

Rate Charts and Settings Imperial (U.S.) Units

(Serial No. 805101-)



JOHN DEERE

OPERATOR'S MANUAL

Rate Charts and Settings

OMA143066 ISSUE C5 (ENGLISH)

CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

If this product contains a gasoline engine:



WARNING

The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

The State of California requires the above two warnings.

John Deere Seeding Group

Worldwide Edition
PRINTED IN U.S.A.

Introduction

Record Rate Settings

Once machine is set for a specific crop and is performing as desired, enter machine settings in the following table as shown. That information can then be

used later, when changing from one crop to another, or from one year to the next. An identical table is provided in your planter operator's manual.

Rates and Settings Record Sheet						
<i>See first column for example.</i>						
Seed	Soybeans					
Transmission Range	High					
Driver Sprocket	20					
Driven Sprocket	26					
Rate	180,000					
Number of Seeds per Foot or Seed Spacing	10.5 per foot					
Ground Speed	6 mph					
Meter Type	Vacuum					
Seed Size	3200 per pound					
Vacuum Meter						
Disk	Soybean A42586					
Baffle Setting	Upper					
Brush	Long					
Doubles Eliminator Setting	No					
Knockout Wheel	No					
Vacuum Level	8 in.					
Talc	1/2 cup per hopper					
Plateless Meter						
Graphite						
Granular Chemical						
Rate						
Meter Setting						
Fertilizer						
Rate						
Meter Setting						
User Notes	Use this area for entering any info that may be needed in the future					

Rates and Settings Record Sheet						
Seed						
Transmission Range						
Driver Sprocket						
Driven Sprocket						
Rate						

Introduction

Rates and Settings Record Sheet						
Seed Spacing						
Ground Speed						
Meter Type						
Size/Type						
Vacuum Settings						
Disk						
Baffle Setting						
Brush						
Doubles Eliminator Setting						
Knockout Wheel						
Vacuum Level						
Talc						
Plateless Meter						
Graphite						
Granular Chemical						
Rate						
Meter Setting						
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Original Instructions. All information, illustrations and specifications in this manual are based on the latest information available at the time of publication. The right is reserved to make changes at any time without notice.

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Safety

Recognize Safety Information



T81389—UN—28JUN13

This is a safety-alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury.

Follow recommended precautions and safe operating practices.

DX,ALERT-19-03OCT22

Understand Signal Words



▲ WARNING

▲ CAUTION

TS187—19—30SEP88

DANGER; The signal word DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING; The signal word WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION; The signal word CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury. CAUTION may also be used to alert against unsafe practices associated with events which could lead to personal injury.

A signal word—DANGER, WARNING, or CAUTION—is used with the safety-alert symbol. DANGER identifies the most serious hazards. DANGER or WARNING safety signs are located near specific hazards. General precautions are listed on CAUTION safety signs. CAUTION also calls attention to safety messages in this manual.

DX,SIGNAL-19-05OCT16

Follow Safety Instructions



TS201—UN—15APR13

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Be sure new equipment components and repair parts include the current safety signs. Replacement safety signs are available from your John Deere dealer.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator's manual.

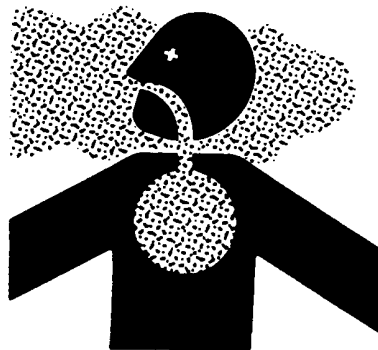
Learn how to operate the machine and how to use controls properly. Do not let anyone operate without instruction.

Keep your machine in proper working condition. Unauthorized modifications to the machine may impair the function and/or safety and affect machine life.

If you do not understand any part of this manual and need assistance, contact your John Deere dealer.

DX,READ-19-01AUG22

Handle Agricultural Chemicals Safely



TS220—UN—15APR13



A34471

A34471—UN—11OCT88

Chemicals used in agricultural applications such as fungicides, herbicides, insecticides, pesticides, rodenticides, and fertilizers can be harmful to your health or the environment if not used carefully.

Always follow all label directions for effective, safe, and legal use of agricultural chemicals.

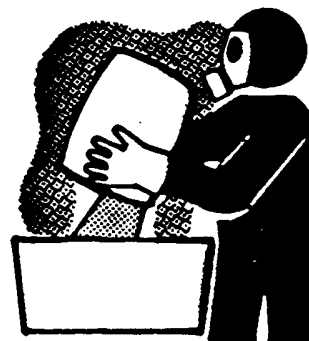
Reduce risk of exposure and injury:

- Wear appropriate personal protective equipment as recommended by the manufacturer. In the absence of manufacturer's instructions, follow these general guidelines:
 - Chemicals labeled '**Danger**': Most toxic. Generally require use of goggles, respirator, gloves, and skin protection.
 - Chemicals labeled '**Warning**': Less toxic. Generally require use of goggles, gloves, and skin protections.
 - Chemicals labeled '**Caution**': Least toxic. Generally require use of gloves and skin protection.
- Avoid inhaling vapor, aerosol or dust.
- Always have soap, water, and towel available when working with chemicals. If chemical contacts skin, hands, or face, wash immediately with soap and water. If chemical gets into eyes, flush immediately with water.
- Wash hands and face after using chemicals and before eating, drinking, smoking, or urination.
- Do not smoke or eat while applying chemicals.
- After handling chemicals, always bathe or shower and change clothes. Wash clothing before wearing again.
- Seek medical attention immediately if illness occurs during or shortly after use of chemicals.
- Keep chemicals in original containers. Do not transfer chemicals to unmarked containers or to containers used for food or drink.
- Store chemicals in a secure, locked area away from human or livestock food. Keep children away.
- Always dispose of containers properly. Triple rinse

empty containers and puncture or crush containers and dispose of properly.

DX,WW,CHEM01-19-24AUG10

Seed Lubricant and Seed Treatments



A34471

A34471—UN—11OCT88

Use an appropriate seed lubricant for your conditions. Follow the instructions and warnings provided by the provider, including use of personal protective equipment against potential skin and respiratory exposures. Be aware of seed treatments that may also create risks of skin and respiratory exposures to chemicals and other substances and take appropriate precautions, including the use of personal protective equipment. Avoid touching or inhaling any seed treatment, seed lubricant, or the dust created by the use of seed treatment or seed lubricant. Reports of potentially fatal cancer and other serious illnesses have been made from exposure to these products.

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Replace Safety Signs



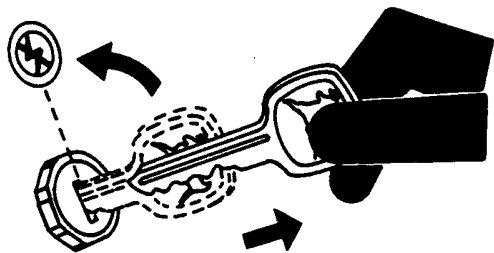
TS201—UN—15APR13

Replace missing or damaged safety signs. Use this operator's manual for correct safety sign placement.

There can be additional safety information contained on parts and components sourced from suppliers that is not reproduced in this operator's manual.

DX,SIGNS-19-18AUG09

Service Machine Safely



TS230—UN—24MAY89

To help prevent personal injury caused by unexpected movement, position the planter on a level surface before performing services.

If the planter must be in a raised position while working on or near it, verify that the service locks are installed or the planter is adequately supported.

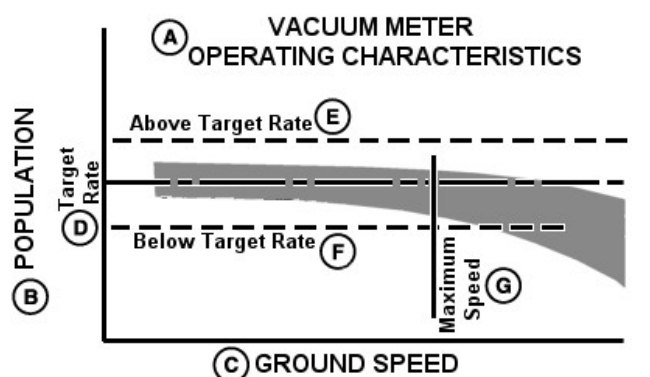
If the planter is connected to the tractor, engage the park brake and/or place the transmission in **Park**, shut off the engine and remove the key.

If the planter is detached from the tractor, block the wheels and use the safety stands to prevent movement.

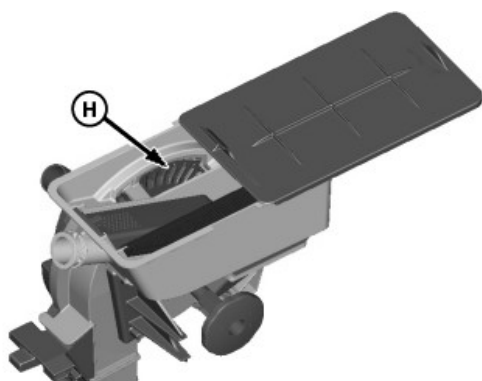
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Operating the MaxEmerge 5 Seed Meter

Vacuum Meter Operating Characteristics



A68173—UN—14JUL10



A82415—UN—23APR14

- A—Vacuum Meter Operating Characteristics
- B—Population
- C—Ground Speed
- D—Target Rate
- E—Higher Than Target Rate
- F—Lower Than Target Rate
- G—Maximum Speed
- H—Seed Cell

The operating band (gray area) illustrates how a vacuum meter performs in relation to target rate (D).

The width of the operating band varies based upon:

- Various sizes and shapes of seeds
- Planting rate variations
- Field Conditions

In most cases, meter accuracy does not decline unless maximum planting speed is exceeded.

The maximum speed varies based upon field conditions. Rough field conditions can knock seed off seed disks and can cause row unit bounce which severely affects seed placement. Adding attachments such as pneumatic down force improves seed placement in rough field conditions.

Always verify that the correct seed disk is used for seed selection. If the seed is unusually sized or shaped, try a disk for a different crop and re-evaluate the performance. See SEED DISK RECOMMENDATIONS in this section.

If seed varies widely in size and shape, try a flat disk and double eliminator for improved population control.

To check for the proper seed disk application with mini-hoppers:

- Remove lid from seed hopper.
- Place seed in meter.
- Connect vacuum hose to meter dome.
- Activate vacuum to recommended level for crop.
- To verify that only one seed fits into each cell (H), turn meter by hand.

CROP STAND = SEED SINGULATION + SEED PLACEMENT + AGRONOMIC FACTORS

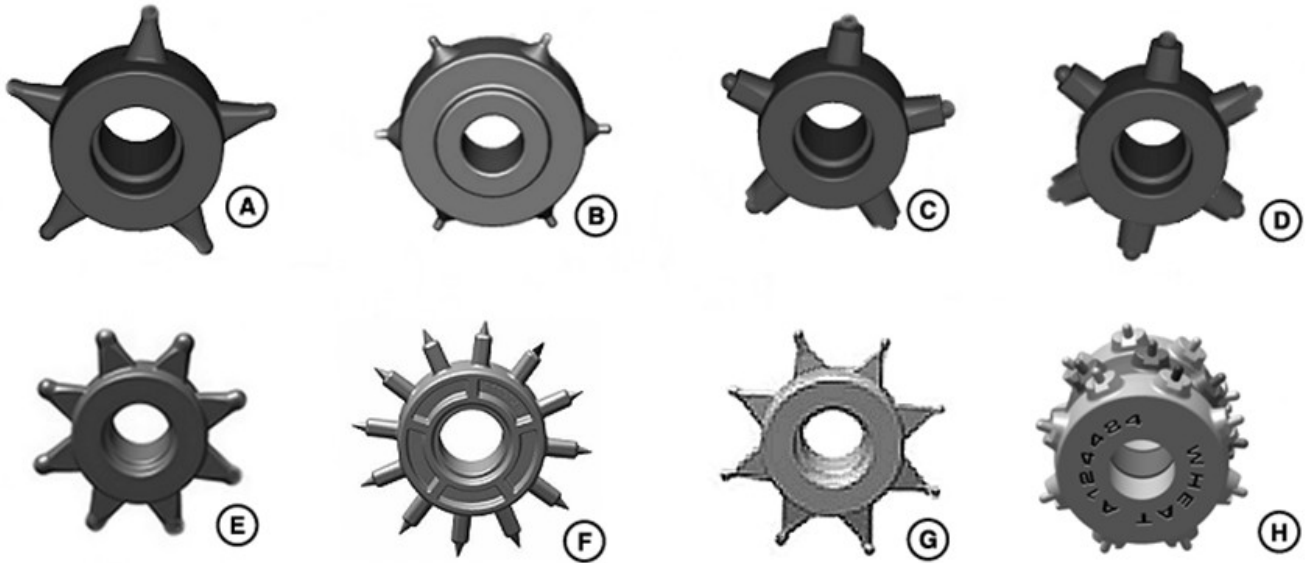
Seed Singulation = Seed Selection + Seed Disk Selection + Vacuum Level + Field Conditions + Maintenance

Seed Placement = Row Unit Maintenance + Speed + Field Conditions + Planter Attachments + Observation & Adjustment

Agronomic Factors = Seed Germination + Soil Temperature + Moisture + Nutrients + Pest Control + Weather

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Seed Meter Settings

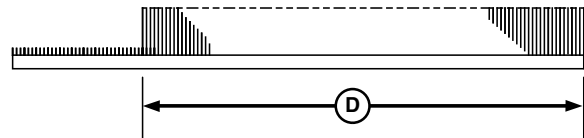


Knockout Wheels

A115530—UN—16FEB22

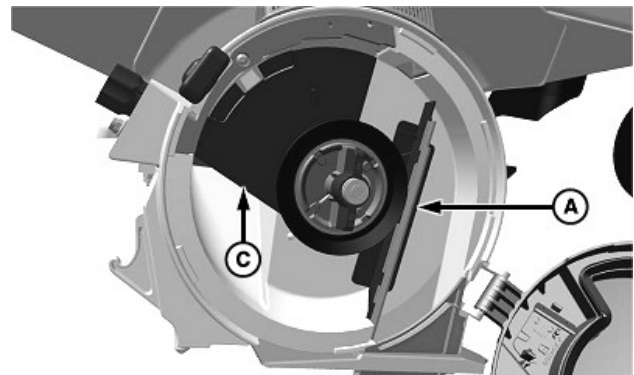
Knockout wheels are used with some seed disks and crops.

Knockout Wheel Identification		
Knockout Wheel	Wheel Part Number	Assembly Part Number
Type A	A102718	AA85899
Type B	H136448	AA79986
Type C	A52389	AA81736
Type D	A53272	AA85089
Type E	A106147	AA89145
Type F	A119983	AA103137
Type G	A123990	AA103153
Type H	A124484, A124483, and A124473	AA103597

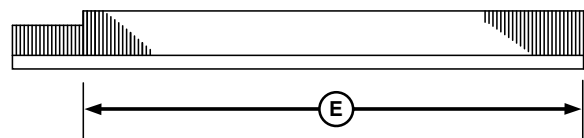


A109249—UN—16FEB21

Front Brush (short)

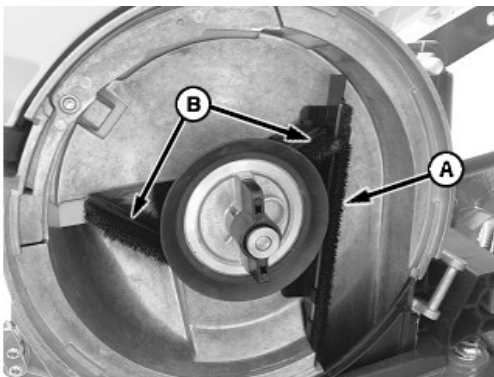


A105685—UN—11SEP19



A109250—UN—16FEB21

Front Brush (long)



A82570—UN—09MAY14

- A—Front Brush
- B—Rear Brush
- C—Baffle
- D—Dimension, 146 mm (5.75 in)

Operating the MaxEmerge 5 Seed Meter

E—Dimension, 165 mm (6.5 in)

The front brush (A) is available in two sizes for different crops. The rear brush (B) is used with mini-hoppers,

except when planting canola. The baffle (C) is used with large hoppers or mini-hoppers when planting canola.

CCS Compatible	Crop	Disk Name (Part Number)	Front Brush (A)	Baffle Position ^a	Double Eliminator	Knockout Wheel
^a A rear brush is used with mini-hoppers instead of a baffle, except when planting canola.						
<i>NOTE: The nozzle insert and hopper elbow recommendations are shown in the CCS operation. Use this table as a quick reference for common settings. (See Seed Disk Recommendations in this section for additional information.) ProMax are flat-type disks that are visually identified by the quantity and the diameter (in millimeters) of the holes in the disk. For example, ProMax 40 x 4.5 has 40 holes that are 4.5 mm in diameter.</i>						
Yes	Field Corn	Large Corn (A50617) or Medium Corn (A43215)	Long	Upper	See Footnote ^b	No ^c
Yes	Field Corn	ProMax 40 x 4.5 (A52391)	Long	Upper	See Footnote ^d	Wheel C
Yes	Sweet Corn	ProMax 40 x 4.5 (A52391)	Long	Upper	See Footnote ^e	Wheel C
Yes	Sweet Corn	ProMax 40 x 3.75 (A52390)	Long	Upper	See Footnote ^e	Wheel C
Yes	Popcorn	Small Corn, Sunflower, and Popcorn (H136478)	Long	Lower	See Footnote ^b	No ^c
Yes	Popcorn	Sorghum (A43066)	Long	Lower	See Footnote ^b	Wheel B
Yes	Oil Sunflower	Small Corn, Sunflower, and Popcorn (H136478)	Long	Lower	See Footnote ^b	No ^c
Yes	Oil Sunflower	ProMax 40 x 2.5 (A102717)	Long	Lower	See Footnote ^b	Wheel A
Yes	Confection Sunflower	ProMax 40 x 4.5 (A52391)	Long	Upper	See Footnote ^e	Wheel C
Yes	Confection Sunflower	ProMax 40 x 3.75 (A52390)	Long	Upper	See Footnote ^e	Wheel C
Yes	Wheat	Wheat (A124486)	Long	Lower	See Footnote ^b	Wheel H
Yes	Cotton	Low-Rate Cotton (A70163)	Long	Upper	See Footnote ^b	No ^c
Yes	Cotton	Cotton and Soybean (A56251)	Long	Upper	See Footnote ^b	No ^c
Yes	Cotton	ProMax 50 x 3.75 (A52903)	Long	Upper	See Footnote ^d	Wheel D
Yes	Cotton	ProMax 64 x 2.8 (A121489)	Long	Upper	See Footnote ^d	Wheel G
Yes	Hilldrop Cotton (4-Seed)	4-Seed Hilldrop Cotton (A65622)	Short	Upper	See Footnote ^b	No ^c
Yes	Hilldrop Cotton (2-Seed)	2-Seed Hilldrop Cotton (A74961)	Long	Upper	See Footnote ^b	No ^c
Yes	Low-Rate Sorghum	Sorghum (A43066)	Long	Lower	See Footnote ^b	Wheel B
Yes	High-Rate Sorghum	High-Rate Sorghum (A52802)	Long	Lower	See Footnote ^b	No ^c
Yes	Sorghum	Sugar Beet (A51712) (H136445) (A51713)	Long	Lower	See Footnote ^b	Wheel B
Yes	Canola	Canola (A119979)	Long	Lower	See Footnote ^b	Wheel F
Yes	Soybean	Soybean (A42586)	Long	Upper	See Footnote ^b	No ^c
Yes	Soybean	Cotton and Small Soybean (A56251)	Long	Upper	See Footnote ^b	No ^c
Yes	Soybean ^f	ProMax 64 x 4.5 (A105848)	Long	Upper	See Footnote ^h	Wheel E
Yes	Sugar Beet	Sugar Beet (A51712) (H136445) (A51713)	Long	Lower	See Footnote ^b	Wheel B
Yes	Sugar Beet	Sugar Beet (A43066)	Long	Lower	See Footnote ^b	Wheel B
The following crops are not approved for the Central Commodity System (CCS™) delivery.						
No	Small Common Edible Bean and Smooth Pea	Small Edible Bean Cell-Type (H136468)	Long	Upper	See Footnote ^b	No ^c
No	Medium Common Edible Bean, Black-Eyed Pea, and Wrinkle Pea	Medium Edible Bean Cell-Type (A51696)	Short	Upper	See Footnote ^b	No ^c
No	Large Common Edible Bean	Large Edible Bean Cell-Type (H136092)	Short	Upper	See Footnote ^b	No ^c
No	Small Common Edible Bean	ProMax 50 x 3.75 (A52903)	Long	Upper	See Footnote ^e	Wheel D
No	Medium Common Edible Bean	ProMax 50 x 4.5 (A52904)	Long	Upper	See Footnote ^e	Wheel D
No	Large Common Edible Bean	ProMax 50 x 5.0 (A52878)	Long	Upper	See Footnote ^e	Wheel D
No	Runner and Spanish Peanuts	Large Edible Bean Cell-Type (H136092)	Short	Upper	See Footnote ^b	No ^c

Operating the MaxEmerge 5 Seed Meter

CCS Compatible	Crop	Disk Name (Part Number)	Front Brush (A)	Baffle Position ^a	Double Eliminator	Knockout Wheel
No	Virginia Peanut	Virginia Peanut (H138722)	Short	Upper	See Footnote ^b	No ^c
No	Cucumber	Sorghum (A43066)	Long	Lower	See Footnote ^b	Wheel B
No	Cucumber	Blank (A52554) ^g	Long	Lower	See Footnote ^d	No ^c

^bThe double eliminator is not used with this disk. Set the double eliminator to position "0."

^cInstall the wiper attachment when a knockout wheel is not used.

^dSet the double eliminator to 5 (50% hole coverage). (See Operate Double Eliminator for additional information.)

^eAdjust the tip of the eliminator towards the center of the meter as far as possible.

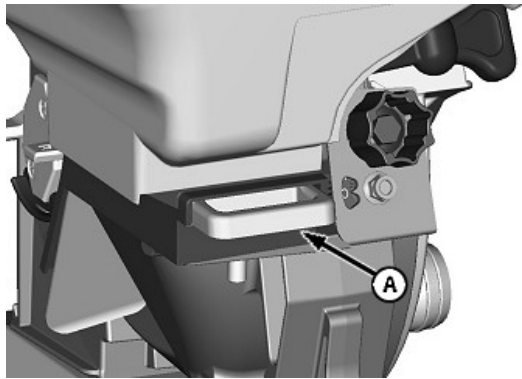
^fThe ProMax 64 x 4.5 disk is only recommended for 38, 51, and 56 cm (15, 20, and 22 in) row spacing.

^gSee the Seed Disk Recommendations for disk configuration.

^hStart with the double eliminator at 5 (50% hole coverage) and adjust as needed to eliminate doubles. (See Operate Double Eliminator for additional information.)

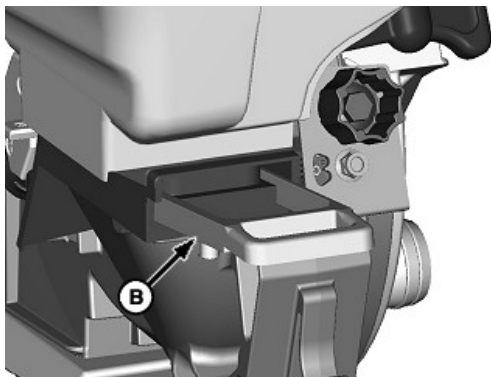
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Clean Out the Vacuum Seed Meter



Open Position

A82646—UN—23MAY14



Closed Position

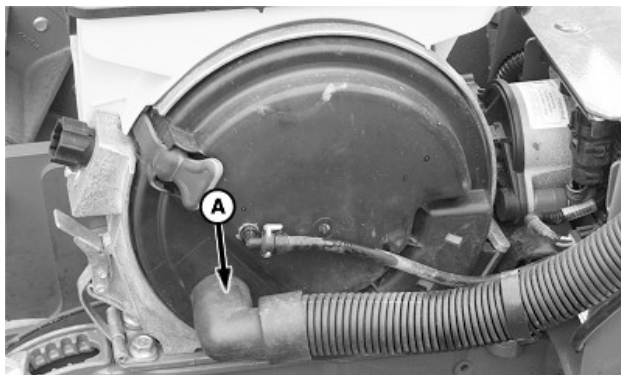
A82648—UN—23MAY14

A—Open Gate Position
B—Closed Gate Position

NOTE: If the planter is equipped with a mini hopper, proceed to step 3.

NOTE: If seed bridging occurs, verify that the gate is open (A) and add more meter lubricant to the seed.

1. Shutoff gates are used on 1.6 bu and 3 bu hoppers. Open the gate when the meter is in use. Close the gate before inspection or cleanout of the seed meter.

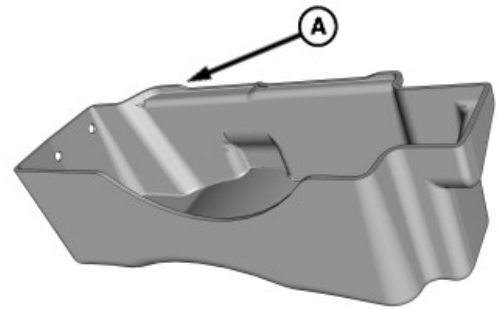


A—Vacuum Hose

A105812—UN—19SEP19

2. Remove the vacuum hose (A).

NOTE: The catch pan (A) is either on the planter frame, inside the planter frame, or on the ladder.



A—Catch Pan

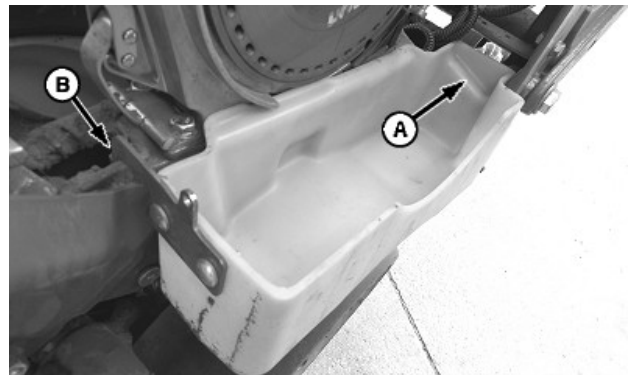
A89605—UN—01MAR16

3. Locate the catch pan (A).

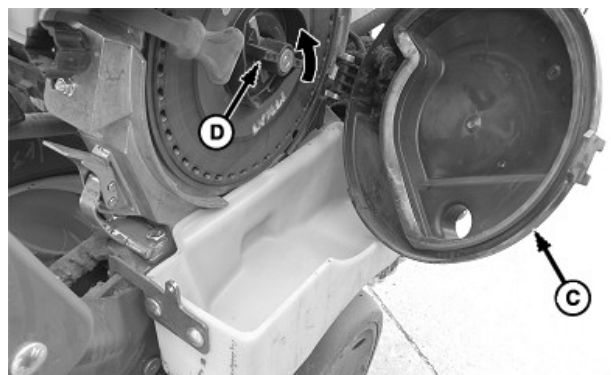


A34471

A34471—UN—11OCT88



A82664—UN—29MAY14



A82665—UN—29MAY14

- A—Front Edge
- B—Hooked Plate
- C—Cover
- D—Handle

CAUTION: Avoid chemical injury to eyes, skin, and lungs. When using seed treatments, use caution when accessing and handling components coated with seed treatment. Read and follow the safety instructions on the product label.

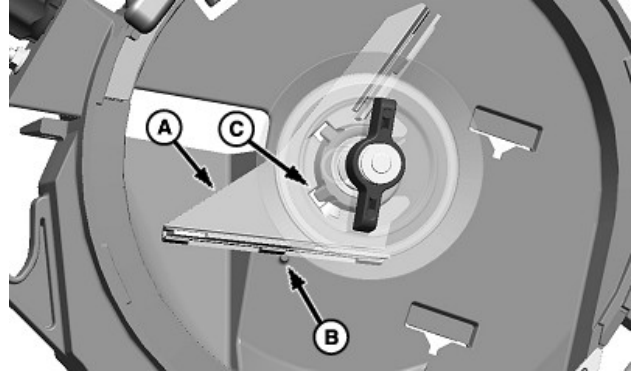
4. Install front edge (A) into position near the parallel arms.
5. Install hooked plate (B) into the notched area as shown.
6. Open cover (C), rotate the handle (D) into the unlocked position, and remove the seed disk.

WP29706,00008BC-19-19SEP19

needed. (See Seed Meter Settings for additional information.)

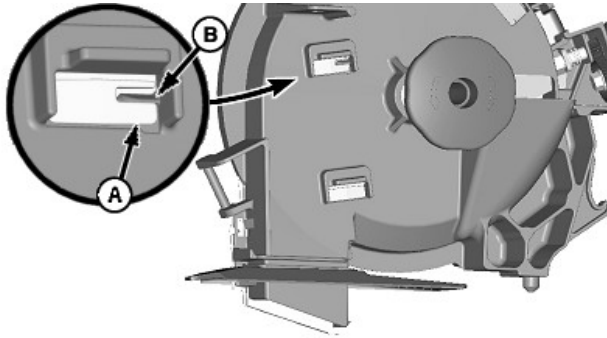
3. Pry the front-brush tab (A) over the lock (B) and remove the front-brush holder (C) from the meter.

NOTE: The rear brush is only used with mini seed hoppers except when planting canola.



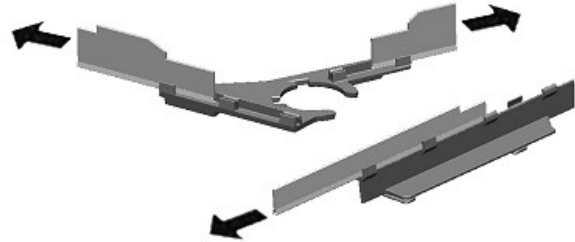
A105687—UN—18SEP19

Change the Vacuum Seed Meter Brush

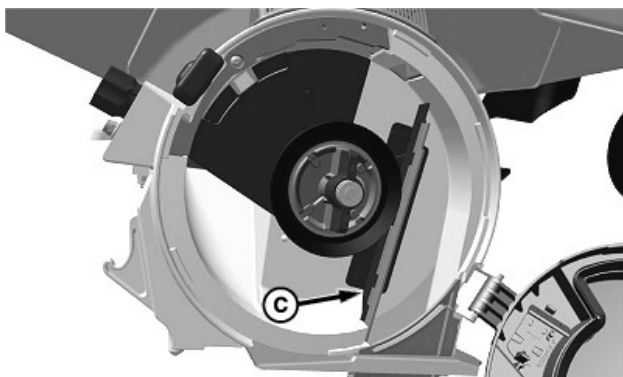


Rear of Seed Meter

A77792—UN—01MAY13



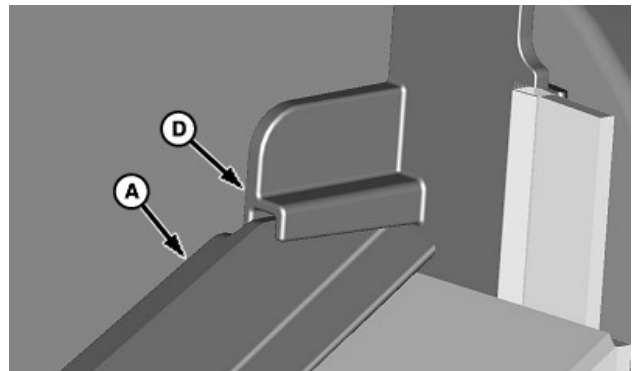
A77794—UN—01MAY13



A105686—UN—12SEP19

- A—Front-Brush Tab
- B—Lock
- C—Front-Brush Holder

1. Open the seed meter and empty any seed contained within it. (See Clean Out the Vacuum Seed Meter for additional information.)
2. Inspect the brushes for wear and replace them as



Brushes Seated

A105688—UN—09OCT19

- A—Rear-Brush Holder
- B—Pin
- C—Grooves and Tabs
- D—Front-Brush Holder

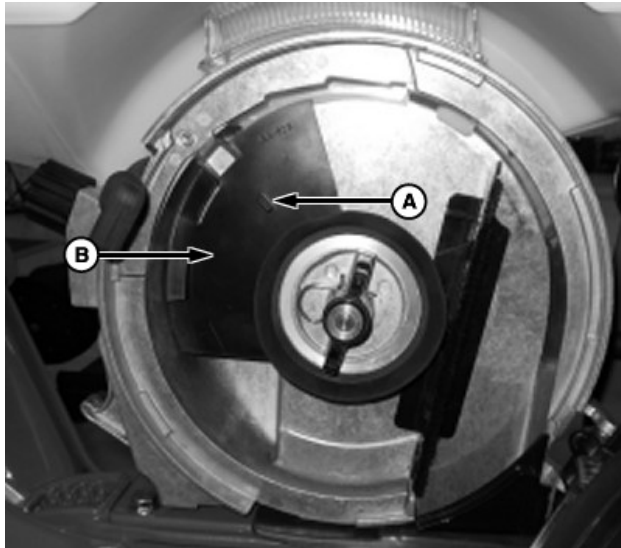
4. Rotate the rear-brush holder (A) until it contacts the pin (B) and the grooves and tabs (C) align. Lift and remove the rear-brush holder.
5. To replace the brushes, slide them in and out of the brush holders.

NOTE: Install the rear brush first.

6. Insert the brush holders into the meter and verify that the holders are locked into position.
7. Verify that the rear-brush holder (A) is seated under the front-brush holder (D).

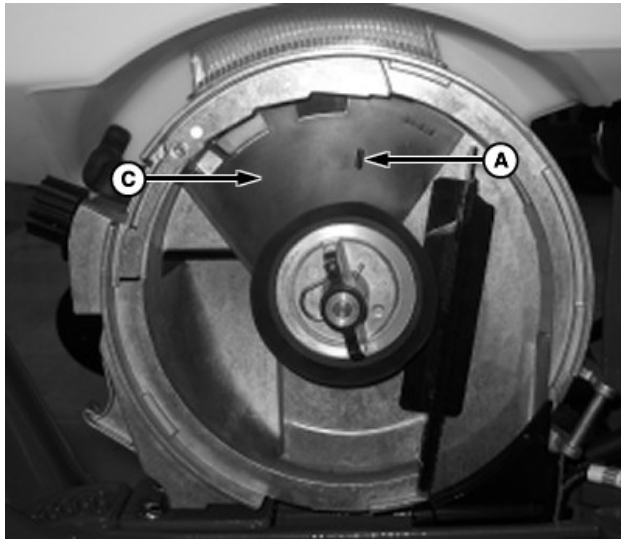
WP29706,00008CF-19-16FEB21

Adjust the Baffle in the Vacuum Seed Meter



A78486—UN—31JUL13

Lower Baffle Position



A78487—UN—31JUL13

Upper Baffle Position

A—Tab
B—Lower Position
C—Upper Position

The baffle is used to avoid over-population due to the seed meter over-filling.

NOTE: The baffle is not used on meters with mini hoppers except when planting canola.

1. Open the seed meter and remove the seed disk.

NOTE: The lower position (B) is recommended for smaller seeds such as: sugar beet, sorghum, oil sunflower, and popcorn.

The upper position (C) is recommended for larger seeds such as: corn, soybean, cotton, common edible bean, peanut, sweet corn, and confectionary sunflower.

2. Move the tab (A) to the position recommended in the Seed Meter Settings.

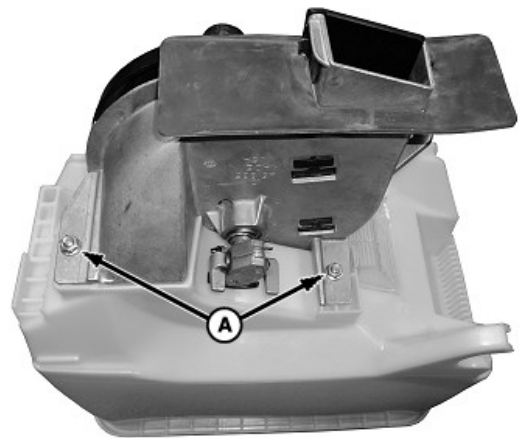
If seed bridges at the baffle, adjust the baffle to the upper position (C) and increase the amount of meter lubricant.

Lowering the baffle does not eliminate an over-filled seed meter caused by rough field conditions. To reduce the effects of a rough field, increase downforce on the row units and reduce ground speed.

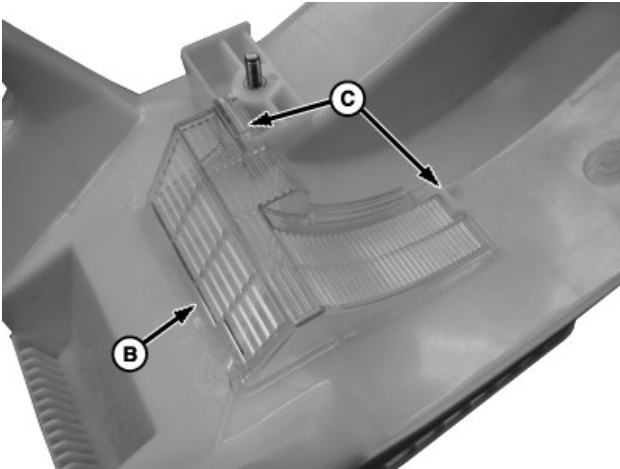
If over-population occurs when planting sideways on a hill: reduce ground speed, use round seeds, or install flat style seed disks. Over-population occurs on hillsides when the agitator tabs on some seed disks hold and carry additional seeds past the meter brush and into the seed tube. Round seeds and flat seed disks improve performance on hillsides.

OUC06074,0000CF4-19-07FEB22

Install Meter Inlet Screen



A68445—UN—26JUL10

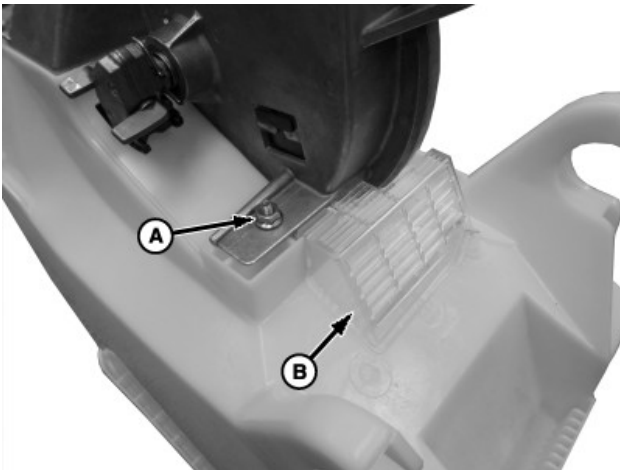


A68446—UN—26JUL10

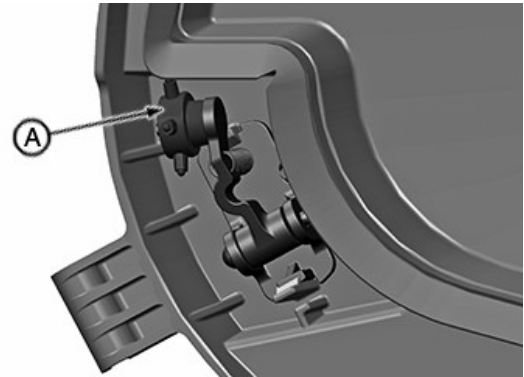
1. Remove hopper and meter from row unit (refer to ACCESSING THE VACUUM METER in this section).
2. Loosen meter nuts (A) and remove meter from hopper.
3. Place inlet screen (B) onto hopper and align with tabs (C).
4. Replace meter and tighten meter nuts.
5. Install meter and hopper on row unit.

OUC06074,0000A51-19-26JUL10

Seed Knockout Wheel Operation



A68447—UN—26JUL10



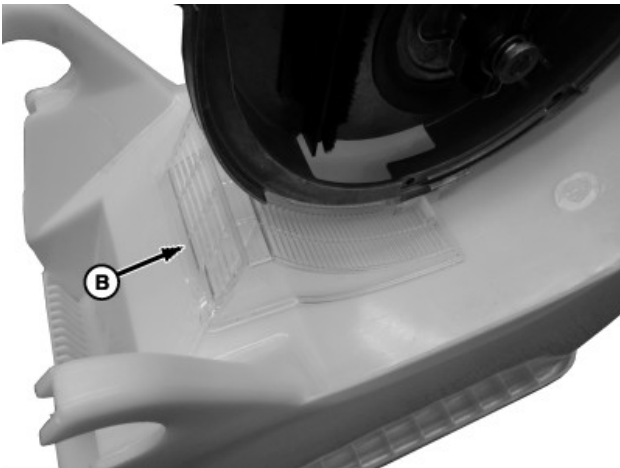
CQ297999—UN—26FEB14

A—Seed Knockout Wheel

The seed knockout wheel (A) is used to push seeds from the seed cell. Wheel projections engage the seed cell holes, forcing all the seeds and foreign material from the seed cell.

The seed knockout wheel is required when planting sorghum, monogerm sugar beet, canola, wheat, cucumber, and seed planted with flat-type seed disks. Sugar beet and sweet corn seeds can have sharp edges and are typically irregular in shape, which contributes to seed lodging in the seed cell. Some sorghum seed contains large amounts of foreign material, which can also become trapped in the seed cell.

WP29706,000051F-19-24FEB22



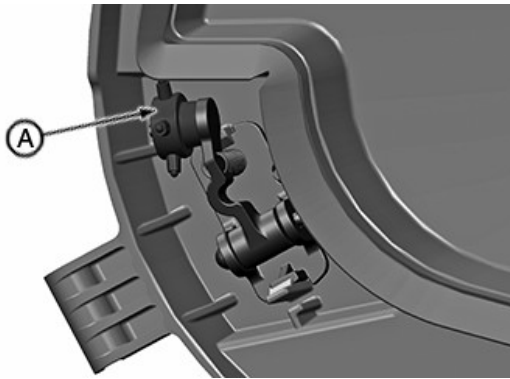
A68448—UN—26JUL10

A—Nuts
B—Screen
C—Tabs

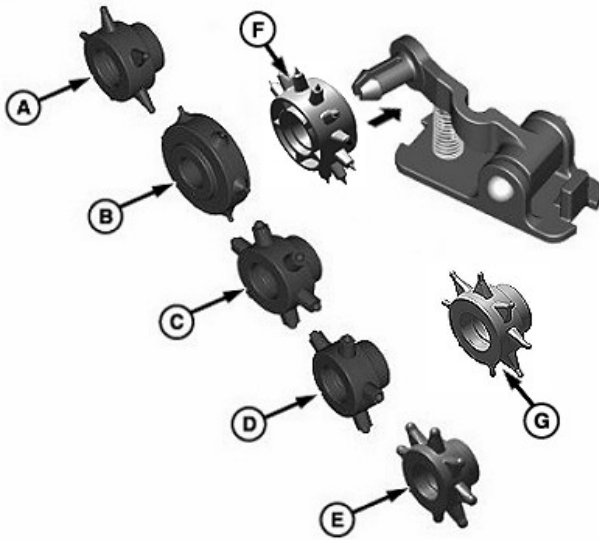
Planting in high residue field conditions can cause pieces of crop residue to build up in the vacuum meter. Meter inlet screens (B) are available from a John Deere™ dealer to prevent crop residue from entering the meter.

To install:

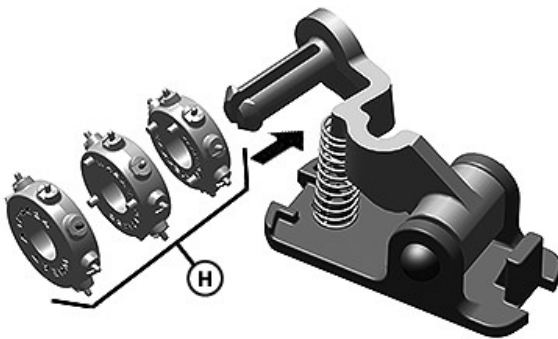
Install the Knockout Wheel Assembly



CQ297999—UN—26FEB14



A109233—UN—29MAR21



A116099—UN—17FEB22

- A—Knockout Wheel (type A)
- B—Knockout Wheel (type B)
- C—Knockout Wheel (type C)
- D—Knockout Wheel (type D)
- E—Knockout Wheel (type E)
- F—Knockout Wheel (type F)
- G—Knockout Wheel (type G)
- H—Knockout Wheel (type H)

NOTE: The knockout wheel is used to ensure that irregularly shaped seeds are fully released from the seed cell hole. Wheel projections engage the seed cell holes to eject all the seeds and foreign material.

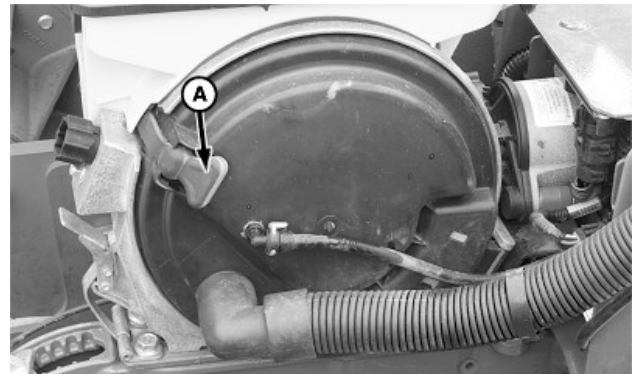
There are eight knockout wheels available for use with different seed disks and seed types. (See Seed Meter Settings in this section for additional information.)

To remove a knockout wheel, squeeze the hub and pull off the wheel.

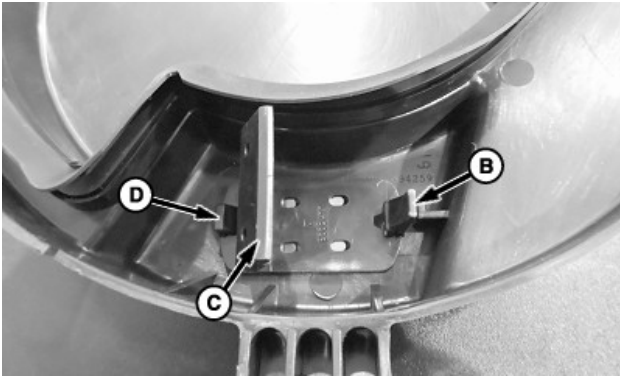
NOTE: Orient the knockout wheel as shown. The shoulder of the selected knockout wheel (type A—G) faces the knockout arm. The smallest wheel for type H is next to the arm.

To install a knockout wheel, press the wheel onto the hub.

Knockout Wheel Identification		
Knockout Wheel	Wheel Part Number	Assembly Part Number
Type A	A102718	AA85899
Type B	H136448	AA79986
Type C	A52389	AA81736
Type D	A53272	AA85089
Type E	A106147	AA89145
Type F	A119983	AA103137
Type G	A123990	AA103153
Type H	A124484, A124483, and A124473	AA103597



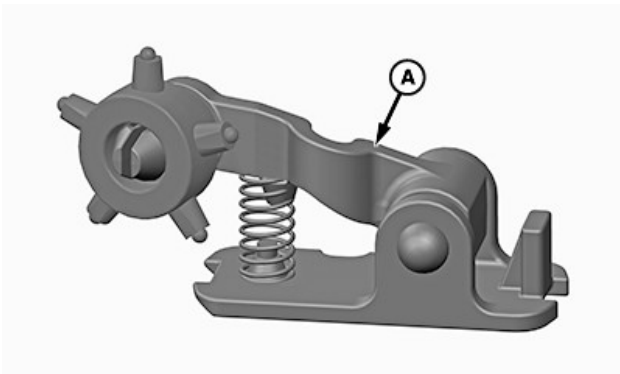
A105814—UN—19SEP19



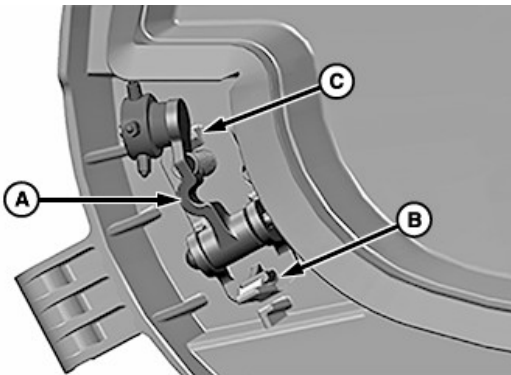
A77663—UN—27AUG13

A—Handle
B—Retaining Clip
C—Wiper Assembly
D—Fastener Clip

1. Disengage handle (A) and open the meter dome.
2. To remove wiper assembly (C), push the retaining clip (B) and pull the wiper assembly away from the fastener clip (D).



A100237—UN—03APR18



A100238—UN—03APR18

A—Knockout Wheel Assembly
B—Retaining Clip
C—Fastener Clip

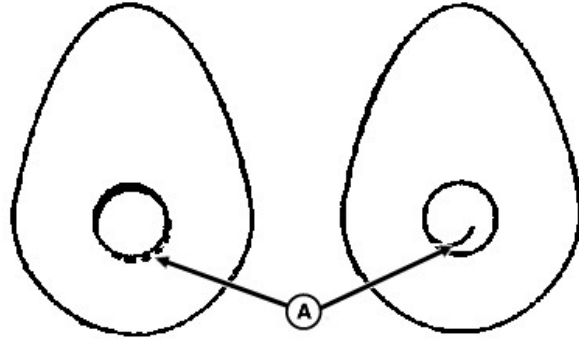
3. Install knockout wheel assembly (A) between the retaining clip (B) and the fastener clip (C).

NOTE: When closing the dome, verify that the wheel and the row of seed cells, on the seed disk, are aligned.

4. Close and latch the meter dome.

WP29706,0000520-19-24FEB22

Inspect the Seed Disk Cell



A46242—UN—27JUL00

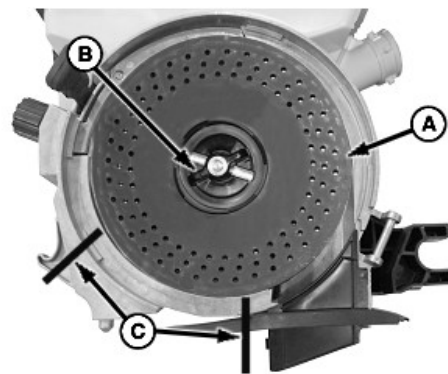
A—Flash

NOTE: To determine seed meter accuracy, perform a field check. If metering performance is satisfactory, it is not necessary to replace any seed disk.

Check seed cell and hole for flash (A) (particles of material left behind in molding process). Remove any flash before installing seed disk. If flash cannot be easily removed, replaced the disk.

WP29706,00005B9-19-13JUL15

Install Seed Disk



A77666—UN—15OCT13

A—Seed Disk
B—Hub Handle
C—Section

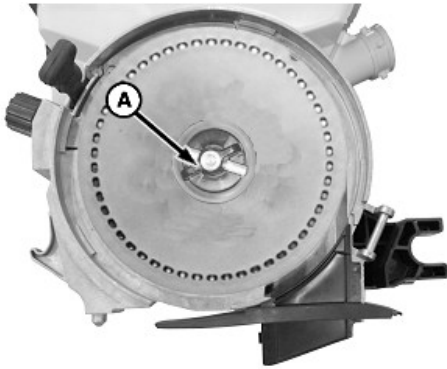
1. Open the seed meter dome.
2. Fit seed disk (A) into housing. Hold the seed disk stationary and rotate hub handle (B) into locked position.
3. Inspect the hub adjustment. If the following conditions are not met, adjust the hub. (See Adjust Seed Meter Hub for additional information.)

- Verify that seed disk (A) continues to rotate approximately 1/4 revolution after the hub is spun rapidly by hand and quickly released.
- Verify that there is light contact between the seed disk and the double eliminator as the seed disk is rotated.
- Verify that no seed loss occurs through any gap in section (C) as the seed disk is rotated.

WP29706,0000521-19-05APR19

Adjust Seed Meter Hub

NOTE: The seed disk lightly contacts the double eliminator when properly adjusted.

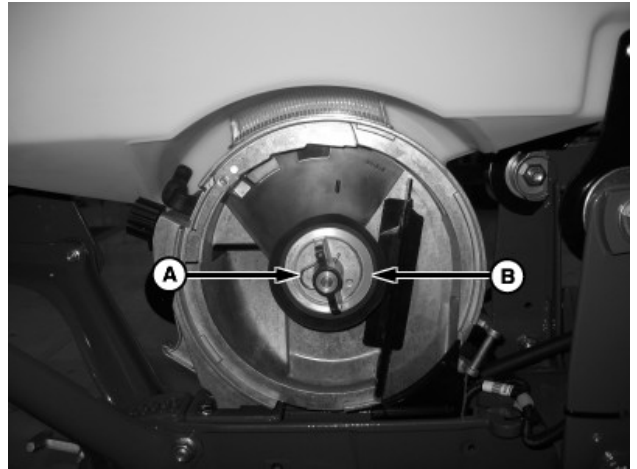


A96513—UN—11MAY17

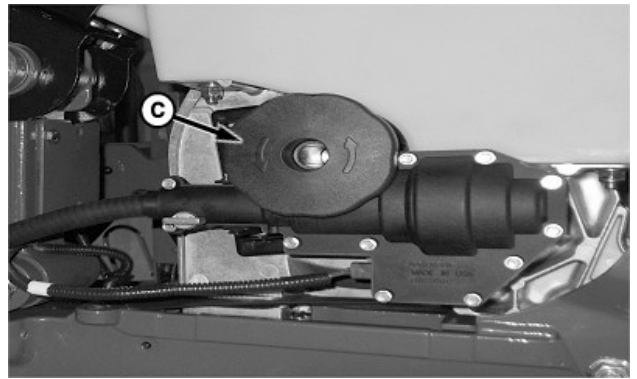
A—Hub Handle

Improve meter accuracy and minimize seed damage with a properly adjusted meter hub. Check this adjustment whenever the seed disks are changed. If a gap between the seed disk and double eliminator exists or seed disk is difficult to turn, adjust the meter hub.

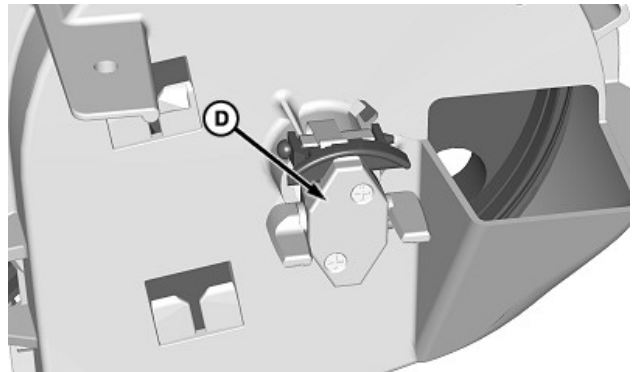
1. Disconnect the seed delivery hose, vacuum hose, and the vacuum sense hose (if equipped).
2. Release meter latch and rotate the meter assembly slightly upward, then remove the meter assembly from the row unit shank.
3. Open the seed meter dome.
4. Turn hub handle (A) counterclockwise and remove the seed disk.



A78484—UN—30JUL13



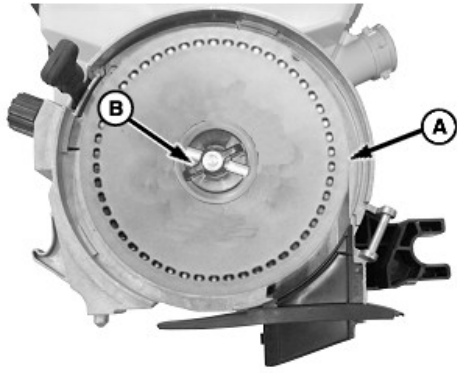
A78485—UN—11NOV13



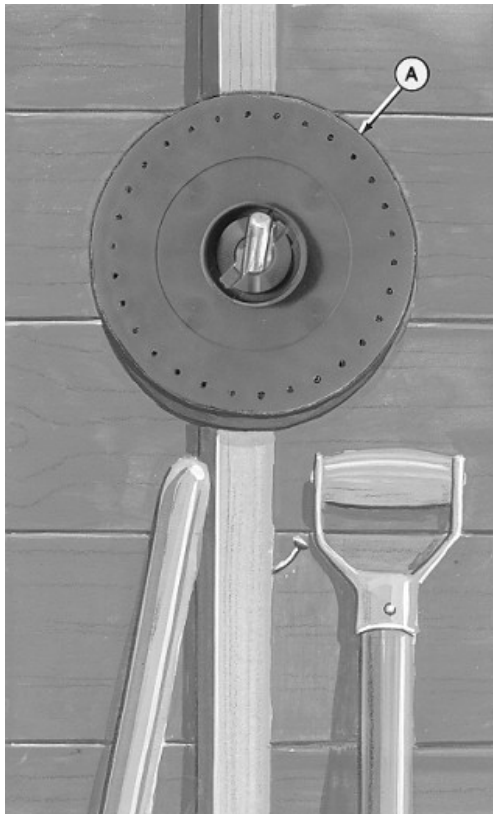
A78490—UN—31JUL13

- A—Spring Clip
- B—Hub
- C—Meter Handle
- D—Meter Drive

5. Remove the spring clip (A).
6. Adjust the hub (B).
 - Make small adjustments.
 - Hold meter handle (C) or the meter drive (D).
 - Thread hub (B) clockwise to move the seed disk closer to the double eliminator.
 - Thread hub (B) counterclockwise to move the seed disk away from the double eliminator.
7. Align the slot with the hole in the shaft and attach the spring clip (A).



A96514—UN—11MAY17



Storage

A44241—UN—19NOV97

A—Seed Disk
B—Hub Handle

8. Attach seed disk (A) and lock the hub handle (B).
9. Inspect the adjustment.
 - Spin and release the seed disk rapidly by hand.
 - Observe the distance that the seed disk rotates. If seed disk rotates approximately 1/4 revolution and stops, the hub is adjusted properly.
 - Repeat the hub adjustment until correct.

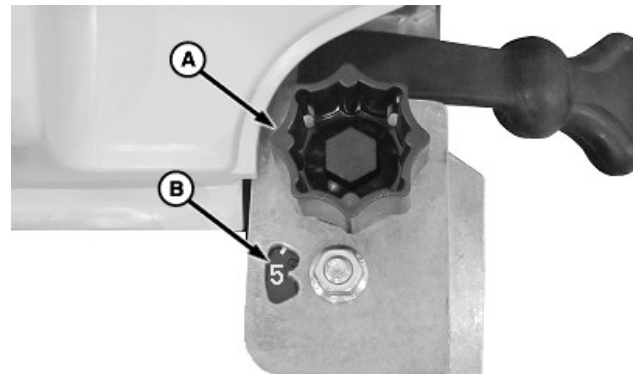
IMPORTANT: Avoid warped seed disks. Do not store seed disks in the seed meters. Store the seed disks horizontal on the hub or hang on the wall from the hub. Do not store under heavy items or hang from the seed hole. Store away from high heat and sunlight.

NOTE: The seed disk lightly contacts the double eliminator when properly adjusted.

10. Rotate seed disk slowly by hand and observe that the seed disk contacts the double eliminator. If a gap large enough for seed to wedge between the seed disk and the housing appears, repeat the hub adjustment. If seed disk is warped, replace the seed disk.
11. When hub adjustment is complete, install the meter assembly on the row unit shank and engage the meter latch.
12. Connect seed delivery hose, vacuum hose, and the vacuum sense hose (if equipped).

WP29706,0000522-19-18OCT19

Calibrate the Double Eliminator



Setting 5

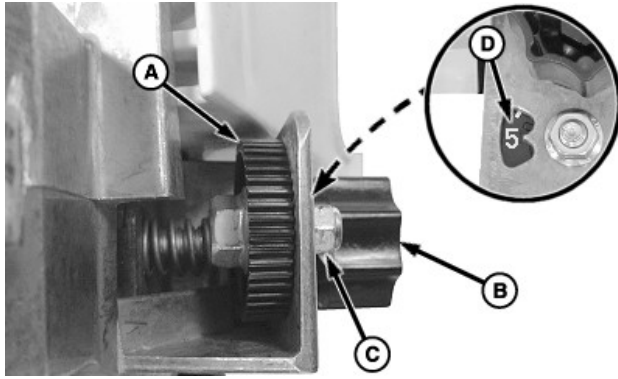
A86028—UN—20APR15

A—Adjustment Knob
B—Setting, 5

Calibrate double eliminator setting 5 (B) for 50% hole coverage on the seed disk.

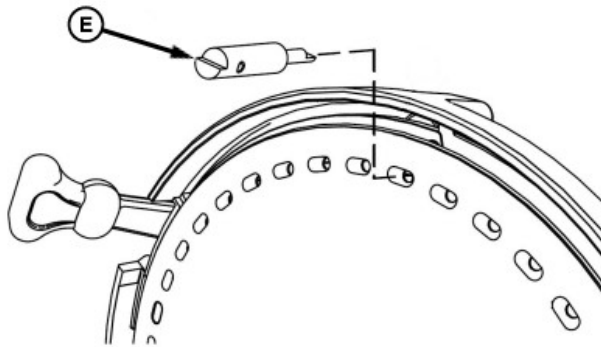
NOTE: To provide more clearance, the calibration procedure requires removal of the hopper.

1. Turn adjustment knob (A) until double eliminator setting 5 (B) is visible.
2. Install the ProMax 40 seed disk in the meter.



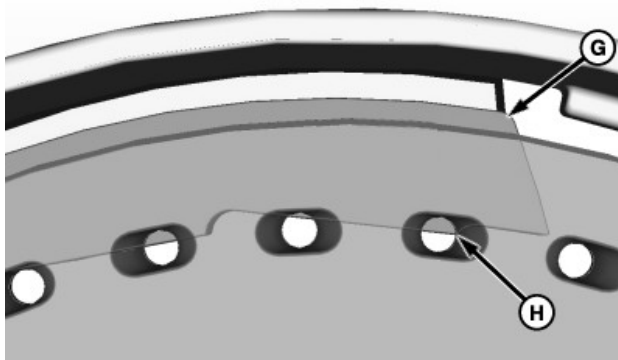
Double Eliminator Knob

A86033—UN—20APR15



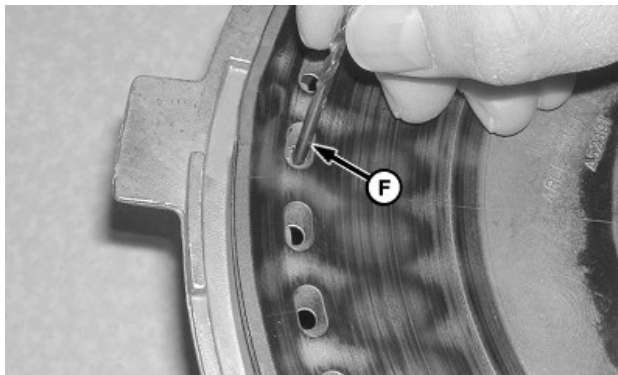
Adjustment Tool Method

A86030—UN—20APR15



50% Coverage

A86032—UN—20APR15



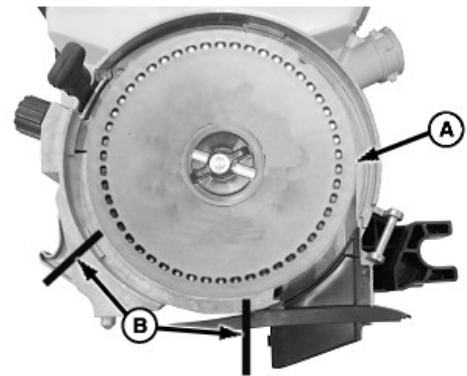
Drill Bit Method

A86031—UN—20APR15

- A—Dial
- B—Adjustment Knob
- C—Nut
- D—Window
- E—Double Eliminator Tool
- F—Drill Bit
- G—Double Eliminator Plate
- H—High Point

NOTE: Contact a John Deere dealer or other service provider for the adjustment tool JDG10965.

3. Insert double eliminator tool (E) or the shank of a 2.5 mm (3/32 in) drill bit (F) into the seed disk hole.
4. Position the tool or drill bit in-line with high point (H) of double eliminator plate (G).
5. Turn adjustment knob (B) until the high point of the double eliminator lightly contacts the tool or drill bit.
6. If the setting is between 4.5 and 5.5 in the center of window (D), no adjustment is needed.
7. If the setting is less than 4.5 or greater than 5.5, loosen nut (C) enough to move dial (A).
8. Position the dial with number 5 showing in the center of window (D).
9. Tighten nut (C).
10. Remove the tool or drill bit from the seed disk.



A86177—UN—22APR15

- A—Disk
- B—Inspection Area

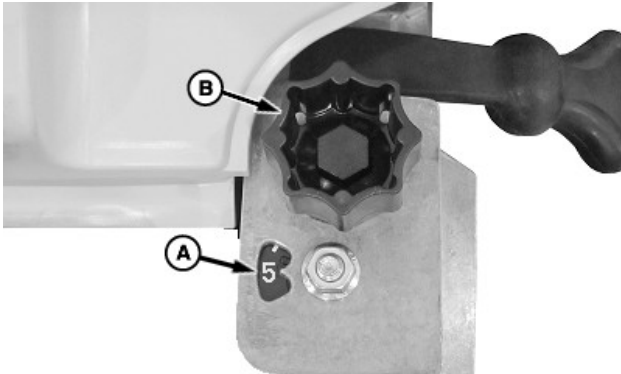
NOTE: The seed disk must turn smoothly and have light contact with the double eliminator. A small gap between the seed disk and the housing is acceptable. Seed must not pass between the disk and the housing. To improve inspection process, place a small amount of seed in the meter.

11. Turn seed disk (A) by hand and inspect the gap between the disk and the meter in inspection area (B). If the disk turns too hard or if the seed passes through the gap, adjust the hub position, adjust the seed meter hub. (See Adjust Seed Meter Hub for additional information).

12. Close the meter dome and if previously removed, attach the meter to the hopper.
13. Set all the rows the same.
14. To evaluate seed delivery and meter performance, plant a short distance and perform a field check. Adjust the individual seed meters as necessary.

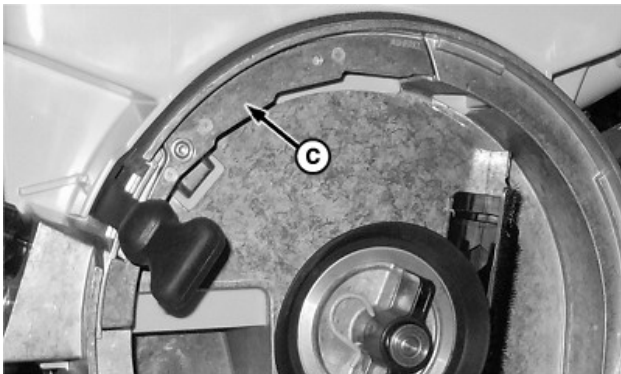
WP29706,0000A09-19-10FEB25

Operate Double Eliminator



A86638—UN—01JUN15

Indicator and Adjustment Knob



A86639—UN—01JUN15

Eliminator Plate

- A—Indicator
B—Adjustment Knob
C—Eliminator Plate

NOTE: Set a vacuum level using the vacuum chart for the disk and seed that is used. The number indicator on the meter has a range of 0—10.

There is a number indicator (A) next to the knob for consistent adjustment. (See Calibrate the Double Eliminator in the MaxEmerge service section.)

Smaller numbers on the indicator = less hole coverage and increase vacuum at the hole.

Middle numbers on the indicator = 1/2 of the hole covered (detent position).

Larger numbers on the indicator = more hole coverage and reduce vacuum at the hole.

Double Eliminator Operating Tips:

- To position the eliminator plate (C) for more or less hole coverage on the seed disks, turn the adjustment knob (B).

For the seed disk used with flat corn seed, the normal operating position is number 5 on the indicator.

When in position number 5, the double eliminator plate covers 1/2 of the seed disk hole and provides good seed singulation for a wide variety of seed sizes and shapes.

If seed singulation performance is inconsistent and cannot be corrected by varying the vacuum level, adjust the double eliminator. If skips are occurring, adjust the double eliminator to a lower setting. If doubles are occurring, adjust the double eliminator to a higher setting.

- Disk hub height is critical for proper performance. Adjust the seed-disk hub, so the seed disk is in light contact with the meter housing. Proper adjustment is achieved when the seed disk turns approximately 1/4 to 1/2 turn when the hub is spun rapidly by hand. (See Adjust the Seed Meter Hub for additional information.)

WP29706,0000523-19-17FEB25

Seed Disk Selection Guidelines

IMPORTANT: These seed disk recommendations are based on seed testing from various sources. Because seed size and shape changes from year to year, there is always a possibility that an alternative disk can provide better performance. Consult your John Deere dealer or other service providers for the most complete and up-to-date listing of available seed disks and recommendations.

The following seed disk recommendations show a seed size range where optimum performance can be expected with each seed disk. Select a disk which best handles the seed to be planted or best represents most seed sizes to be planted.

If several seed sizes are planted and their seed size falls within overlapping areas of two seed disks, it is recommended that BOTH seed disks are ordered to optimize performance to individual seed shape.

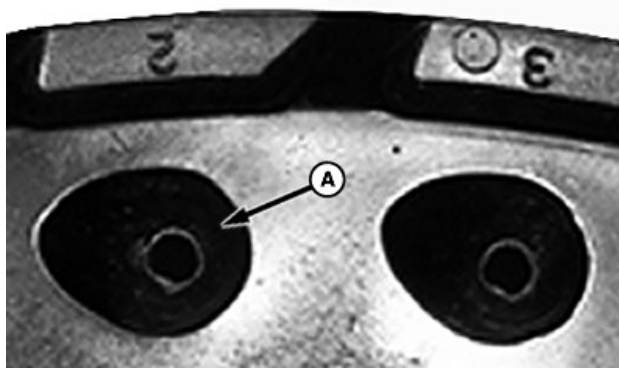
To determine proper disk usage, place a sample of seed into the cells of a seed disk. If two seeds easily fit in the cell, a smaller disk must be used. If one seed does not fit properly in the cell, a larger disk must be used. If two disks work well for a particular seed size, always use the smaller disk. Increase the vacuum level to compensate

for skips (and rough fields). Lower the vacuum level to eliminate doubles.

For seed sizes outside the ranges listed, seed disks for other crops can be used. As with any seed disk change, population and spacing must always be checked in the field.

OJ06074,0000ECD-19-20JAN25

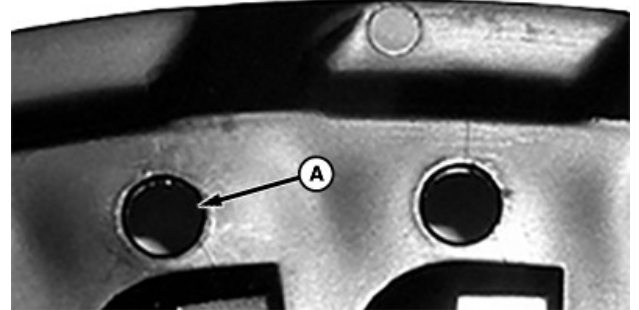
Seed Disk Recommendations for Optimum Performance with Field Corn



Cell-Type Disk Close-Up

A106624—UN—27MAR20

A—Cell-Type



Flat-Type Disk Close-Up

A106625—UN—27MAR20

A—Flat-Type

Flat-type (A) disks only have holes on the flat surface of the disk. The hole quantity and diameter vary by disk. The variety of disks provide optimized control of population and spacing for different seed types, shapes, and sizes. Follow all recommendations for seed meter settings and vacuum level for each disk. Maintain the meter components and disk hub adjustment.

Seed Disk Guide for Field Corn					
Seed Shape	Seeds/kg (seeds/lb)	Disk Name	Part Number (type)	Number of Holes (hole diameter [mm])	If population is difficult to control:
Non-Uniform (mixed shapes)	Mixed Sizes (mixed sizes)	ProMax 40 x 4.5	A52391 (flat-type)	40 (4.5)	If over or under seed populating, adjust the double eliminator.
Uniform Flat	Less than 3308 (1500)	ProMax 40 x 4.5	A52391 (flat-type)	40 (4.5)	If over or under seed populating, adjust the double eliminator.
Uniform Flat	3308—6175 (1500—2800)	Medium Corn	A43215 (cell-type)	30 (3.6)	Adjust vacuum first. If problems persist, switch to an overlapping disk shown in the vacuum level chart. ^a
Uniform Flat	Greater than 6175 (2800)	Small Corn, Sunflower, and Popcorn	H136478 (cell-type)	30 (2.6)	Adjust vacuum first. If problems persist, switch to the Medium Corn Disk (A43215).
Uniform Round	Less than 3308 (1500)	Large Corn	A50617 (cell-type)	30 (3.6)	Adjust vacuum.
Uniform Round	3308—6175 (1500—2800)	Medium Corn	A43215 (cell-type)	30 (3.6)	Adjust vacuum first. If problems persist, switch to Large Corn Disk (A50617).
Uniform Round	Greater than 6175 (2800)	Small Corn, Sunflower, and Popcorn	H136478 (cell-type)	30 (2.6)	Adjust vacuum first. If problems persist, switch to Medium Corn Disk (A43215).

^aFor larger seed sizes less than 3970 seeds/kg (1800 seeds/lb), switch to the Large Corn Disk (A50617). If population control problems persist, switch to the ProMax 40 x 4.5 Disk (A52391) with a double eliminator. For smaller seed sizes greater than 5072 seeds/kg (2300 seeds/lb), switch to the Small Corn, Sunflower, and Popcorn Disk (H136478). If population control problems persist, switch to the ProMax 40 x 4.5 Disk (A52391) with a double eliminator.

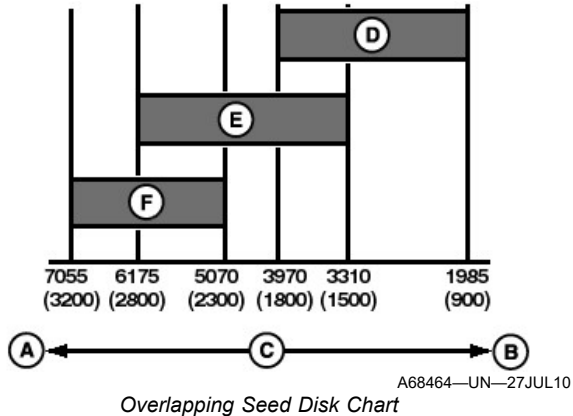
For optimum performance, use the Seed Disk Guide for Field Corn, adjust the seed meter (see Seed Meter Settings), and then refer to the vacuum level chart for an initial vacuum setting.

Nearly 100% of target population is achievable when

the proper vacuum level and the medium corn or large corn seed disks (with seed cells) are used.

Using cell-type disks (medium and large corn disks) requires careful seed selection for optimum performance.

Metering performance is directly dependent on the consistency of seed size. Seeds that are mixed shapes and sizes do not perform optimally with cell-type disks. The ProMax 40 x 4.5 Disk (A52391) with a double eliminator is required for optimum seed singulation and seed release when seeds vary in size.



A—Small Seeds
 B—Large Seeds
 C—Seed Size, Seeds/kg (seeds/lb)
 D—Large Corn Disk
 E—Medium Corn Disk
 F—Small Corn, Sunflower, and Popcorn Disk

NOTE: A knockout wheel is required when using John Deere flat disks.

For seed sizes that overlap the Medium Corn Disk (A43215) and the Large Corn Disk (A50617), choose the medium corn disk for initial setting. If population is difficult to control, switch to the large corn disk.

DIFFICULT TO PLANT SEEDS

IMPORTANT: Avoid population errors. Adjust all settings on the planter and monitor when using a ProMax disk.

- Difficult to plant seeds include varieties with mixed sizes, mixed shapes, combinations of sizes and shapes, long and slender seeds, seeds with a sharp point (germ), and others.
- A ProMax disk is a flat disk used to improve seed singulation with difficult to plant seeds. The ProMax requires higher vacuum levels than cell-type disks and requires the installation of a double eliminator and knockout wheel in each meter assembly.
- Quality-graded seed also requires proper seed disk selection for optimal performance.

PLANTING CORN IN HILLSIDE CONDITIONS

Diminished meter performance is possible on steep hillsides or when changing directions on a hillside. If the left side of machine is the downhill side, skips are possible due to the seeds falling away from the seed

disk and a smaller seed reservoir next to the seed disk. If the right side of machine is the downhill side, overpopulation is possible due to the seeds being forced against the seed disk and a large seed reservoir next to the seed disk. To maximize seed meter performance on hillsides, follow these steps:

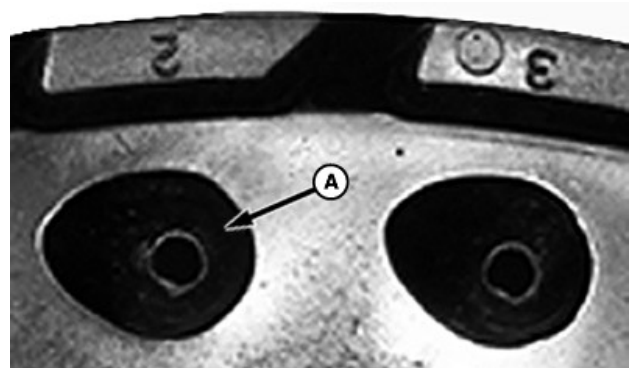
- Use a disk with the fewest holes possible when using cell-type disks. Fewer holes provide less opportunity for doubles.
- Use round seed. Round seed remains in the cell of a cell-type disk better and reduces the chance for doubles.

IMPORTANT: Avoid population errors. Adjust all settings on the planter and monitor when using a ProMax disk.

- If round seed is not available or hillsides are steep, use a flat-type disk with a double eliminator. The flat-type disk has no seed cells and requires higher vacuum levels, a double eliminator, and a knockout wheel. The double eliminator is used to remove one of two seeds covering a single hole in a seed disk. The knockout wheel is used to remove debris from holes in a seed disk.

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Seed Disk Recommendations for Crops other than Field Corn

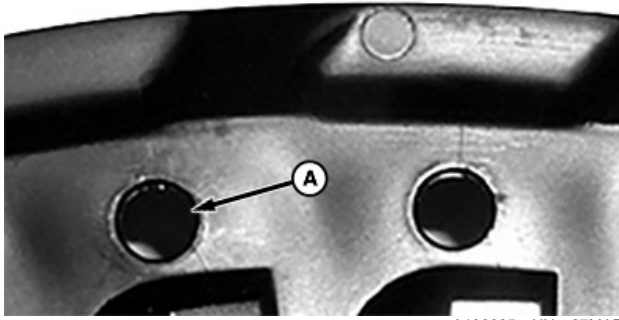


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Cell-Type Disk Close-Up

A—Cell-Type

Vacuum seed disks come in two types, cell-type and flat-type. Cell-type (A) disks have recessed cells around each vacuum hole in the disk. The cell sizes, hole quantity, and hole diameter vary by disk.



A106625—UN—27MAR20

Flat-Type Disk Close-Up

A—Flat-Type

Flat-type (A) disks only have holes on the flat surface of the disk. The hole quantity and diameter vary by disk. The various disks provide optimized control of population and spacing for different seed types, shapes, and sizes.

NOTE: Flat-type disks require higher vacuum than cell-type disks.

Follow all recommendations for seed meter settings and vacuum level for each disk. Maintain the meter components and disk hub adjustment.

John Deere flat-type disks meter a wide variety of seed sizes and shapes, including crops that are non-approved for the CCS system. For optimum performance, select the seed disk, adjust the seed meter (see Seed Meter Settings), and then refer to the vacuum level chart for the initial vacuum setting.

Sweet Corn

Disk Name	Part Number (type)	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.				
ProMax 40 x 4.5	A52391 (flat-type)	<8600 (<3900)	40	4.5
ProMax 40 x 3.75	A52390 (flat-type)	>7700 (>3500)	40	3.75

Popcorn

Disk Name	Part Number (type)	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.				
Small Corn, Sunflower,	H136478 (cell-type)	5500—9900 (2500—4500)	30	2.6

Disk Name	Part Number (type)	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
and Popcorn				
Sorghum	A43066 (cell-type)	>9900 (>4500)	45	1.5
On difficult to plant seeds, the ProMax 40 x 4.5 (A52390) improves performance. Sometimes a Medium Corn Disk (A43215) or Small Corn, Sunflower, and Popcorn Disk (H136478) can provide satisfactory performance.				

Confection Sunflower

Disk Name	Part Number (type)	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.				
ProMax 40 x 4.5	A52391 (flat-type)	5000—7200 (2250—3250)	40	4.5
ProMax 40 x 3.75	A52390 (flat-type)	7200—11 600 (3250—5250)	40	3.75

Oil Sunflower

Disk Name	Part Number (type)	Seed Sizes	Number of Holes	Hole Diameter (mm)
NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.				
Small Corn, Sunflower, and Popcorn	H136478 (cell-type)	4 (small) 3 (medium) 2 (large)	30	2.6
ProMax 40 x 2.5	A102717 (flat-type)	4 (small) 3 (medium) 2 (large)	40	2.5
For oil sunflower seed sizes 1 (extra large) and 5 (extra small), see the recommendations for confectionary sunflowers. Small Corn, Sunflower, and Popcorn Disk (H136478) is recommended for oil sunflower seed sizes 4 (small), 3 (medium), and 2 (large). Small Corn, Sunflower, and Popcorn Disk (H136478) is not recommended for oil sunflower seed sizes 1 (extra large) and 5 (extra small) or confectionary sunflower seeds.				

Wheat

Disk Name	Part Number (type)	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.				
Wheat	A124486 (cell-type)	22 710—37 920 (10 300—17 200)	210	2
For small seeds that result in doubles on the cotton and small soybean disk, using a Small Edible Bean Disk (A52903) with the double eliminator is recommended. The ProMax 64 disk has better seed singulation than the Cotton and Small Soybean Disk (A56251). The ProMax 64 disk is				

Operating the MaxEmerge 5 Seed Meter

Disk Name	Part Number (type)	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
recommended for 91, 97, and 102 cm (36, 38, and 40 in) rows. If seed singulation is below expectations when using wax-based meter lubrication, try a talc and graphite blend (see the Meter Lubrication section).				

Drilled Cotton

Disk Name	Part Number (type)	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
<i>NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.</i>				
Cotton and Small Soybean	A56251 (cell-type)	8800—13 200 (4000—6000)	64	2.5
Low-Rate Cotton	A70163 (cell-type)	8800—13 200 (4000—6000)	32	2.5
ProMax 50 x 3.75	A52903 (flat-type)	3520—7260 (1600—3300)	50	3.75
ProMax 64 x 2.8	A121489 (flat-type)	7260—13 900 (3300—6300)	64	2.8
For small seeds that result in doubles on the cotton and small soybean disk, using a Small Edible Bean Disk (A52903) with the double eliminator is recommended. The ProMax 64 disk has better seed singulation than the Cotton and Small Soybean Disk (A56251). The ProMax 64 disk is recommended for 91, 97, and 102 cm (36, 38, and 40 in) rows. If seed singulation is below expectations when using wax-based meter lubrication, try a talc and graphite blend (see the Meter Lubrication section).				

4-Seed Hilldrop Cotton

Disk Name	Part Number (type)	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
<i>NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.</i>				
4-Seed Hilldrop Cotton	A65622 (cell-type)	8800—13 200 (4000—6000)	48	2.5
For small seeds that result in dropping more than four seeds, use of the 2-seed hilldrop cotton disk is recommended.				

2-Seed Hilldrop Cotton

Disk Name	Part Number (type)	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
<i>NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.</i>				
2-Seed Hilldrop Cotton	A74961	8800—13 200 (4000—6000)	64	2.5

Soybean

Disk Name	Part Number (type)	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
<i>NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.</i>				
Soybean	A42586 (cell-type)	<7700 (<3500)	108	4.4
Cotton and Small Soybean	A56251 (cell-type)	>7700 (>3500)	64	2.5
ProMax 64 x 4.5	A105848 (flat-type)	<7700 (<3500)	64	4.5
For smaller seed sizes that result in doubles, Cotton and Small Soybean Disk (A56251) can provide improved performance. The ProMax 64 disk is recommended for narrow row spacing with the following rates and ground speeds.				

ProMax 64			
Maximum Rates for Row Spacing and Ground Speed			
	38 cm (15 in)	51 cm (20 in)	56 cm (22 in)
Ground Speed kPh (mph)	Population Seeds/ha (acre)		
6.5 (4)	733 900 (297 000)	550 400 (222 750)	500 400 (202 500)
7.25 (4.5)	652 400 (264 000)	489 300 (198 000)	444 800 (180 000)
8 (5)	587 100 (237 600)	440 300 (178 200)	400 300 (162 000)
9 (5.5)	533 700 (216 000)	400 300 (162 000)	363 900 (147 273)
9.75 (6)	489 300 (198 000)	367 000 (148 500)	333 600 (135 000)
10.5 (6.5)	451 600 (182 769)	338 700 (137 077)	307 900 (124 615)
11.25 (7)	419 400 (169 714)	314 500 (127 286)	285 900 (115 714)

Low-Rate Sorghum

Disk Name	Part Number (type)	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
<i>NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.</i>				
Low-Rate Sorghum	A43066 (cell-type)	22 000—35 300 (10 000—16 000)	45	1.5
For smaller seed sizes, a Medium Sugar Beet Disk (H136445) or a Small Sugar Beet Disk (A51712) can provide improved performance.				

High-Rate Sorghum

Disk Name	Part Number (type)	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.				
High-Rate Sorghum	A52802 (cell-type)	22 000—35 300 (10 000—16 000)	90	1.5

Canola

Disk Name	Part Number (type)	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.				
Canola	A119979 (cell-type)	189 200—199 200 (86 000—96 000)	90	2.5

Monogerm Sugar Beet

Disk Name	Part Number (type)	Seed Size mm (in)	Number of Holes	Hole Diameter (mm)
NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.				
Small Sugar Beet	A51712 (cell-type)	2.6—3.2 (6.5/64—8/64)	45	1.5
Medium Sugar Beet	H136445 (cell-type)	3.0—3.6 (7.5/64—9/64)	45	1.5
Large Sugar Beet	A51713 (cell-type)	3.4—4.0 (8.5/64—10/64)	45	1.6

Pelleted Sugar Beet

Disk Name	Part Number (type)	Seed Size mm (in)	Number of Holes	Hole Diameter (mm)
NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.				
Medium Sugar Beet	H136445 (cell-type)	3.2—4.0 (8/64—10/64)	45	1.5
Large Sugar Beet	A51713 (cell-type)	3.6—4.6 (9/64—11.5/64)	45	1.5
Sorghum	A43066 (cell-type)	3.6—4.6 (9/64—11.5/64)	45	1.5

Small Common Edible Bean and Pea with Disk H136468 (cell-type)

Seed	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.			
Black Turtle	4180—5720 (1900—2600)	108	3.5
Navy	3960—5500 (1800—2500)	108	3.5
Pink Viva	3740—4290 (1700—1950)	108	3.5
Small White	5280—6600 (2400—3000)	108	3.5
Smooth Pea	6160—7040 (2800—3200)	108	3.5

Medium Common Edible Bean and Pea with Disk A51696 (cell-type)

Seed	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.			
Black-Eyed Pea	3520—4400 (1600—2000)	56	4
Green Bean (garden)	2200—4840 (1000—2200)	56	4
Kidney (small)	2530—3080 (1150—1400)	56	4
Pinto	1760—3080 (800—1400)	56	4
Red Mexican (small)	2640—3300 (1200—1500)	56	4
Wrinkle Pea	3960—5060 (1800—2300)	56	4

Large Common Edible Bean and Peanut with Disk H136092 (cell-type)

Seed	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.			
Cranberry Bean	1760—2640 (800—1200)	50	4.8
Kidney (medium)	2090—2530 (950—1150)	50	4.8
Great Northern	1980—2860 (900—1300)	50	4.8
Garbanzo	1650—1980 (750—900)	50	4.8
Peanut (runner)	1430—1760 (650—800)	50	4.8

Seed	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
Peanut (Spanish)	2200—2750 (1000—1250)	50	4.8

Small Common Edible Bean and Pea with ProMax 50 X 3.75 Disk (A52903)

Seed	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
<i>NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.</i>			
Green Garden (small)	3520—5280 (1600—2400)	50	3.75
Black Turtle	4180—5720 (1900—2600)	50	3.75
Navy	3960—5720 (1800—2600)	50	3.75
Small White	5280—7260 (2400—3300)	50	3.75
Wrinkle Pea	3740—5060 (1700—2300)	50	3.75

Medium Common Edible Bean and Pea with ProMax 50 X 4.5 Disk (A52904)

Seed	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
<i>NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.</i>			
Green Garden (medium)	2640—3520 (1200—1600)	50	4.5
Small Red	2640—3300 (1200—1500)	50	4.5
Pinto	All Sizes	50	4.5
Medium Kidney	2530—3080 (1150—1400)	50	4.5
Lima	2640—3520 (1200—1600)	50	4.5
Pink Viva	3740—4180 (1700—1900)	50	4.5
Black-Eyed Pea	3520—4400 (1600—2000)	50	4.5
Smooth Pea	6160—7040 (2800—3200)	50	4.5

Large Common Edible Bean with ProMax 50 X 5.0 Disk (A52878)

Seed	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
<i>NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.</i>			
Green Garden (large)	1540—2640 (700—1200)	50	5.0
Cranberry	1760—2640 (800—1200)	50	5.0
Large Kidney	1870—2530 (850—1150)	50	5.0
Great Northern	1980—2860 (900—1300)	50	5.0
Garbanzo	1650—1980 (750—900)	50	5.0

Virginia Peanut

Disk Name	Part Number (type)	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
<i>NOTE: On planters equipped with CCS, see the CCS section for nozzle and elbow recommendations.</i>				
Virginia Peanut	H138722 (cell-type)	1100—1760 (500—800)	46	5.3

Cucumber

Disk Name	Part Number (type)	Seeds/kg (seeds/lb)	Number of Holes	Hole Diameter (mm)
Sorghum	A43066 (cell-type)	22 000—35 300 (10 000—16 000)	45	1.5
Blank	A52554 (flat-type)	22 000—35 300 (10 000—16 000)	60	2
To improve performance with the blank disk, use small seed tube inserts.				

Blank Seed Disk

The Blank ProMax Seed Disk (A52554) (flat-type) allows custom drilling of a specific hole size for specialty crops. (See your John Deere dealer or other service provider for additional information.)

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Optimize Seed Spacing

Match the seed disk to the seed for optimal meter performance. Seed spacing depends on ground conditions, meter speed, and ground speed.

IMPORTANT: Avoid poor seed spacing. Avoid rough ground conditions, high metering speeds, and high ground speeds. The operator determines if the planting timeline is more important than optimal spacing.

To optimize the seed spacing, observe the following:

GROUND CONDITIONS—To achieve optimal spacing, slow down in rough ground conditions.

METER SPEED—With high seed populations, reduce ground speed to reduce meter speed.

GROUND SPEED—Ground speed directly affects in-ground seed spacing. As the ground speeds rise above 8 km/h (5 mph), seed spacing performance decreases.

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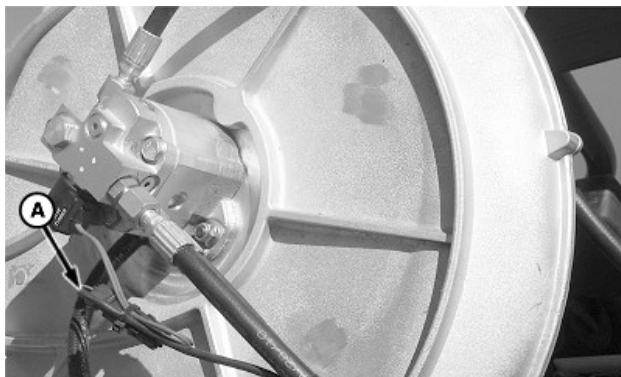
Check Meter Performance

IMPORTANT: After a Seed Disk is selected, in ground spacing checks are required to determine the level of metering performance. (See Checking Seed Population section.)

The seed-disk selection guidelines are recommendations resulting from tests with seed from various sources. Because of changes in seed shape and size from year to year, there is always the possibility that an alternative disk provides better performance.

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Install The Hopper Extension (Mini-Hopper Only)



A—CCS™ Solenoid Harness

A86748—UN—17JUN15

IMPORTANT: Avoid interference with the frame tube. Do not use the mini-hopper extension on the 1795 rockshaft near the mainframe.

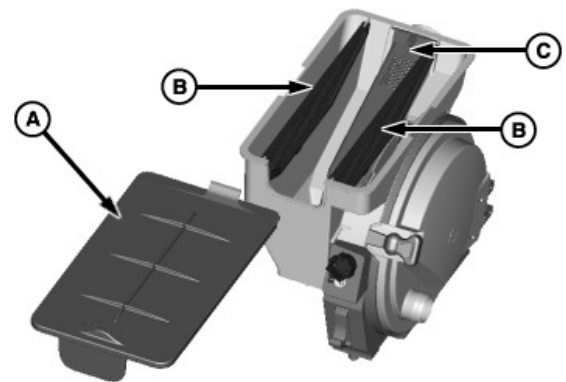
NOTE: When sugar beets are used or when using seed not approved for CCS™ seed tank delivery, the seed must be added to the hoppers, not the CCS™ tank. The extensions allow for more seeds to be planted. The extensions are useful when planting seed plots.

Disable the CCS™ blower when using the mini-hopper extension.

Do not install more than one extension on a mini-hopper.

When filling the mini-hopper extension, do not fill the seed over the screen vent holes.

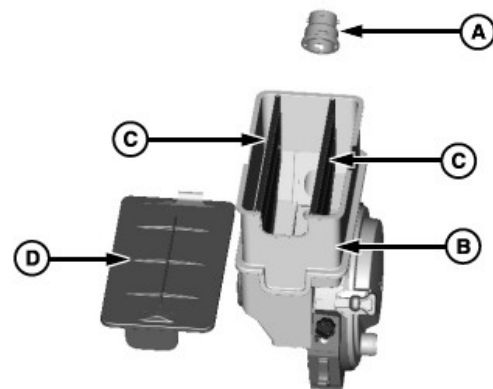
1. Disconnect harness (A) to disable the CCS™ blower.



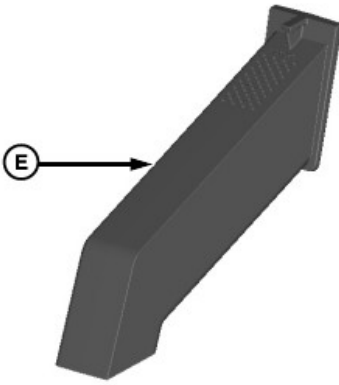
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A—Lid
B—Screened Dividers
C—Discharge Tube

2. Remove the lid (A), the screened dividers (B), and the discharge tube (C).



A78493—UN—31JUL13



A—Cap
B—Mini-Hopper Extension
C—Non-Screened Dividers
D—Lid
E—Discharge Tube

A78494—UN—31JUL13

3. Install cap (A) between the CCS™ tube and the hose.

NOTE: Mini-hopper extensions are compatible with the CCS™ delivery system. To return to CCS™ system use, install the discharge tube (E) removed in step 2, reconnect the CCS™ blower harness, and remove the cap (A) (if used).

NOTE: Do not fill the mini hopper higher than the bottom of the screens. If seeds restrict the airflow through the screens, meter performance suffers.

4. Install extension (B) onto the mini-hopper.
5. Install the dividers (C) into the mini-hopper and the extension (B).
6. Reinstall the lid (D).

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Set the Vacuum Level

Vacuum Level Chart	
Crop	Vacuum Level, mm (in) of Water
Sugar Beet	See Chart
Corn	See Chart
Sweet Corn	See Chart
Popcorn	See Chart
Common Edible Beans, Peas, and Peanuts with an Edible Bean Cell-Type Seed Disk	Use 203 (8) for common edible beans except the following: Use 152 (6) for small common edible beans with 6160 seeds/kg (2800 seeds/lb) or more. Use 152 (6) for medium common edible beans with 3960 seeds/kg (1800 seeds/lb) or more.
Common Edible Beans and Peas with a ProMax Seed Disk	See Chart
Wheat	See Chart
Cotton (cell-type disk)	203 (8)
Cotton Hilddrop	203 (8)
Cotton with a ProMax Seed Disk	See Chart
Runner, Spanish, and Virginia Peanuts	See Chart
Sorghum	203 (8)
High-Rate Sorghum	203 (8)
Canola	Use 203 (8) when planting 556 000—667 200 seeds/ha (225 000—270 000 seeds/acre). Use 254 (10) when planting 667 200—889 600 seeds/ha (270 000—360 000 seeds/acre).
Oil Sunflower	See Chart
Confection Sunflower	See Chart
Soybean	203 (8)
Soybean with a Cotton Disk	127—178 (5—7)
Soybean with a ProMax 64 Disk	280—560 (11—22)
Cucumber with a Sorghum Disk	254 (10)
Cucumber with a Blank (custom) Disk	203—305 (8—12)

Some seed sizes, seed shapes, and situations require vacuum levels slightly higher or lower than the settings shown. Always verify the vacuum level with a field

check. The vacuum charts are a guide and are accurate in most conditions.

Blower control is determined by the blower configuration and hose attachment to the tractor. Multiple vacuum

blowers on one selective control valve (SCV) use in-line flow control valves for adjustment. A single blower on an SCV uses the tractor flow control for adjustment.

Use the vacuum level charts for the initial vacuum setting and adjust the level as needed. The charts are based on a typical ground speed and population rate. If high population rates or high ground speeds affect seed placement, increase the vacuum level. If low population rates or low ground speeds affect seed placement, decrease the vacuum level.

NOTE: At any setting, the vacuum level is slightly lower when the hydraulic oil is cold or when seeds are not covering holes in the seed disk. Make the final setting after the oil has warmed and the seed disks are full.

If rough field conditions cause seed skips, an increase in vacuum can help. Extra downforce can improve the ride quality, but do not exceed a level of downforce that degrades the seed furrow. If all the possible adjustments do not reduce seed skips, reduce ground speed.

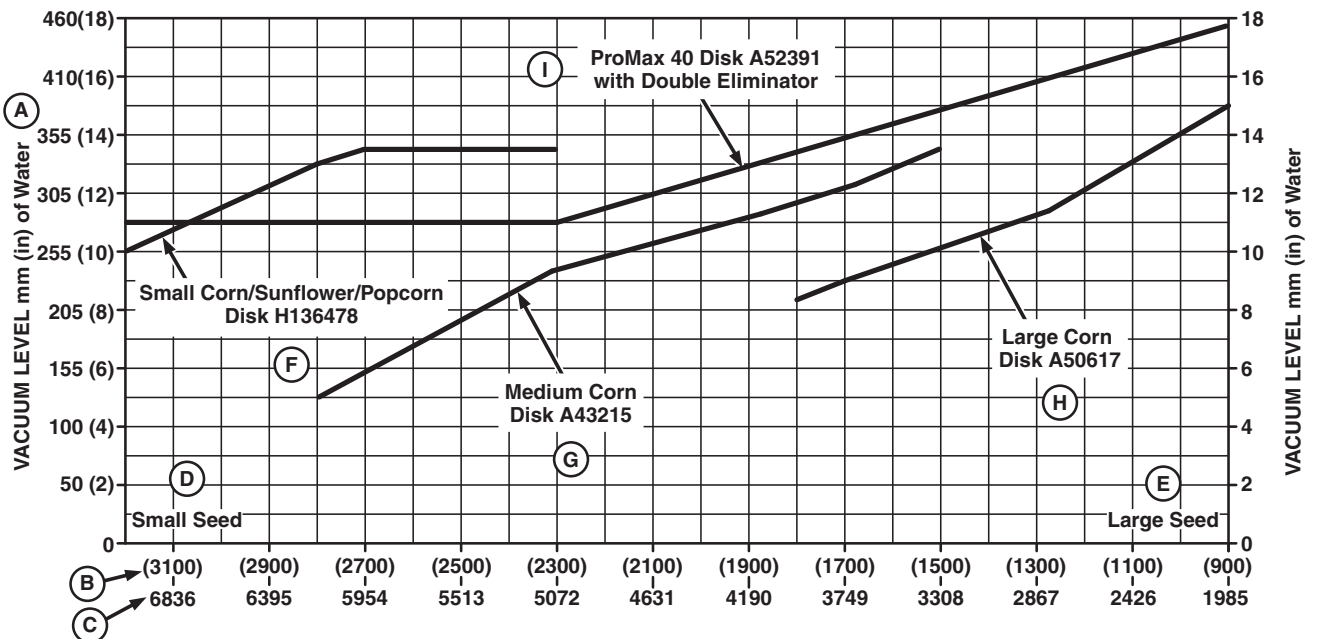
The vacuum level is indicated on the vacuum gauge or on the screen.

Set the vacuum level as follows:

1. Verify that the seed meters are set up for the crop.
2. Engage the vacuum (SCV lever in the detent position). Let the oil warm (approximately 15 minutes).
3. Fill all the tanks and hoppers with seed.
4. Plant a short distance or use the on-screen meter fill function to fill the seed disks with seed.
5. Adjust the vacuum level manually with the tractor or the in-line valves, or activate the vacuum automation on the screen.
6. To refine the vacuum level (when using electric driven seed meters), use the runoff feature on the screen.

OUC06064,000015A-19-05APR23

Vacuum Level for Field Corn Using H136478, A43215, A50617, or A52391 Seed Disks



A106657—UN—01APR20

A—Vacuum Level, mm (in) of Water
B—Seeds per Pound
C—Seeds per Kilogram
D—Small Seed
E—Large Seed

F—Small Corn, Sunflower, and Popcorn Disk
G—Medium Corn Disk
H—Large Corn Disk
I—ProMax 40 Disk

Determine the vacuum level based on the seeds per kg (lb). To calculate the seeds per kg (lb), divide the number of seeds in a bag by the weight of the bag.

EXAMPLE: If there are 4190 seeds per kg (1900 seeds per lb), the chart indicates a vacuum level of 280 mm (11 in) with a medium corn disk.

Use the vacuum level charts for the initial vacuum setting and adjust the level as needed. The charts are based on a typical ground speed and population rate. If high population rates or high ground speeds affect seed placement, increase the vacuum level. If low population rates or low ground speeds affect seed placement, decrease the vacuum level.

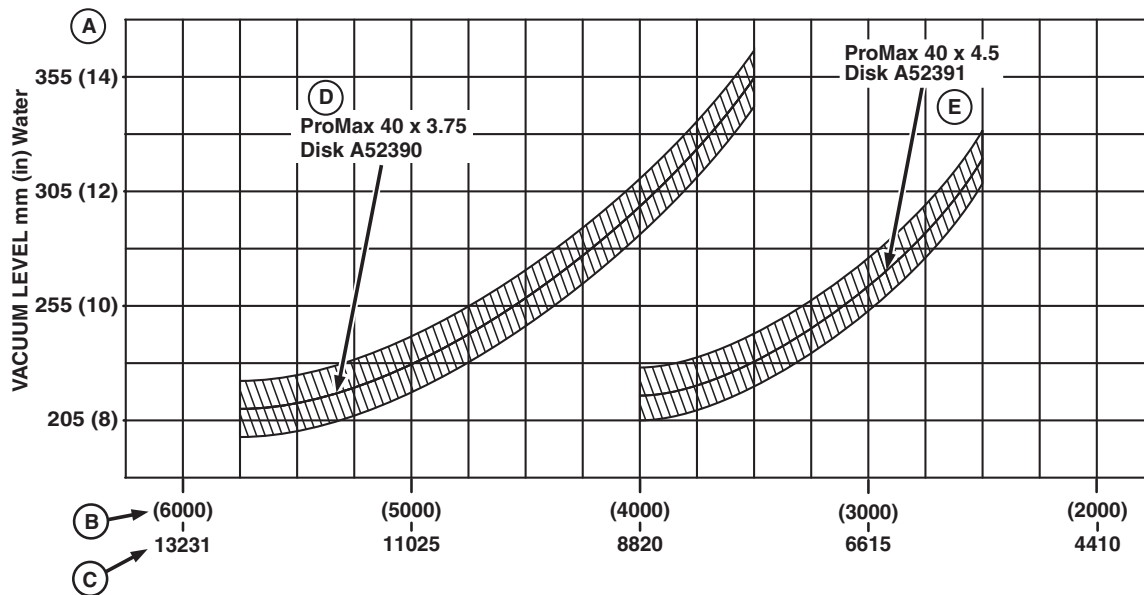
If rough field conditions cause seed skips, an increase in vacuum can help. Extra downforce can improve the

ride quality, but do not exceed a level of downforce that degrades the seed furrow. If all the possible adjustments do not reduce seed skips, reduce ground speed.

Where the medium and large corn disks overlap, select the medium seed disk initially. If the target rate is difficult to control, switch to the large corn disk.

MH69740,000055C-19-15APR20

Vacuum Level for Sweet Corn



A106660—UN—01APR20

A—Vacuum Level, mm (in) of Water
B—Seeds per Pound
C—Seeds per Kilogram

Determine the vacuum level based on the seeds per kg (lb). To calculate the seeds per kg (lb), divide the number of seeds in a bag by the weight of the bag.

EXAMPLE: If there are 9370 seeds per kg (4250 seeds per lb), the chart indicates a vacuum level of 280 mm (11 in) with a ProMax 40 x 3.75 disk.

Use the vacuum level charts for the initial vacuum setting and adjust the level as needed. The charts are based on a typical ground speed and population rate. If high population rates or high ground speeds affect seed

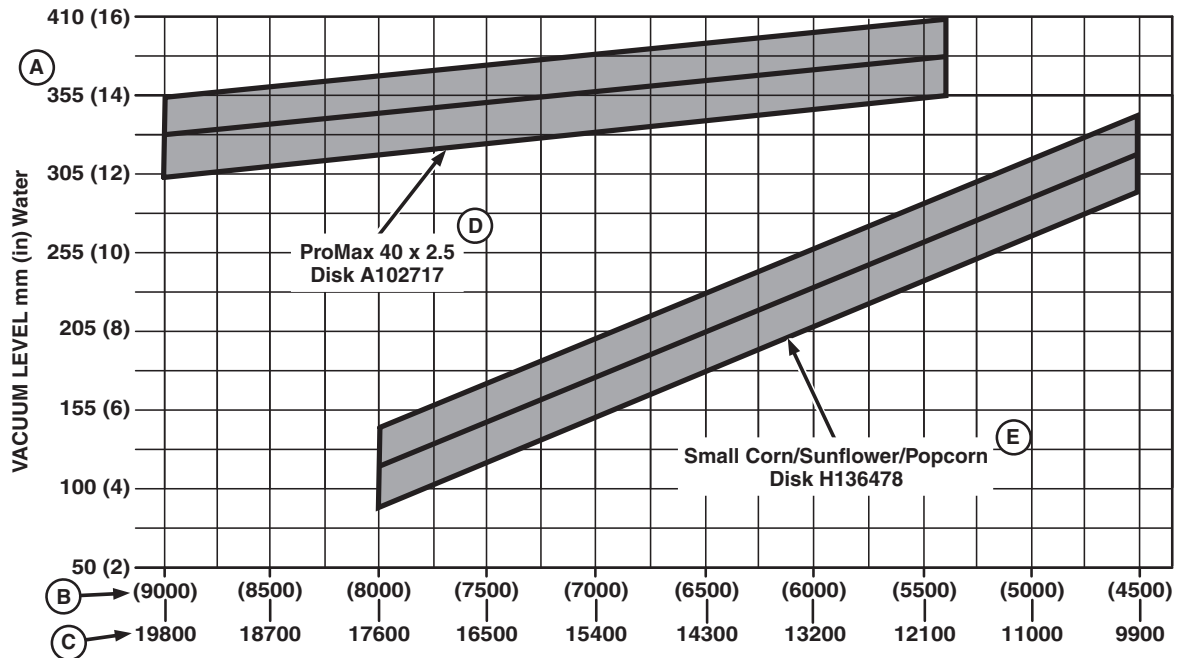
D—ProMax 40 x 3.75 Disk
E—ProMax 40 x 4.5 Disk

placement, increase the vacuum level. If low population rates or low ground speeds affect seed placement, decrease the vacuum level.

If rough field conditions cause seed skips, an increase in vacuum can help. Extra downforce can improve the ride quality, but do not exceed a level of downforce that degrades the seed furrow. If all the possible adjustments do not reduce seed skips, reduce ground speed.

MH69740,000055F-19-15APR20

Vacuum Level for Oil Sunflower



A106658—UN—01APR20

A—Vacuum Level, mm (in) of Water

B—Seeds per Pound

C—Seeds per Kilogram

Determine the vacuum level based on the seeds per kg (lb). To calculate the seeds per kg (lb), divide the number of seeds in a bag by the weight of the bag.

EXAMPLE: If there are 12 100 seeds per kg (5500 seeds per lb), the chart indicates a vacuum level of 254 mm (10 in) with the small corn, sunflower, and popcorn disk (E).

Use the vacuum level charts for the initial vacuum setting and adjust the level as needed. The charts are based on a typical ground speed and population rate. If high population rates or high ground speeds affect seed

D—ProMax 40 x 2.5 Disk

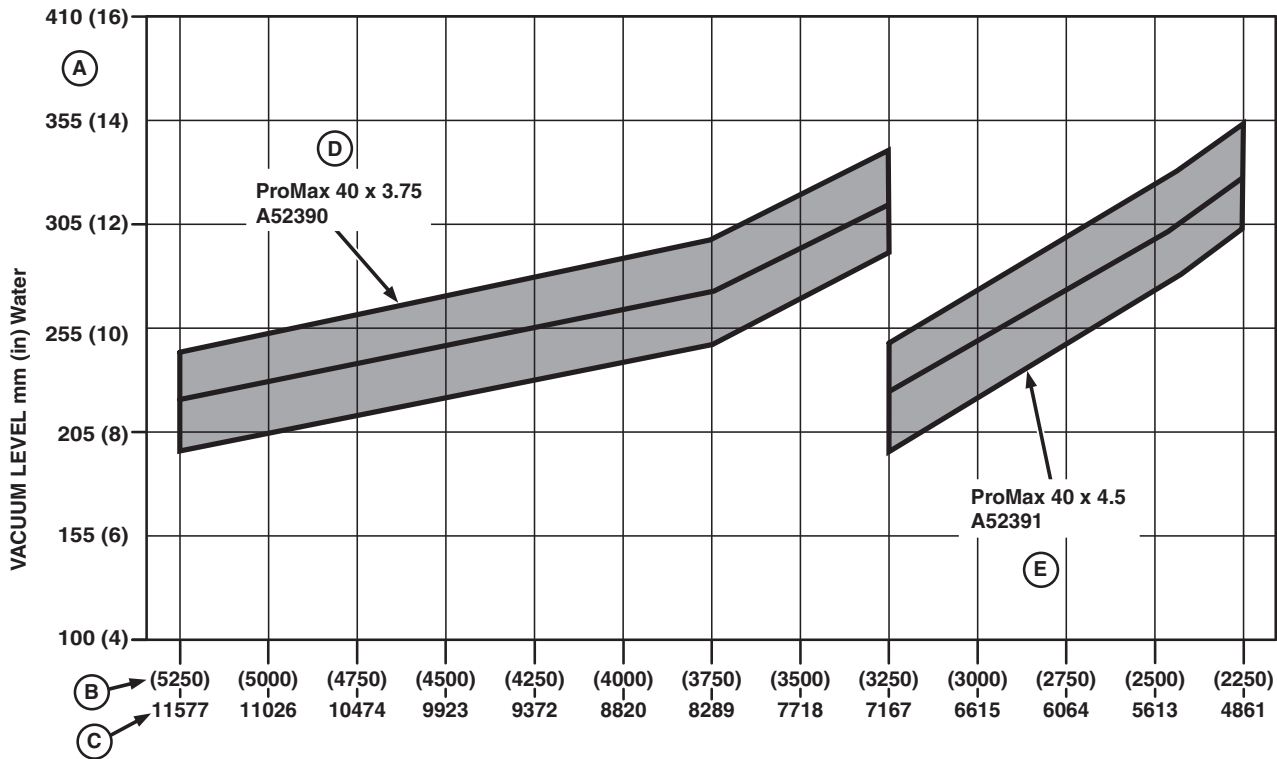
E—Small Corn, Sunflower, and Popcorn Disk

placement, increase the vacuum level. If low population rates or low ground speeds affect seed placement, decrease the vacuum level.

If rough field conditions cause seed skips, an increase in vacuum can help. Extra downforce can improve the ride quality, but do not exceed a level of downforce that degrades the seed furrow. If all the possible adjustments do not reduce seed skips, reduce ground speed.

MH69740,000055D-19-15APR20

Vacuum Level for Confectionary Sunflower



A106659—UN—01APR20

A—Vacuum Level, mm (in) of Water
B—Seeds per Pound
C—Seeds per Kilogram

Determine the vacuum level based on the seeds per kg (lb). To calculate the seeds per kg (lb), divide the number of seeds in a bag by the weight of the bag.

EXAMPLE: If there are 9372 seeds per kg (4250 seeds per lb), the chart indicates a vacuum level of 254 mm (10 in) with a ProMax 40 x 3.75 disk.

Use the vacuum level charts for the initial vacuum setting and adjust the level as needed. The charts are based on a typical ground speed and population rate. If high population rates or high ground speeds affect seed

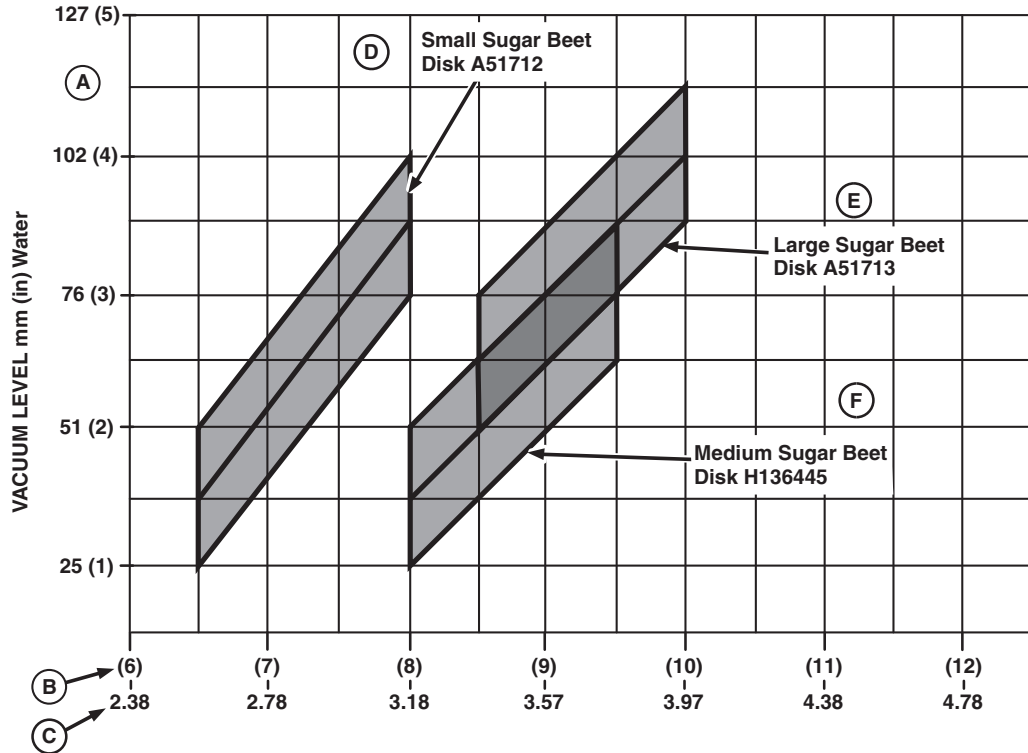
D—ProMax 40 x 3.75 Disk
E—ProMax 40 x 4.5 Disk

placement, increase the vacuum level. If low population rates or low ground speeds affect seed placement, decrease the vacuum level.

If rough field conditions cause seed skips, an increase in vacuum can help. Extra downforce can improve the ride quality, but do not exceed a level of downforce that degrades the seed furrow. If all the possible adjustments do not reduce seed skips, reduce ground speed.

MH69740,000055E-19-15APR20

Vacuum Level for Sugar Beet



A96362—UN—04MAY17

A—Vacuum Level, mm (in) of Water
B—Seed Diameter (per 64th of an inch)
C—Seed Diameter (per Millimeter)

D—Small Sugar Beet
E—Large Sugar Beet
F—Medium Sugar Beet

EXAMPLE: If the seed label indicates a medium seed diameter of 3.6 mm (9/64 in), set the vacuum level to 64 mm (2.5 in) with the medium sugar-beet disk.

Use the vacuum level charts for the initial vacuum setting and adjust the level as needed. The charts are based on a typical ground speed and population rate. If high population rates or high ground speeds affect seed placement, increase the vacuum level. If low population rates or low ground speeds affect seed placement, decrease the vacuum level.

If rough field conditions cause seed skips, an increase in vacuum can help. Extra downforce can improve the ride quality, but do not exceed a level of downforce that degrades the seed furrow. If all the possible adjustments do not reduce seed skips, reduce ground speed.

MH69740.0000563-19-03MAY17

Vacuum Level for Cotton Using a ProMax Disk

Disk	Seed Size	Vacuum Range
ProMax	Recommendations Seeds/kg (Seeds/lb)	mm (in) of Water
50 x 3.75 (A52903)	3520—7260 (1600—3300)	305—457 (12—18)
64 x 2.8 (A121489)	6610—8600 (3000—3900)	280—508 (11—20)
64 x 2.8 (A121489)	8600—10 360 (3900—4700)	228—407 (9—16)
64 x 2.8 (A121489)	10 360—14 330 (4700—6500)	152—305 (6—12)

NOTE: To maintain the vacuum levels when using a ProMax 50 disk, do not exceed 12 row units per vacuum blower.

Determine the vacuum level based on the seeds per kg (lb). To calculate the seeds per kg (lb), divide the number of seeds in a bag by the weight of the bag.

Use the vacuum level charts for the initial vacuum setting and adjust the level as needed. The charts are based on a typical ground speed and population rate. If high population rates or high ground speeds affect the seed placement, increase the vacuum level. If low population rates or low ground speeds affect the seed placement, decrease the vacuum level.

If rough field conditions cause seed skips, an increase in the vacuum level can help. Extra downforce can improve the ride quality, but do not exceed a level of downforce that degrades the seed furrow. If all the possible adjustments do not reduce the seed skips, reduce the ground speed.

OUO6074,00011D7-19-31MAR21

Vacuum Level for Wheat

Seed Size Seeds/kg (Seeds/lb)	Seed Size Seeds/kg (Seeds/lb)	Seed Size Seeds/kg (Seeds/lb)	Seed Size Seeds/kg (Seeds/lb)
22 710 (10 300)	27 560 (12 500)	29 760 (13 500)	37 920 (17 200)
Vacuum mm (in) of Water	Vacuum mm (in) of Water	Vacuum mm (in) of Water	Vacuum mm (in) of Water
203 (8)	203 (8)	178 (7)	51 (2)
305 (12)	305 (12)	254 (10)	76 (3)
381 (15)	356 (14)	279 (11)	102 (4)
457 (18)	432 (17)	305 (12)	152 (6)
559 (22)	559 (22)	356 (14)	178 (7)
660 (26)	584 (23)	457 (18)	279 (11)

Determine the vacuum level based on the seeds per kg (lb). To calculate the seeds per kg (lb), divide the number of seeds in a bag by the weight of the bag.

Use the vacuum level charts for the initial vacuum setting and adjust the level as needed. The charts are based on a typical ground speed and population rate. If high population rates or high ground speeds affect the seed placement, increase the vacuum level. If low population rates or low ground speeds affect the seed placement, decrease the vacuum level.

If rough field conditions cause seed skips, an increase in the vacuum level can help. Extra downforce can improve the ride quality, but do not exceed a level of downforce that degrades the seed furrow. If all the possible adjustments do not reduce the seed skips, reduce the ground speed.

WP29706,0000F59-19-10FEB22

Vacuum Level for Common Edible Beans and Peas Using a ProMax 50 Disk

Vacuum Chart Using the ProMax Edible Beans and Peas Disk						
Crop	ProMax 50 Disks			Vacuum Range	Double Eliminator	Seed Size
	50 x 3.75 (A52903)	50 x 4.5 (A52904)	50 x 5 (A52878)	mm (in) of Water	Percent of Hole Covered	Recommendations Seeds/kg (Seeds/lb)
Small Common Edible Beans						
Small Green Garden	X			406—457 (16—18)	0—50	3528—5292 (1600—2400)
Black Turtle	X			406—457 (16—18)	0—50	4190—5733 (1900—2600)
Navy	X			406—457 (16—18)	0—50	3969—5733 (1800—2600)
Small Whites	X			305—356 (12—14)	0—50	5292—7277 (2400—3300)
Pink Viva		X		457—508 (18—20)	0—50	3749—4190 (1700—1900)
Medium Common Edible Beans						
Medium Green Garden		X		457—508 (18—20)	0—50	2649—3528 (1200—1600)
Small Red		X		457—508 (18—20)	0—50	2649—3308 (1200—1500)
Pinto		X		508—559 (20—22)	0—50	All Sizes
Medium Kidney		X		356—406 (14—16)	0—50	2536—3087 (1150—1400)
Lima		X		457—508 (18—20)	0—50	2649—3528 (1200—1600)
Large Common Edible Beans						
Large Green Garden			X	508—559 (20—22)	0—25	1544—2649 (700—1200)
Cranberry			X	508—559 (20—22)	0—50	1764—2649 (800—1200)
Large Kidney			X	457—508 (18—20)	0—50	1874—2536 (850—1150)
Great Northern			X	457—508 (18—20)	0—50	1985—2867 (900—1300)
Garbanzo			X	406—457 (16—18)	0—50	1654—1985 (750—900)
Edible Peas						
Black-Eyed		X		406—457 (16—18)	0—50	3528—4410 (1600—2000)
Smooth		X		356—406 (14—16)	0—50	6174—7056 (2800—3200)
Wrinkle	X			305—356 (12—14)	0—50	3749—5072 (1700—2300)

NOTE: To maintain the vacuum levels when using a ProMax 50 disk, do not exceed 12 row units per vacuum blower.

A Vacuum Gauge (AA38407) with a 762 mm (30 in) vacuum range is available from your John Deere dealer or other service providers.

Determine the vacuum level based on the seeds per kg (lb). To calculate the seeds per kg (lb), divide the number of seeds in a bag by the weight of the bag.

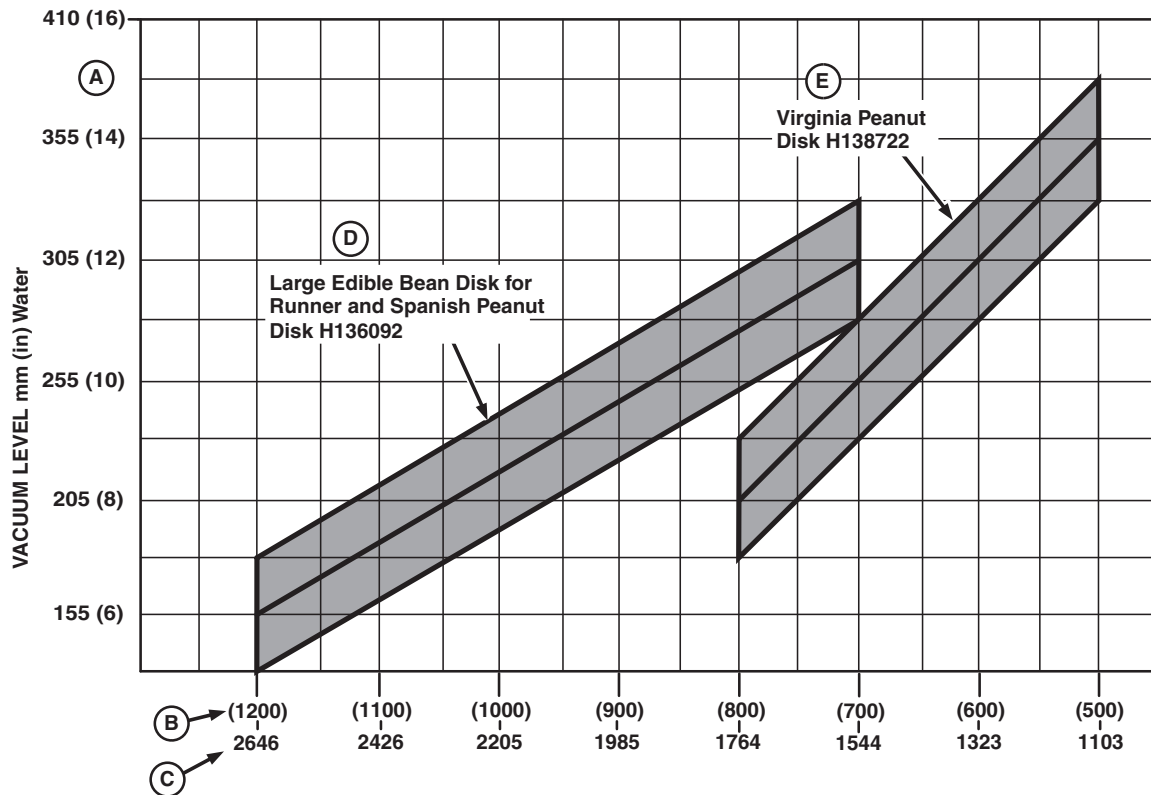
Use the vacuum level charts for the initial vacuum setting and adjust the level as needed. The charts are based on a typical ground speed and population rate. If

high population rates or high ground speeds affect the seed placement, increase the vacuum level. If low population rates or low ground speeds affect the seed placement, decrease the vacuum level.

If rough field conditions cause seed skips, an increase in the vacuum level can help. Extra downforce can improve the ride quality, but do not exceed a level of downforce that degrades the seed furrow. If all the possible adjustments do not reduce the seed skips, reduce the ground speed.

MH69740,0000564-19-20JAN25

Vacuum Level for Peanuts



A96361—UN—04MAY17

A—Vacuum Level, mm (in) of Water
B—Seeds Per Pound
C—Seeds Per Kilogram

D—Large Edible-Bean Disk for Runner and Spanish Peanut
E—Virginia Peanut Disk

Determine the vacuum level based on the seeds per kg (lb). To calculate the seeds per kg (lb), divide the number of seeds in a bag by the weight of the bag.

EXAMPLE: If there are 1764 seeds per kg (800 seeds per lb), the chart indicates a vacuum level of 280 mm (11 in) with the large edible-bean disk for Runner Peanuts or a vacuum level of 203 mm (8 in) with the Virginia Peanut disk.

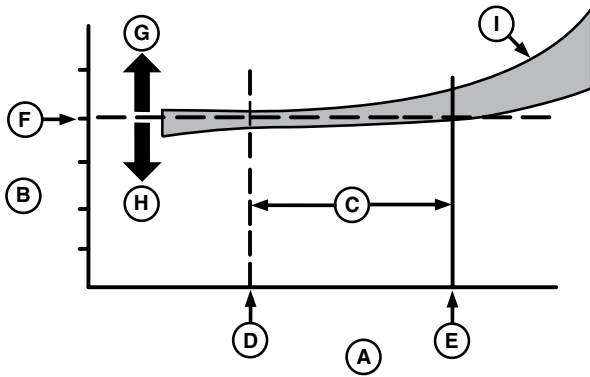
Use the vacuum level charts for the initial vacuum setting and adjust the level as needed. The charts are based on a typical ground speed and population rate. If high population rates or high ground speeds affect seed placement, increase the vacuum level. If low population rates or low ground speeds affect seed placement, decrease the vacuum level.

If rough field conditions cause seed skips, an increase in vacuum can help. Extra downforce can improve the ride quality, but do not exceed a level of downforce that degrades the seed furrow. If all the possible adjustments do not reduce seed skips, reduce ground speed.

Finger Pick-Up Metering Unit Operating Characteristics

IMPORTANT: The graph shows performance characteristics of the finger pick-up metering unit relative to operating speed (A). An increase in operating speed above a maximum speed (E) can cause overpopulation. Population (B) in the operating range (I) is shown as a gray band on the graph rather than a single line, since population can vary due to differences in seed size and shape.

MH69740,0000562-19-03MAY17



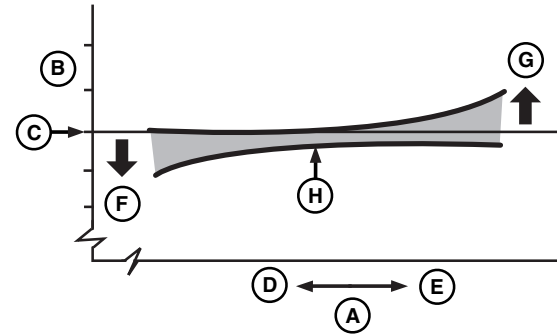
A68478—UN—28JUL10

- A—Operating Speed
- B—Population
- C—Recommended Operating Range
- D—1/2 Maximum Speed
- E—Maximum Speed
- F—Target Population
- G—Higher Than Target Population
- H—Lower Than Target Population
- I—Operating Range

The most accurate population is obtained when the machine is operated between one-half maximum speed (D) and maximum speed (E). Planting too fast can result in doubles and triples. Planting too slow can result in skips.

Maximum speeds, shown in planting rate charts, are for optimum conditions. Use slower speeds when planting in rough seedbeds to ensure satisfactory machine performance. Poor depth control and erratic seed spacing can result from planting too fast for conditions.

See **HOW TO USE PLANTING RATE CHARTS** in Plateless Meter Rate Charts section for instructions on setting sprockets for target planting rate.



A68479—UN—28JUL10

- A—Seed Size
- B—Population
- C—Target Population
- D—Very Large Seed Size
- E—Very Small Seed Size
- F—Lower Than Target Population
- G—Higher Than Target Population
- H—Population Range

IMPORTANT: The chart illustrates how seed size affects population.

This meter provides consistent seed spacing and population control when planting corn. It also has good performance when planting confectionary (large) sunflower seeds.

The meter accommodates all normal sizes of U.S. seed corn (except popcorn).

Seedbed conditions, seed size, and operating characteristics of seed meter can influence meter accuracy. Rough seedbeds and fast planting speeds typically deteriorate the accuracy of seed placement.

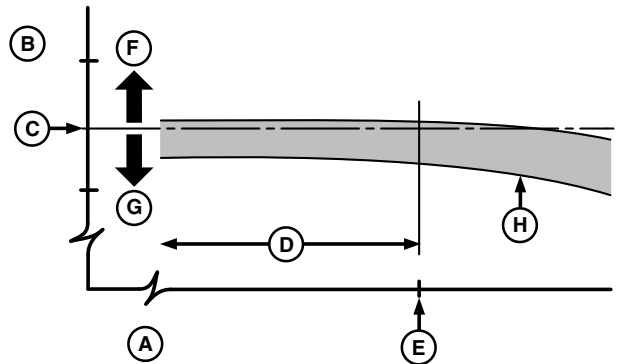
CROP STAND = SEED SINGULATION + SEED PLACEMENT + AGRONOMIC FACTORS

Seed Singulation = Seed Selection + Field Conditions + Maintenance

Seed Placement = Row Unit Maintenance + Speed + Field Conditions + Planter Attachments + Observation & Adjustment

Agronomic Factors = Seed Germination + Soil Temperature + Moisture + Nutrients + Pest Control + Weather

Radial Bean Meter Operating Characteristics



- A—Operating Speed
B—Population
C—Target Rate
D—Recommended Operating Range
E—Maximum Speed
F—Higher Than Target Rate
G—Lower Than Target Rate
H—Operating Range

A68480—UN—28JUL10

IMPORTANT: The graph shows operating characteristics of radial bean metering units.

The graph shows performance characteristics of the radial bean metering unit relative to operating speed (A). An increase in operating speed above a maximum speed can affect meter performance. Population (B) in the operating range (H) is shown as a gray band on the graph rather than a single line, since population can vary due to differences in seed size and shape.

IMPORTANT: Avoid planting miscalculations. Perform field checks to determine if the target rate is achieved.

IMPORTANT: Replace hopper lids after hoppers have been filled. If lids are not installed, dust and debris can accumulate in seed metering mechanism, causing excessive wear.

Best results are obtained when machine is operated under maximum speed.

At higher speeds, large beans can result in lower rates than listed in the chart. Small beans can result in higher

rates at lower planting speeds. Actual rates **MUST** be checked in the field using target speed. Adjust machine settings accordingly.

The radial bean meter performs best with uniform seed sizes. Mixing seed sizes can cause high drive-torque, increased wear, or meter damage. If mixed seed must be used, always use settings for the smallest seed size.

IMPORTANT: If farmer-applied treatments are used, follow chemical manufacturers recommendations carefully. Dry powder or fast drying liquid treatments are recommended. **HIGH-OIL-CONTENT TREATMENTS ARE NOT RECOMMENDED.**

Chemical reaction between farmer-applied seed treatments and treatments commercially applied to seed can cause seed treatments to become sticky. Certain temperature and humidity levels can further complicate material compatibility. Treatments which adhere to radial bean meter components can cause reduced population and spacing control.

Check with the chemical and seed supplier for treatment compatibility.

NOTE: Using liquid hopper-applied seed treatments, which leave a wet coating on seed, is not recommended.

Metering rates can vary depending upon surface texture of beans and whether beans are coated with seed treatment. These factors, in combination with variations in seed size, can result in rate variations from those given in charts.

Increasing the amount of graphite per 35.2 L (1 bu.) of seed added into a hopper can improve metering rate of rough-textured or treated seed.

To determine if a radial bean meter is delivering the correct rate, check population in the field. See Check Seed Population section.

After determining correct sprocket combinations for the desired planting rate, plant at a speed no greater than maximum speed shown for the sprocket combination used. This can help ensure accurate planting rates.

CROP STAND = SEED SINGULATION + SEED PLACEMENT + AGRONOMIC FACTORS

Seed Singulation = Seed Selection + Field Conditions + Maintenance

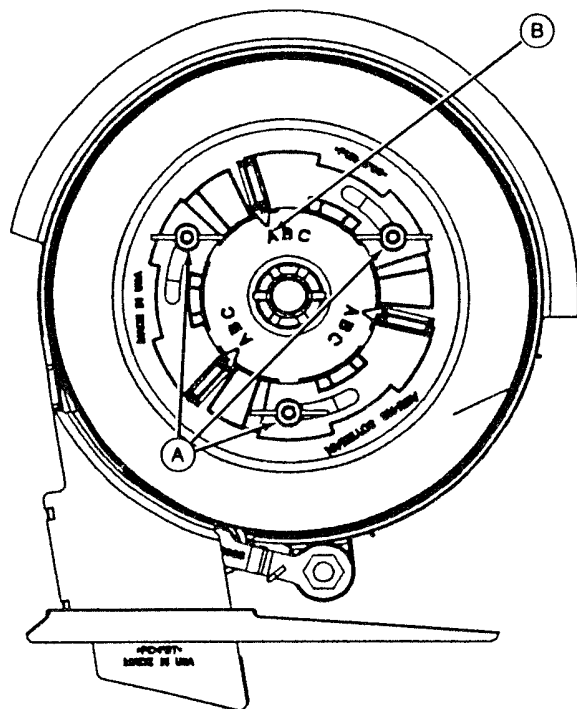
Seed Placement = Row Unit Maintenance + Speed + Field Conditions + Planter Attachments + Observation & Adjustment

Agonomic Factors = Seed Germination + Soil Temperature + Moisture + Nutrients + Pest Control + Weather

Setting Radial Bean Meter

IMPORTANT: Meter cannot be adjusted when bowl is full. Seed inside bowl prevents bowl cover from moving in. Hopper/meter should be placed on its side and seed shaken down to create room for bowl cover.

Bowl should turn with minimal resistance when cells are filled with seed. If bowl is difficult to turn, soybeans may be passing beneath bowl. Reduce setting by one position (C to B, or B to A), and check population in the field. See Checking Seed Population section.



A—Nut
B—Letter Indicator

A40338—UN—17OCT96

Loosen nuts (A) and align indicator with the corresponding letter (B) listed according to soybean size.

Position	Seed Size in Seeds/kg	Seed Size in Seeds/lb	Description
A	8158 to 9923	3700 to 4500	Small
B	6174 to 8159	2800 to 3700	Medium Small
C	4410 to 6174	2000 to 2800	Large

Settings above are approximate for a given seed size.

Operator should check population, and adjust setting to get best population control. Selecting next larger seed size will result in a slightly greater population. Selecting next smaller seed size will result in a slightly lower population.

NOTE: If a combination of seed sizes exists, meter should be set for smaller instead of larger sized seed. This will prevent damage to seed meter and hub caused by seeds wedged between bowl and meter housing.

For non-commercial or "bin run" seed, use the following method to determine proper A-B-C setting.

Remove meter from bottom of hopper. Fill meter with seed and spin meter for one full revolution. Scribe a mark on meter bowl and meter housing. Turn meter five full revolutions until scribed marks line up again. Count seeds that have been metered.

Setting Meter for "Bin Run" Seed	
Correct A-B-C Setting	270 to 290 Seeds
Low A-B-C Setting	269 Seeds or Below (Move to Next Highest Setting)
High A-B-C Setting	291 Seeds or Above (Move to Next Lowest Setting)

Addition of a 15 mL (1 Tbls.) of graphite per 58 L (1.6 bu) hopper is recommended for extending life of meter.

Addition of 120 mL (1/2 cup) of talc over top of each hopper full of seeds may improve population during humid planting conditions.

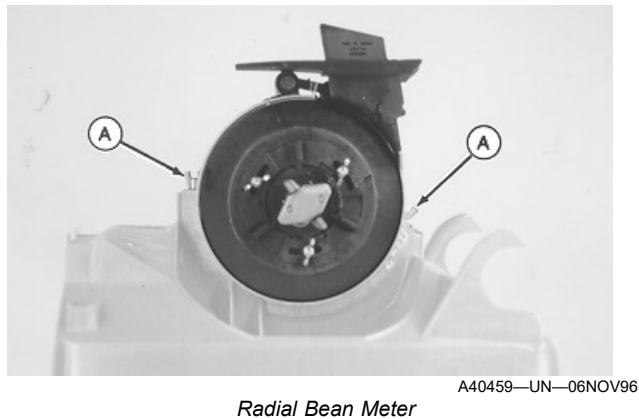
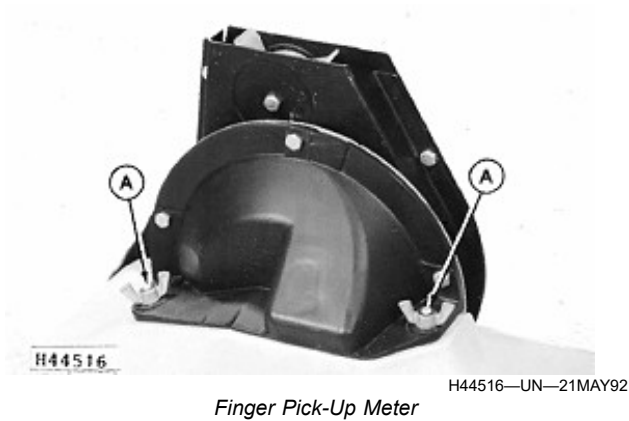
AG,OUO6074,1268-19-12JAN06

Plateless Meters

IMPORTANT: Avoid excessive wear. Close lids on seed hoppers when planting. If lids are not closed, dust and debris can accumulate in seed meter.

IMPORTANT: Always remove seed from hopper and meter after use.

Store meter assemblies in a clean place while not in use.



A—Wing Nuts

1. Meter assemblies are interchangeable.
2. Replace meters as follows:
 - a. Empty and remove seed hopper from row unit.
 - b. Turn hopper upside down and remove two wing nuts (A).
 - c. Pull meter assembly straight up.
 - d. Position desired meter on hopper and attach with wing nuts (A).
- Equip machine with finger pick-up meters to plant all sizes (or mixed sizes) of corn and sunflower seeds. Performance in sunflowers is optimized with use of sunflower finger assembly.
- Equip machine with radial bean meters to plant soybeans.

OUO6045,00006CF-19-11JUN09

Vacuum Seed Meter Rate Charts

How to Use Rate Charts

IMPORTANT: Actual planting rate must be checked in the field. See Check Seed Population section.

NOTE: All rate charts are based on typical drive wheel slippage. Crop residue, unit down force, tire pressure, and soil conditions affect drive wheel slippage.

1. Locate rate chart for crop and row spacing.
2. Locate row spacing column.
3. Scan down the column to find target population.
4. Determine if target population is in the High Range or Low Range table. The input sprocket on seed transmission must be set to this range.
5. Scan left of target population to find number of teeth on Driver and Driven sprockets. The Planting Rate Sprockets must be set to this combination.
6. Scan right of target population to find recommended speed range. The top of the speed range is for optimum field conditions. If planting in rough conditions, reduce speed and increase unit down force.
7. See Seed Transmission section for this planter to set transmission.

Determine Transmission Settings for a Row Spacing Not Shown in Operator's Manual

To find transmission sprocket settings for the row widths not shown in seed charts, use the following formula.

FORMULA:

$$(A \div B) \times C = D$$

A = Actual row spacing in inches

B = Row spacing in chart nearest to actual row spacing

C = Target population

D = Calculated population used to determine transmission setting and speed

The following example is for a planter with vacuum seed meters on 28 in row spacing that is planting corn. A 30-hole seed disk is selected following the seed disk recommendations. The Small, Medium, or Large corn, Sunflower, and Popcorn disk on 30 to 40 in Rows (30-hole disk) rate chart is the closest match.

EXAMPLE:

$$(28 \div 30) \times 28\ 000 = 26\ 133$$

The population value in the 30 in column nearest to the calculated population of 26 133 is 26 318.

The recommended sprocket combination is 29-tooth driver and 27-tooth for this example.

OJ06074,0000065-19-10MAR09

Rates are approximate. Perform a rate check before planting. To configure the meter, see Vacuum Seed Meter Setup section. See How to Use Rate Charts in this section for assistance with chart.							
Low-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre					Recommended Speed Range in mph
Driver	Driven	Average Seed Spacing (in)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	
35	24	5-7/8	35 733	29 777	28 210	26 800	3—8
35	25	6-1/8	34 304	28 586	27 082	25 728	3—8
35	26	6-3/8	32 894	27 487	26 040	24 738	3—8
35	27	6-5/8	31 763	26 469	25 076	23 822	3—8
35	28	6-7/8	30 628	25 523	24 180	22 971	3—8
29	24	7-1/8	29 607	24 673	23 374	22 205	4—8
29	25	7-3/8	28 423	23 686	22 439	21 317	4—8
29	26	7-5/8	27 330	22 775	21 576	20 497	4—8
29	27	8	26 318	21 931	20 777	19 738	4—8
29	28	8-1/4	25 378	21 148	20 035	19 033	4—8
24	24	8-5/8	24 503	20 419	19 344	18 377	4—8
24	25	8-7/8	23 522	19 602	18 570	17 642	4—8
24	26	9-1/4	22 618	18 848	17 856	16 963	4—8
24	27	9-5/8	21 780	18 150	17 195	16 335	4—8
24	28	10	21 002	17 502	16 581	15 752	4—8
20	24	10-1/4	20 419	17 016	16 120	15 314	4—8
20	25	10-3/4	19 602	16 335	15 475	14 702	4—8
20	26	11-1/8	18 848	15 707	14 880	14 136	4—8
20	27	11-1/2	18 150	15 125	14 329	13 613	4—8

Vacuum Seed Meter Rate Charts

20	28	12	17 502	14 585	13 817	13 126	4—8
16	24	12-7/8	16 335	13 613	12 896	12 251	4—8
16	25	13-3/8	15 682	13 068	12 380	11 761	4—8
16	26	13-7/8	15 078	12 565	11 904	11 309	4—8
16	27	14-3/8	14 520	12 100	11 463	10 890	4—8
16	28	15	14 001	11 668	11 054	10 501	4—8

AG,OUO6074,1207-19-27MAR23

Small, Medium, or Large Corn, Sunflower, and Popcorn Disks on 15 to 22 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.						
High-Range Input Sprocket						
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A50617, A43215, and H136478) 30-Hole Disks (cell-type)				Recommended Speed Range in mph
Driver	Driven	Average Seed Spacing (in)	15 in Rows	20 in Rows	22 in Rows	
35	24	2-1/4	190 575	142 931	129 938	2—3
35	25	2-3/8	182 952	137 214	124 740	2—3
35	26	2-3/8	175 915	131 937	119 942	2—3
35	27	2-1/2	169 400	127 050	115 500	2—3.5
35	28	2-5/8	163 350	122 513	111 375	2—3.5
29	24	2-5/8	157 905	118 429	107 663	2—3.5
29	25	2-3/4	151 589	113 692	103 356	2—3.5
29	26	2-7/8	145 758	109 319	99 381	2—4
29	27	3-1/8	140 360	105 270	95 700	2—4
29	28	3-1/8	135 347	101 510	92 282	2—4
24	24	3-1/4	130 680	98 010	89 100	2—4.5
24	25	3-3/8	125 453	94 090	85 536	2—4.5
24	26	3-1/2	120 628	90 471	82 246	2—4.5
24	27	3-5/8	116 160	87 120	79 200	2—5
24	28	3-3/4	112 011	84 009	76 371	2—5
20	24	3-7/8	108 900	81 675	74 250	2—5.5
20	25	4	104 544	78 408	71 280	2—5.5
20	26	1-1/4	100 523	75 392	68 538	2—6
20	27	4-3/8	96 800	72 600	66 000	2—6
20	28	4-1/2	93 343	70 007	63 643	2—6.5
16	24	4-7/8	87 120	65 340	59 400	2—6.5
16	25	5	83 635	62 726	57 024	2—7
16	26	5-1/4	80 418	60 314	54 831	2—7
16	27	5-3/8	77 440	58 080	52 800	2—7.5
16	28	5-5/8	74 674	56 006	50 914	2—8

Low-Range Input Sprocket						
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A50617, A43215, and H136478) 30-Hole Disks (cell-type)				Recommended Speed Range in mph
Driver	Driven	Average Seed Spacing (in)	15 in Rows	20 in Rows	22 in Rows	
35	24	5-7/8	71 466	53 599	48 727	3—8
35	25	6-1/8	68 607	51 455	46 778	3—8

Vacuum Seed Meter Rate Charts

Low-Range Input Sprocket						
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A50617, A43215, and H136478) 30-Hole Disks (cell-type)				
Driver	Driven	Average Seed Spacing (in)	15 in Rows	20 in Rows	22 in Rows	Recommended Speed Range in mph
35	26	6-3/8	65 968	49 476	44 978	3—8
35	27	6-5/8	63 525	47 644	43 313	3—8
35	28	6-7/8	61 256	45 942	41 766	3—8
29	24	7-1/8	59 214	44 411	40 373	4—8
29	25	7-3/8	56 846	42 634	38 759	4—8
29	26	7-5/8	54 659	40 995	37 268	4—8
29	27	8	52 635	39 476	35 888	4—8
29	28	8-1/4	50 755	38 066	34 606	4—8
24	24	8-5/8	49 005	36 754	33 413	4—8
24	25	8-7/8	47 045	35 284	32 076	4—8
24	26	9-1/4	45 235	33 927	30 842	4—8
24	27	9-5/8	43 560	32 670	29 700	4—8
24	28	10	42 004	31 503	28 639	4—8
20	24	10-1/4	40 838	30 628	27 844	4—8
20	25	10-3/4	39 204	29 403	26 730	4—8
20	26	11-1/8	37 696	28 272	25 702	4—8
20	27	11-1/2	36 300	27 225	24 750	4—8
20	28	12	35 004	26 253	23 866	4—8
16	24	12-7/8	32 670	24 503	22 275	4—8
16	25	13-3/8	31 363	23 522	21 384	4—8
16	26	13-7/8	30 157	22 618	20 562	4—8
16	27	14-3/8	29 040	21 780	19 800	4—8
16	28	15	28 003	21 002	19 093	4—8

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Small, Medium, or Large Corn, Sunflower, and Popcorn Disks on 30 to 40 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.							
High-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A50617, A43215, and H136478) 30-Hole Disks (cell-type)					
Driver	Driven	Average Seed Spacing (in)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
35	24	2-1/4	95 288	79 406	75 227	71 466	2—3
35	25	2-3/8	91 476	76 230	72 218	68 607	2—3
35	26	2-3/8	87 958	73 298	69 440	65 968	2—3
35	27	2-1/2	84 700	70 583	66 868	63 525	2—3.5
35	28	2-5/8	81 675	68 063	64 480	61 256	2—3.5
29	24	2-5/8	78 593	65 794	62 331	59 214	2—3.5
29	25	2-3/4	75 794	63 162	59 383	56 846	2—3.5
29	26	2-7/8	72 879	60 733	57 536	54 659	2—4
29	27	3-1/8	70 180	58 483	55 405	52 635	2—4
29	28	3-1/8	67 674	56 395	53 427	50 755	2—4
24	24	3-1/4	65 340	54 450	51 584	49 005	2—4.5
24	25	3-3/8	62 726	52 272	49 521	47 045	2—4.5
24	26	3-1/2	60 314	50 262	47 616	45 235	2—4.5

Vacuum Seed Meter Rate Charts

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Average Seed Spacing (in)	Approximate Seed Population per Acre (A50617, A43215, and H136478) 30-Hole Disks (cell-type)				Recommended Speed Range in mph
Driver	Driven		30 in Rows	36 in Rows	38 in Rows	40 in Rows	
24	27	3-5/8	58 080	48 400	45 853	43 560	2—5
24	28	3-3/4	56 006	46 671	44 215	42 004	2—5
20	24	3-7/8	54 450	45 375	42 987	40 838	2—5.5
20	25	4	52 272	43 560	41 267	39 204	2—5.5
20	26	4-1/4	50 262	41 885	39 680	37 696	2—6
20	27	4-3/8	48 400	40 333	38 211	36 300	2—6
20	28	4-1/2	46 671	38 893	36 846	35 004	2—6.5
16	24	4-7/8	43 560	36 300	34 389	32 670	2—6.5
16	25	5	41 818	34 484	33 014	31 363	2—7
16	26	5-1/4	40 209	33 508	31 744	30 157	2—7
16	27	5-3/8	38 720	32 267	30 568	29 040	2—7.5
16	28	5-5/8	37 337	31 114	29 477	28 003	2—8

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Average Seed Spacing (in)	Approximate Seed Population per Acre (A50617, A43215, and H136478) 30-Hole Disks (cell-type)				Recommended Speed Range in mph
Driver	Driven		30 in Rows	36 in Rows	38 in Rows	40 in Rows	
35	24	5-7/8	35 733	29 777	28 210	26 800	3—8
35	25	6-1/8	34 304	28 586	27 082	25 728	3—8
35	26	6-3/8	32 984	27 487	26 040	24 738	3—8
35	27	6-5/8	31 763	26 469	25 076	23 822	3—8
35	28	6-7/8	30 628	25 523	24 180	22 971	3—8
29	24	7-1/8	29 607	24 673	23 374	22 205	4—8
29	25	7-3/8	28 423	23 686	22 439	21 317	4—8
29	26	7-5/8	27 330	22 775	21 576	20 497	4—8
29	27	8	26 318	21 931	20 777	19 738	4—8
29	28	8-1/4	25 378	21 148	20 035	19 033	4—8
24	24	8-5/8	24 503	20 419	19 344	18 377	4—8
24	25	8-7/8	23 522	19 602	18 570	17 642	4—8
24	26	9-1/4	22 618	18 848	17 856	16 963	4—8
24	27	9-5/8	21 780	18 150	17 195	16 335	4—8
24	28	10	21 002	17 502	16 581	15 752	4—8
20	24	10-1/4	20 419	17 016	16 120	15 314	4—8
20	25	10-3/4	19 602	16 335	15 475	14 702	4—8
20	26	11-1/8	18 848	15 707	14 880	14 136	4—8
20	27	11-1/2	18 150	15 125	14 329	13 613	4—8
20	28	12	17 502	14 585	13 817	13 126	4—8
16	24	12-4/8	16 335	13 613	12 896	12 251	4—8
16	25	13-3/8	15 682	13 068	12 380	11 761	4—8
16	26	13-7/8	15 078	12 565	11 904	11 309	4—8
16	27	14-3/8	14 520	12 100	11 463	10 890	4—8
16	28	15	14 001	11 668	11 054	10 501	4—8

ProMax 40 x 2.5, ProMax 40 x 3.75, or ProMax 40 x 4.5 Disks on 15 to 22 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.						
High-Range Input Sprocket						
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A52390, A52391, and A102717) 40-Hole Disk (flat-type)				Recommended Speed Range in mph
Driver	Driven	Average Seed Spacing (in)	15 in Rows	20 in Rows	22 in Rows	
35	24	1-5/8	254 100	190 575	173 250	0.5—1.5
35	25	1-3/4	243 336	182 962	166 320	0.5—1.5
35	26	1-3/4	234 554	175 915	159 923	0.5—1.5
35	27	1-7/8	225 867	169 400	154 000	0.5—1.5
35	28	1-7/8	217 800	163 350	148 500	0.5—1.5
29	24	2	210 540	157 905	143 550	0.5—2
29	25	2-1/8	202 118	151 589	137 808	0.5—2
29	26	2-1/4	194 345	145 758	132 508	0.5—2
29	27	2-1/4	187 147	140 360	127 600	0.5—2
29	28	2-3/8	183 463	135 347	123 043	0.5—2
24	24	2-3/8	174 240	130 680	116 800	0.5—2
24	25	2-1/2	167 270	125 453	114 048	0.5—2.5
24	26	2-5/8	160 837	120 628	109 662	0.5—2.5
24	27	2-3/4	154 380	116 160	105 600	1—2.5
24	28	2-3/4	149 349	112 011	101 829	1—2.5
20	24	2-7/8	145 200	108 900	99 000	1—2.5
20	25	3	139 392	104 544	95 040	1—3
20	26	3-1/8	134 031	100 523	91 385	1—3
20	27	3-1/4	129 067	96 800	88 600	1—3
20	28	3-3/8	124 457	93 343	84 867	1—3
16	24	3-5/8	116 160	87 120	79 200	1—3.5
16	25	3-3/4	111 514	83 635	76 032	1—3.5
16	26	3-7/8	107 225	80 418	73 068	1—3.5
16	27	4-1/8	103 253	77 440	70 400	1.5—4
16	28	4-1/4	99 566	74 674	67 886	1.5—4

Low-Range Input Sprocket						
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A52390, A52391, and A102717) 40-Hole Disk (flat-type)				Recommended Speed Range in mph
Driver	Driven	Average Seed Spacing (in)	15 in Rows	20 in Rows	22 in Rows	
35	24	4-3/8	95 288	71 466	64 969	1.5—4
35	25	4-5/8	91 476	68 607	62 370	1.5—4.5
35	26	4-3/4	87 958	65 988	59 971	1.5—4.5
35	27	4-7/8	84 700	63 525	57 750	1.5—5
35	28	5-1/8	81 676	61 256	55 583	1.5—5
29	24	53/8	78 963	59 214	63 831	2—5
29	25	5-1/2	75 794	56 846	51 678	2—5.5
29	26	5-3/4	72 879	54 659	49 690	2—5.5
29	27	6	70 180	52 636	47 850	2—6
29	28	6-1/4	67 674	50 765	46 141	2—6
24	24	6-3/8	65 340	49 005	44 560	2—6.5
24	25	6-3/4	62 726	47 045	42 768	2.5—6.5
24	26	6-7/8	60 314	45 235	41 123	2.5—6.5

Vacuum Seed Meter Rate Charts

Low-Range Input Sprocket						
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A52390, A52391, and A102717) 40-Hole Disk (flat-type)				
Driver	Driven	Average Seed Spacing (in)	15 in Rows	20 in Rows	22 in Rows	Recommended Speed Range in mph
24	27	7-1/4	58 080	43 560	39 600	2.5—6.5
24	28	7-1/2	56 006	42 004	38 186	2.5—6.5
20	24	7-3/4	54 450	40 838	37 126	2.5—6.5
20	25	8	52 272	39 204	35 640	3—6.5
20	26	8-1/4	50 262	37 696	34 269	3—6.5
20	27	8-5/8	48 400	36 380	33 000	3—6.5
20	28	9	46 871	35 004	31 821	3—6.5
16	24	9-5/8	43 580	32 670	29 700	3.5—6.5
16	25	10	41 818	31 363	28 512	3.5—6.5
16	26	10-3/8	40 209	30 157	27 415	3.5—6.5
16	27	10-3/4	38 720	29 040	26 400	4—6.5
16	28	11-1/4	37 337	28 003	25 457	4—6.5

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ProMax 40 x 3.75 and ProMax 40 x 4.5 Disks on 30 to 40 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.							
High-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A52390 and A52391) 40-Hole Disk (flat-type)					
Driver	Driven	Average Seed Spacing (in)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
35	24	1-5/8	127 050	105 875	100 303	95 288	0.5—1.5
35	25	1-3/4	121 968	101 640	96 291	91 476	0.5—1.5
35	26	1-3/4	117 277	97 731	92 587	87 958	0.5—1.5
35	27	1-7/8	112 933	94 111	89 158	84 700	0.5—1.5
35	28	1-7/8	108 900	90 750	85 974	81 675	0.5—1.5
29	24	2	105 270	87 725	83 108	78 953	0.5—2
29	25	2-1/8	101 059	84 216	79 784	75 794	0.5—2
29	26	2-1/4	97 172	80 977	76 715	72 879	0.5—2
29	27	2-1/4	93 573	77 978	73 874	70 180	0.5—2
29	28	2-3/8	90 231	75 193	71 235	67 674	0.5—2
24	24	2-3/8	87 120	72 600	68 779	65 340	0.5—2
24	25	2-1/2	83 635	69 696	66 028	62 726	0.5—2.5
24	26	2-5/8	80 418	67 015	63 488	60 314	0.5—2.5
24	27	2-3/4	77 440	64 533	61 137	58 080	1—2.5
24	28	2-3/4	74 674	62 229	58 953	56 006	1—2.5
20	24	2-7/8	72 600	60 500	57 316	54 450	1—2.5
20	25	3	69 696	58 080	55 023	52 272	1—3
20	26	3-1/8	67 015	55 846	52 907	50 262	1—3
20	27	3-1/4	64 533	53 778	50 947	48 400	1—3
20	28	3-3/8	62 229	51 857	49 128	46 671	1—3
16	24	3-5/8	58 080	48 400	45 853	43 560	1—3.5
16	25	3-3/4	55 757	46 464	44 019	41 818	1—3.5
16	26	3-7/8	53 612	44 677	42 326	40 209	1—3.5
16	27	4-1/8	51 627	43 022	40 758	38 720	1.5—4

Vacuum Seed Meter Rate Charts

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A52390 and A52391) 40-Hole Disk (flat-type)					
Driver	Driven	Average Seed Spacing (in)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
16	28	4-1/4	49 783	41 486	39 302	37 337	1.5—4

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A52390 and A52391) 40-Hole Disk (flat-type)					
Driver	Driven	Average Seed Spacing (in)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
35	24	4-3/8	47 644	39 703	37 613	35 733	1.5—4
35	25	4-5/8	45 738	38 115	36 109	34 304	1.5—4.5
35	26	4-3/4	43 979	36 649	34 720	32 984	1.5—4.5
35	27	4-7/8	42 350	35 292	33 434	31 763	1.5—5
35	28	5-1/8	40 838	34 031	32 240	30 628	1.5—5
29	24	5-1/4	39 476	32 897	31 165	29 607	2—5
29	25	5-1/2	37 897	31 581	29 919	28 423	2—5.5
29	26	5-5/8	36 440	30 366	28 768	27 330	2—5.5
29	27	6	35 090	29 242	27 703	26 317	2—6
29	28	6-1/4	33 837	28 197	26 713	25 378	2—6
24	24	6-3/8	32 670	27 225	25 792	24 503	2—6.5
24	25	6-3/4	31 363	26 136	24 760	23 522	2.5—6.5
24	26	6-7/8	30 157	25 131	23 808	22 618	2.5—6.5
24	27	7-1/4	29 040	24 200	22 926	21 780	2.5—6.5
24	28	7-1/2	28 003	23 336	22 108	21 002	2.5—6.5
20	24	7-3/4	27 225	22 688	21 493	20 419	2.5—6.5
20	25	8	26 136	21 780	20 634	19 602	3—6.5
20	26	8-1/4	25 131	20 942	19 840	18 848	3—6.5
20	27	8-5/8	24 200	20 167	19 105	18 150	3—6.5
20	28	9	23 336	19 446	18 423	17 502	3—6.5
16	24	9-5/8	21 780	18 150	17 195	16 335	3.5—6.5
16	25	10	20 909	17 424	16 507	15 682	3.5—6.5
16	26	10-3/8	20 105	16 754	15 872	15 078	3.5—6.5
16	27	10-3/4	19 360	16 133	15 284	14 520	4—6.5
16	28	11-1/4	18 669	15 557	14 738	14 001	4—6.5

WP29706,0000E40-19-27MAR23

Low-Rate Cotton Disk on 15 to 40 in Rows

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A70163) 32-Hole Disk (cell-type)							
Driver	Driven	Average Seed	15 in Rows	30 in Rows	32 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended

Vacuum Seed Meter Rate Charts

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Average Seed Spacing (in)	Approximate Seed Population per Acre (A70163) 32-Hole Disk (cell-type)						Recommended Speed Range in mph
Driver	Driven		15 in Rows	30 in Rows	32 in Rows	36 in Rows	38 in Rows	40 in Rows	
		Spacing (in)							Speed Range in mph
35	24	2	203 280	101 640	95 288	84 700	80 242	76 230	2—8
35	25	2-1/8	195 149	97 574	91 476	81 312	77 032	73 181	2—8
35	26	2-1/4	187 643	93 822	87 958	78 185	74 070	70 366	2—8
35	27	2-3/8	180 693	90 347	84 700	75 289	71 326	67 760	2—8
35	28	2-3/8	174 240	87 120	81 675	72 600	68 779	65 340	2—8
29	24	2-1/2	168 432	84 216	78 953	70 180	66 486	63 162	2—8
29	25	2-5/8	161 695	80 847	75 794	67 373	63 827	60 636	2—8
29	26	2-5/8	155 476	77 738	72 879	64 782	61 372	58 303	2—8
29	27	2-3/4	149 717	74 859	70 180	62 382	59 099	56 144	2—8
29	28	2-7/8	144 370	72 185	67 674	60 154	56 988	54 139	2—8
24	24	3	139 392	69 696	65 340	58 080	55 023	52 272	2—8
24	25	3-1/8	133 816	66 908	62 726	55 757	52 822	50 181	2—8
24	26	3-1/4	128 670	64 335	60 314	53 612	50 791	48 251	2—8
24	27	3-3/8	123 904	61 952	58 080	51 627	48 909	46 464	2—8
24	28	3-1/2	119 479	59 739	56 006	49 783	47 163	44 805	2—8
20	24	3-5/8	116 160	58 080	54 450	48 400	45 853	43 560	2—8
20	25	3-3/4	111 514	55 757	52 272	46 464	44 019	41 818	2—8
20	26	3-7/8	107 225	53 612	50 262	44 677	42 326	40 209	2—8
20	27	4	103 253	51 627	48 400	43 022	40 758	38 720	2—8
20	28	4-1/4	99 566	49 783	46 671	41 486	39 302	37 337	2—8
16	24	4-1/2	92 928	46 464	43 560	38 720	36 682	34 848	3—8
16	25	4-1/2	89 211	44 605	41 818	37 171	35 215	33 454	3—8
16	26	4-7/8	85 780	42 890	40 209	35 742	33 860	32 167	3—8
16	27	5	82 603	41 301	38 720	34 418	32 606	30 976	3—8
16	28	5-1/4	79 653	39 826	37 337	33 189	31 442	29 870	3—8

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Average Seed Spacing (in)	Approximate Seed Population per Acre (A70163) 32-Hole Disk (cell-type)						Recommended Speed Range in mph
Driver	Driven		15 in Rows	30 in Rows	32 in Rows	36 in Rows	38 in Rows	40 in Rows	
35	24	5-1/2	76 230	38 115	35 733	31 763	30 091	28 586	3—8
35	25	5-3/4	73 181	36 590	34 304	30 492	28 887	27 443	3—8
35	26	5-7/8	70 366	35 183	32 984	29 319	27 776	26 387	3—8
35	27	6-1/8	67 760	33 880	31 763	28 233	26 747	25 410	3—8
35	28	6-3/8	65 340	32 670	30 628	27 225	25 792	24 503	3—8
29	24	6-5/8	63 162	31 581	29 607	26 318	24 932	23 686	3—8
29	25	6-7/8	60 636	30 318	28 423	25 265	23 935	22 738	4—8
29	26	7-1/8	58 303	29 152	27 330	24 293	23 014	21 864	4—8
29	27	7-1/2	56 144	28 072	26 318	23 393	22 162	21 054	4—8

Vacuum Seed Meter Rate Charts

Low-Range Input Sprocket									
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (A70163) 32-Hole Disk (cell-type)						
Driver	Driven	Average Seed Spacing (in)	15 in Rows	30 in Rows	32 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
29	28	7-3/4	54 139	27 069	25 378	22 558	21 371	20 302	4—8
24	24	8	52 272	26 136	24 503	21 780	20 634	19 602	4—8
24	25	8-3/8	50 181	25 091	23 522	20 909	19 808	18 818	4—8
24	26	8-5/8	48 251	24 126	22 618	20 105	19 046	18 094	4—8
24	27	9	46 464	23 232	21 780	19 360	18 341	17 424	4—8
24	28	9-3/8	44 805	22 402	21 002	18 669	17 686	16 802	4—8
20	24	9-5/8	43 560	21 780	20 419	18 150	17 195	16 335	4—8
20	25	10	41 818	20 909	19 602	17 424	16 507	15 682	4—8
20	26	10-3/8	40 209	20 105	18 848	16 754	15 872	15 078	4—8
20	27	10-3/4	38 720	19 360	18 150	16 133	15 284	14 520	4—8
20	28	11-1/4	37 337	18 669	17 502	15 557	14 738	14 001	4—8
16	24	12	34 848	17 424	16 335	14 520	13 756	13 068	4—8
16	25	12-1/2	33 454	16 727	15 682	13 939	13 206	12 545	4—8
16	26	13	32 167	16 084	15 078	13 403	12 698	12 063	4—8
16	27	13-1/2	30 976	15 488	14 520	12 907	12 227	11 616	4—8
16	28	14	29 870	14 935	14 001	12 446	11 791	11 201	4—8

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Cotton and Small Soybean Disk on 30 to 40 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.							
High-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (A56251) 64-Hole Disk (cell-type)				
Driver	Driven	Average Seed Spacing (in)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
35	24	1	203 280	169 400	160 484	152 460	2—5.5
35	25	1-1/8	195 149	162 624	154 065	146 362	2—5.5
35	26	1-1/8	187 643	156 369	148 139	140 732	2—6
35	27	1-1/8	180 693	150 578	142 653	135 520	2—6
35	28	1-1/4	174 240	145 200	137 558	130 680	2—6.5
29	24	1-1/4	168 432	140 360	132 973	126 324	2—6.5
29	25	1-3/8	161 695	134 746	127 654	121 271	2—7
29	26	1-3/8	155 476	129 563	122 744	116 607	2—7
29	27	1-1/2	149 717	124 764	118 198	112 288	2—7.5
29	28	1-1/2	144 370	120 309	113 977	108 278	2—7.5
24	24	1-1/2	139 392	116 160	110 046	104 544	2—8
24	25	1-5/8	133 816	111 514	105 644	100 362	2—8
24	26	1-5/8	128 670	107 225	101 581	96 502	2—8
24	27	1-3/4	123 904	103 253	97 819	92 928	2—8
24	28	1-3/4	119 479	99 566	94 325	89 609	2—8
20	24	1-7/8	116 160	96 800	91 705	87 120	2—8
20	25	1-7/8	111 514	92 928	88 037	83 635	2—8
20	26	2	107 225	89 354	84 651	80 418	2—8

Vacuum Seed Meter Rate Charts

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Average Seed Spacing (in)	Approximate Seed Population per Acre (A56251) 64-Hole Disk (cell-type)				Recommended Speed Range in mph
Driver	Driven		30 in Rows	36 in Rows	38 in Rows	40 in Rows	
20	27	2	103 253	86 044	81 516	77 440	2—8
20	28	2-1/8	99 566	82 971	78 605	74 674	2—8
16	24	2-1/4	92 928	77 440	73 364	69 696	3—8
16	25	2-3/8	89 211	74 342	70 430	66 908	3—8
16	26	2-1/2	85 780	71 483	67 721	64 335	3—8
16	27	2-1/2	82 603	68 836	65 213	61 952	3—8
16	28	2-5/8	79 653	66 377	62 884	59 739	3—8

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Average Seed Spacing (in)	Approximate Seed Population per Acre (A56251) 64-Hole Disk (cell-type)				Recommended Speed Range in mph
Driver	Driven		30 in Rows	36 in Rows	38 in Rows	40 in Rows	
35	24	2-3/4	76 230	63 525	60 182	57 173	3—8
35	25	2-7/8	73 181	60 984	57 774	54 886	3—8
35	26	3	70 366	58 638	55 552	52 775	3—8
35	27	3-1/8	67 760	56 467	53 495	50 820	3—8
35	28	3-1/4	65 340	54 450	51 584	49 005	3—8
29	24	3-3/8	63 162	52 635	49 865	47 372	3—8
29	25	3-1/2	60 636	50 530	47 870	45 477	4—8
29	26	3-5/8	58 303	48 586	46 029	43 728	4—8
29	27	3-3/4	56 144	46 787	44 324	42 108	4—8
29	28	3-7/8	54 139	45 116	42 741	40 604	4—8
24	24	4	52 272	43 560	41 267	39 204	4—8
24	25	4-1/4	50 181	41 818	39 617	37 636	4—8
24	26	4-3/8	48 251	40 209	38 093	36 188	4—8
24	27	4-1/2	46 464	38 720	36 682	34 848	4—8
24	28	4-3/4	44 805	37 337	35 372	33 603	4—8
20	24	4-7/8	43 560	36 300	34 389	32 670	4—8
20	25	5	41 818	34 848	33 014	31 363	4—8
20	26	5-1/4	40 209	33 508	31 744	30 157	4—8
20	27	5-1/2	38 720	32 267	30 568	29 040	4—8
20	28	5-5/8	37 337	31 114	29 477	28 003	4—8
16	24	6	34 848	29 040	27 512	26 136	4—8
16	25	6-1/4	33 454	27 878	26 411	25 091	4—8
16	26	6-1/2	32 167	26 806	25 395	24 126	4—8
16	27	6-3/4	30 976	25 813	24 455	23 232	4—8
16	28	7	29 870	24 891	23 581	22 402	4—8

WP29706,0000E42-19-27MAR23

ProMax 64 x 2.8 Disk on 36 to 40 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.						
High-Range Input Sprocket						
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (A121489) 64-Hole Disk (flat-type)			
Driver	Driven	Average Seed Spacing (in)	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
35	24	1	169 400	160 484	152 460	2—5.5
35	25	1-1/8	162 624	154 065	146 362	2—5.5
35	26	1-1/8	156 369	148 139	140 732	2—6
35	27	1-1/8	150 578	142 653	135 520	2—6
35	28	1-1/4	145 200	137 558	130 680	2—6.5
29	24	1-1/4	140 360	132 973	126 324	2—6.5
29	25	1-3/8	134 746	127 654	121 271	2—7
29	26	1-3/8	129 563	122 744	116 607	2—7
29	27	1-1/2	124 764	118 198	112 288	2—7.5
29	28	1-1/2	120 309	113 977	108 278	2—7.5
24	24	1-1/2	116 160	110 046	104 544	2—8
24	25	1-5/8	111 514	105 644	100 362	2—8
24	26	1-5/8	107 225	101 581	96 502	2—8
24	27	1-3/4	103 253	97 819	92 928	2—8
24	28	1-3/4	99 566	94 325	89 609	2—8
20	24	1-7/8	96 800	91 705	87 120	2—8
20	25	1-7/8	92 928	88 037	83 635	2—8
20	26	2	89 354	84 651	80 418	2—8
20	27	2	86 044	81 516	77 440	2—8
20	28	2-1/8	82 971	78 605	74 674	2—8
16	24	2-1/4	77 440	73 364	69 696	3—8
16	25	2-3/8	74 342	70 430	66 908	3—8
16	26	2-1/2	71 483	67 721	64 335	3—8
16	27	2-1/2	68 836	65 213	61 952	3—8
16	28	2-5/8	66 377	62 884	59 739	3—8

Low-Range Input Sprocket						
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (A121489) 64-Hole Disk (flat-type)			
Driver	Driven	Average Seed Spacing (in)	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
35	24	2-3/4	63 525	60 182	57 173	3—8
35	25	2-7/8	60 984	57 774	54 886	3—8
35	26	3	58 638	55 552	52 775	3—8
35	27	3-1/8	56 467	53 495	50 820	3—8
35	28	3-1/4	54 450	51 584	49 005	3—8
29	24	3-3/8	52 635	49 865	47 372	3—8
29	25	3-1/2	50 530	47 870	45 477	4—8
29	26	3-5/8	48 586	46 029	43 728	4—8
29	27	3-3/4	46 787	44 324	42 108	4—8
29	28	3-7/8	45 116	42 741	40 604	4—8
24	24	4	43 560	41 267	39 204	4—8
24	25	4-1/4	41 818	39 617	37 636	4—8
24	26	4-3/8	40 209	38 093	36 188	4—8

Vacuum Seed Meter Rate Charts

Low-Range Input Sprocket						
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (A121489) 64-Hole Disk (flat-type)			
Driver	Driven	Average Seed Spacing (in)	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
24	27	4-1/2	38 720	36 682	34 848	4—8
24	28	4-3/4	37 337	35 372	33 603	4—8
20	24	4-7/8	36 300	34 389	32 670	4—8
20	25	5	34 848	33 014	31 363	4—8
20	26	5-1/4	33 508	31 744	30 157	4—8
20	27	5-1/2	32 267	30 568	29 040	4—8
20	28	5-5/8	31 114	29 477	28 003	4—8
16	24	6	29 040	27 512	26 136	4—8
16	25	6-1/4	27 878	26 411	25 091	4—8
16	26	6-1/2	26 806	25 395	24 126	4—8
16	27	6-3/4	25 813	24 455	23 232	4—8
16	28	7	24 891	23 581	22 402	4—8

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ProMax 50 x 3.75 Disk on 30 to 40 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.								
High-Range Input Sprocket								
Planting Rate Sprockets Number of Teeth				Approximate Seed Population per Acre (A52903) 50-Hole Disk (flat-type)				
Driver	Driven	Average Seed Spacing (in)	Average Seed per ft	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
35	24	1-3/8	9.11	158 813	132 344	125 378	119 109	3—4
35	25	1-3/8	8.75	152 460	127 050	120 363	114 345	3—4
35	26	1-1/2	8.41	146 596	122 163	115 734	109 947	3—4
35	27	1-1/2	8.10	141 167	117 639	111 447	108 875	3—4
35	28	1-1/2	7.81	136 125	113 438	109 467	102 094	3—4.5
29	24	1-5/8	7.55	131 588	109 656	103 885	98 691	3—4.5
29	25	1-3/4	7.25	126 324	105 270	99 729	94 743	3—4.5
29	26	1-3/4	6.97	121 465	101 221	95 894	91 099	3—4.5
29	27	1-3/4	6.71	116 967	97 472	92 342	87 725	3—4.5
29	28	1-7/8	6.49	112 789	93 991	89 044	84 592	3—4.5
24	24	1-7/8	6.25	108 900	90 750	85 974	81 675	3—4.5
24	25	2	6.00	104 544	87 120	82 535	78 408	3—4.5
24	26	2	5.77	100 523	83 769	79 360	75 392	4—5
24	27	2-1/8	5.56	96 800	80 667	76 421	72 600	4—5
24	28	2-1/4	5.36	93 343	77 786	73 692	70 007	4—5
20	24	2-3/8	5.21	90 750	75 625	71 645	68 063	4—5
20	25	2-1/2	5.00	87 120	72 600	68 779	65 340	4—5
20	26	2-1/2	4.81	83 769	69 808	66 134	62 827	4—5
20	27	2-1/2	4.62	80 667	67 222	63 684	60 500	4—6
20	28	2-5/8	4.46	77 786	64 821	61 410	58 339	4—6
16	24	2-7/8	4.17	72 600	60 500	57 316	54 450	4—6
16	25	3	4.00	69 696	58 080	55 023	52 272	4—6

Vacuum Seed Meter Rate Charts

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth				Approximate Seed Population per Acre (A52903) 50-Hole Disk (flat-type)				
Driver	Driven	Average Seed Spacing (in)	Average Seed per ft	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
16	26	3-1/8	3.85	67 015	55 846	52 907	50 262	4—6
16	27	3-1/4	3.70	64 533	53 778	50 947	48 400	4—6
16	28	3-3/8	3.50	62 229	51 857	49 128	46 671	4—6

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth				Approximate Seed Population per Acre (A52903) 50-Hole Disk (flat-type)				
Driver	Driven	Average Seed Spacing (in)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph	
35	24	3-1/2	59 555	49 629	47 017	44 666	4—6	
35	25	3-5/8	57 173	47 644	45 136	42 879	4—6	
35	26	3-3/4	54 974	45 811	43 400	41 230	4—6	
35	27	4	52 938	44 115	41 793	39 703	4—6	
35	28	4-1/8	51 047	42 539	40 300	38 285	4—6	
29	24	4-1/2	49 345	41 121	38 957	37 009	4—6	
29	25	4-3/8	47 372	39 476	37 399	35 529	4—6	
29	26	4-5/8	45 550	37 958	35 960	34 162	4—6	
29	27	4-3/4	43 863	36 552	34 638	32 897	4—6	
29	28	5	42 296	35 247	33 392	31 722	4—6	
24	24	5-1/8	40 838	34 031	32 240	30 628	4—6	
24	25	5-3/8	39 204	32 670	30 951	29 403	4—6	
24	26	5-1/2	37 696	31 413	29 760	28 272	4—6	
24	27	5-3/4	36 300	30 250	28 658	27 225	4—6	
24	28	6	35 004	29 170	27 634	26 253	4—6	
20	24	6-1/8	34 031	28 359	26 867	25 523	4—6	
20	25	6-3/8	32 670	27 225	25 792	24 503	4—6	
20	26	6-5/8	31 413	26 178	24 800	23 560	4—6	
20	27	7	30 250	25 208	23 882	22 688	4—6	
20	28	7-1/8	29 170	24 308	23 029	21 877	4—6	
16	24	7-5/8	27 225	22 688	21 493	20 419	4—6	
16	25	8	26 136	21 780	20 634	19 602	4—6	
16	26	8-3/8	25 131	20 942	19 840	18 848	4—6	
16	27	8-5/8	24 200	20 167	19 105	18 150	4—6	
16	28	9	23 336	19 446	18 423	17 502	4—6	

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4-Seed Hilldrop Cotton Disk on 30 to 40 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.							
High-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (A65622) 48-Hole Disk (cell-type)				
Driver	Driven	Hill Spacing (in)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
35	24	5-1/2	152 460	127 052	120 364	114 344	2—3
35	25	5-3/4	146 360	121 968	115 548	109 772	2—3
35	26	5-7/8	140 732	117 276	111 104	105 548	2—3.5
35	27	6-1/8	135 520	112 932	106 988	101 640	2—3.5
35	28	6-3/4	130 680	108 900	103 168	98 012	2—4
29	24	6-5/8	126 324	105 272	99 728	94 744	2—4
29	25	6-7/8	121 272	101 060	95 740	90 952	2—4
29	26	7-1/8	116 608	97 172	92 056	87 456	2—4.5
29	27	7-1/2	112 288	93 572	88 648	84 216	2—4.5
29	28	7-3/4	108 276	90 232	85 484	81 208	2—4.5
24	24	8	104 544	87 120	82 536	78 408	2—5
24	25	8-3/8	100 364	83 636	79 232	75 272	2—5
24	26	8-5/8	96 504	80 420	76 184	72 376	2—5.5
24	27	9	92 928	77 440	73 364	69 696	2—5.5
24	28	9-3/8	89 608	74 676	70 744	67 208	2—5.5
20	24	9-5/8	87 120	72 600	68 780	65 340	2—6
20	25	10	83 636	69 696	66 028	62 728	2—6
20	26	10-3/8	80 420	67 016	63 488	60 312	2—6.5
20	27	10-3/4	77 440	64 532	61 136	58 080	2—6.5
20	28	11-1/4	74 676	62 228	58 952	56 004	2—7
16	24	12	69 696	58 080	55 024	52 272	2—7.5
16	25	12-1/2	66 908	55 756	52 824	50 180	3—8
16	26	13	64 336	53 612	50 792	48 252	3—8
16	27	13-1/2	61 952	51 628	48 908	46 464	3—8
16	28	14	59 740	49 784	47 164	44 804	3—8

Low-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (A65622) 48-Hole Disk (cell-type)				
Driver	Driven	Hill Spacing (in)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
35	24	14-5/8	57 172	47 644	45 136	42 880	3—8
35	25	15-1/4	54 884	45 740	43 332	41 164	3—8
35	26	15-7/8	52 776	43 980	41 664	39 580	3—8
35	27	16-1/2	50 820	42 352	40 120	38 116	3—8
35	28	17	49 004	40 836	38 688	36 752	3—8
29	24	17-5/8	47 372	39 476	37 400	35 528	3—8
29	25	18-3/8	45 476	37 896	35 904	34 108	4—8
29	26	19-1/8	43 728	36 440	34 520	32 796	4—8
29	27	19-7/8	42 108	35 092	33 244	31 580	4—8
29	28	20-5/8	40 604	33 836	32 056	30 452	4—8
24	24	21-3/8	39 204	32 672	30 952	29 404	4—8
24	25	22-1/4	37 636	31 364	29 712	28 208	4—8
24	26	23-1/8	36 188	30 156	28 568	27 140	4—8

Vacuum Seed Meter Rate Charts

Low-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth		Hill Spacing (in)	Approximate Seed Population per Acre (A65622) 48-Hole Disk (cell-type)				Recommended Speed Range in mph
Driver	Driven		30 in Rows	36 in Rows	38 in Rows	40 in Rows	
24	27	24	34 848	29 040	27 512	26 136	4—8
24	28	24-7/8	33 604	28 004	26 528	25 204	4—8
20	24	25-5/8	32 632	27 224	25 792	24 504	4—8
20	25	26-5/8	31 364	26 136	24 760	23 524	4—8
20	26	27-3/4	30 156	25 132	23 808	22 616	4—8
20	27	28-3/4	29 040	24 200	22 928	21 780	4—8
20	28	29-7/8	28 004	23 336	22108	21 004	4—8
16	24	32	26 136	21 780	20 632	19 604	4—8
16	25	33-3/8	25 092	20 908	19 808	18 816	4—8
16	26	34-5/8	24 124	20 104	19 048	18 096	4—8
16	27	36	23 232	19 360	18 340	17 424	4—8
16	28	37-3/8	22 404	18 668	17 688	16 800	4—8

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2-Seed Hilldrop Cotton Disk on 30 to 40 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.							
High-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth		Hill Spacing (in)	Approximate Seed Population per Acre (A74961) 64-Hole Disk (cell-type)				Recommended Speed Range in mph
Driver	Driven		30 in Rows	36 in Rows	38 in Rows	40 in Rows	
35	24	2	203 280	169 400	160 484	152 460	2—5.5
35	25	2-1/8	195 149	162 624	154 065	146 362	2—5.5
35	26	2-1/4	187 643	156 369	148 139	140 732	2—6
35	27	2-1/4	180 693	150 578	142 653	135 520	2—6
35	28	2-3/8	174 240	145 200	137 558	130 680	2—6.5
29	24	2-1/2	168 432	140 360	132 973	126 324	2—6.5
29	25	2-5/8	161 695	134 746	127 654	121 271	2—7
29	26	2-3/4	155 476	129 563	122 744	116 607	2—7
29	27	2-7/8	149 717	124 764	118 198	112 288	2—7.5
29	28	2-7/8	144 370	120 309	113 977	108 278	2—7.5
24	24	3	139 392	116 160	110 046	104 544	2—8
24	25	3-1/8	133 816	111 514	105 644	100 362	2—8
24	26	3-1/4	128 670	107 225	101 581	96 502	2—8
24	27	3-3/8	123 904	103 253	97 819	92 928	2—8
24	28	3-1/2	119 479	99 566	94 325	89 609	2—8
20	24	3-5/8	116 160	96 800	91 705	87 120	2—8
20	25	3-3/4	111 514	92 928	88 037	83 635	2—8
20	26	3-7/8	107 225	89 354	84 651	80 418	2—8
20	27	4	103 253	86 044	81 516	77 440	2—8
20	28	4-1/4	99 566	82 971	78 605	74 674	2—8
16	24	4-1/2	92 928	77 440	73 364	69 696	3—8
16	25	4-5/8	89 211	74 342	70 430	66 908	3—8
16	26	4-7/8	85 780	71 483	67 721	64 335	3—8
16	27	5	82 603	68 836	65 213	61 952	3—8

Vacuum Seed Meter Rate Charts

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A74961) 64-Hole Disk (cell-type)					Recommended Speed Range in mph
Driver	Driven	Hill Spacing (in)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	
16	28	5-1/4	79 653	66 377	62 884	59 739	3—8

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A74961) 64-Hole Disk (cell-type)					Recommended Speed Range in mph
Driver	Driven	Hill Spacing (in)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	
35	24	5-1/2	76 230	63 525	60 182	57 173	3—8
35	25	5-3/4	73 181	60 984	57 774	54 886	3—8
35	26	5-7/8	70 366	58 636	55 552	52 775	3—8
35	27	6-1/8	67 760	56 467	53 495	50 820	3—8
35	28	6-1/8	65 340	54 450	51 584	49 005	3—8
29	24	6-5/8	63 162	52 635	49 865	47 372	3—8
29	25	6-7/8	60 636	50 530	47 870	45 477	4—8
29	26	7-1/8	58 303	48 586	46 029	43 728	4—8
29	27	7-1/2	56 144	46 787	44 324	42 108	4—8
29	28	7-3/4	54 139	45 116	42 741	40 604	4—8
24	24	8	52 272	43 560	41 267	39 204	4—8
24	25	8-3/8	50 181	41 818	39 617	37 636	4—8
24	26	8-5/8	48 251	40 209	38 093	36 188	4—8
24	27	9	46 464	38 720	36 682	34 848	4—8
24	28	9-3/8	44 805	37 337	35 372	33 603	4—8
20	24	9-5/8	43 560	36 300	34 389	32 670	4—8
20	25	10	41 818	34 848	33 014	31 363	4—8
20	26	10-3/8	40 209	33 508	31 744	30 157	4—8
20	27	10-7/8	38 720	32 267	30 568	29 040	4—8
20	28	11-1/4	37 337	31 114	29 477	28 003	4—8
16	24	12	34 848	29 040	27 512	26 136	4—8
16	25	12-1/2	33 454	27 878	26 411	25 091	4—8
16	26	13	32 167	26 806	25 395	24 126	4—8
16	27	13-1/2	30 976	25 813	24 455	23 232	4—8
16	28	14	29 870	24 891	23 581	22 402	4—8

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Sorghum Disk on 15 to 22 in Rows

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A43066) 45-Hole Disk (cell-type)					Recommended Speed Range in mph
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	15 in Rows	20 in Rows	22 in Rows	
35	24	1-1/2	8.2	285 863	214 397	194 906	2—5.5
35	25	1-1/2	7.9	274 428	205 821	187 110	2—5.5
35	26	1-5/8	7.6	263 873	197 985	179 913	2—6
35	27	1-3/4	7.2	254 100	190 575	173 250	2—6
35	28	1-3/4	7.0	245 025	183 769	167 063	2—6.5
29	24	1-3/4	6.8	236 858	177 643	161 494	2—6.5
29	25	1-7/8	6.5	227 383	170 537	156 034	2—7
29	26	1-7/8	6.3	218 638	163 978	149 071	2—7
29	27	2	6.0	210 640	157 905	143 650	2—7.5
29	28	2	5.8	203 021	152 266	138 423	2—7.5
24	24	2-1/8	5.6	196 020	147 015	133 860	2—8
24	25	2-1/4	5.4	188 179	141 134	128 304	2—8
24	26	2-3/8	5.2	180 942	135 706	123 369	2—8
24	27	2-1/2	5.0	174 240	130 680	118 860	2—8
24	28	2-1/2	4.8	168 017	126 013	114 557	2—8
20	24	2-1/2	4.7	163 360	122 513	111 375	2—8
20	25	2-5/8	4.5	158 316	117 612	106 920	2—8
20	26	2-3/4	4.3	150 785	113 088	102 808	2—8
20	27	2-7/8	4.2	145 200	108 900	99 000	2—8
20	28	3	4.0	140 014	105 011	95 464	2—8
16	24	3-1/4	3.8	130 680	98 010	89 100	3—8
16	25	3-3/8	3.6	125 453	94 090	85 536	3—8
16	26	3-1/2	3.5	120 628	90 471	82 246	3—8
16	27	3-5/8	3.3	116 160	87 120	79 200	3—8
16	28	3-3/4	3.2	112 011	84 089	76 371	3—8

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A43066) 45-Hole Disk (cell-type)					Recommended Speed Range in mph
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	15 in Rows	20 in Rows	22 in Rows	
35	24	4	3.1	107 198	80 399	73 090	3—8
35	25	4-1/8	3.0	102 911	77 183	70 166	3—8
35	26	4-1/4	2.8	98 952	74 214	67 468	3—8
35	27	4-3/8	2.7	95 288	71 466	64 969	3—8
35	28	4-5/8	2.6	91 884	68 913	62 648	3—8
29	24	4-3/4	2.5	88 822	66 616	60 560	4—8
29	25	5	2.4	85 269	63 952	58 138	4—8
29	26	5-1/8	2.3	81 989	61 492	55 902	4—8
29	27	5-3/8	2.3	78 953	59 214	53 831	4—8
29	28	5-1/2	2.2	75 133	57 100	51 909	4—8
24	24	5-3/4	2.1	73 508	55 131	50 119	4—8
24	25	6	2.0	70 567	52 925	48 114	4—8
24	26	6-1/4	1.9	67 853	50 890	46 263	4—8

Vacuum Seed Meter Rate Charts

Low-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A43066) 45-Hole Disk (cell-type)					
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	15 in Rows	20 in Rows	22 in Rows	Recommended Speed Range in mph
24	27	6-3/8	1.9	65 340	49 006	44 560	4—8
24	28	6-5/8	1.8	63 006	47 255	42 959	4—8
20	24	6-7/8	1.8	61 256	45 942	41 766	4—8
20	25	7-1/8	1.7	58 806	44 105	40 095	4—8
20	26	7-3/8	1.6	56 544	42 408	38 553	4—8
20	27	7-3/4	1.6	54 450	40 838	37 125	4—8
20	28	9	1.5	52 605	39 379	35 799	4—8
16	24	8-5/8	1.4	49 805	36 754	33 413	4—8
16	25	8-7/8	1.3	47 045	35 284	32 076	4—8
16	26	9-1/4	1.3	45 235	33 927	30 842	4—8
16	27	9-5/8	1.2	43 560	32 670	29 700	4—8
16	28	10	1.2	42 094	31 503	28 639	4—8

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Sorghum Disk on 30 to 40 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.								
High-Range Input Sprocket								
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A43066) 45-Hole Disk (cell-type)						
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
35	24	1-1/2	8.2	142 931	119 109	112 840	107 198	2—5.5
35	25	1-1/2	7.9	137 214	114 345	108 327	102 911	2—5.5
35	26	1-5/8	7.6	131 937	109 947	104 160	98 952	2—6
35	27	1-3/4	7.2	127 050	105 875	100 303	95 288	2—6
35	28	1-3/4	7.0	122 512	102 094	96 720	91 884	2—6.5
29	24	1-3/4	6.8	118 429	98 691	93 496	88 822	2—6.5
29	25	1-7/8	6.5	113 692	94 743	89 757	85 269	2—7
29	26	1-7/8	6.3	109 319	91 099	86 304	81 989	2—7
29	27	2	6.0	105 270	87 725	83 108	78 953	2—7.5
29	28	2	5.8	101 510	84 592	80 140	76 133	2—7.5
24	24	2-1/8	5.6	98 010	81 675	77 376	73 508	2—8
24	25	2-1/4	5.4	94 090	78 408	74 281	70 567	2—8
24	26	2-3/8	5.2	90 471	75 392	71 424	67 853	2—8
24	27	2-1/2	5.0	87 120	72 600	68 779	65 340	2—8
24	28	2-1/2	4.8	84 009	70 007	66 323	63 006	2—8
20	24	2-1/2	4.7	81 675	68 063	64 480	61 256	2—8
20	25	2-5/8	4.5	78 408	65 340	61 901	58 806	2—8
20	26	2-3/4	4.3	75 392	62 827	59 520	56 544	2—8
20	27	2-7/8	4.2	72 600	60 500	57 316	54 450	2—8
20	28	3	4.0	70 007	58 339	55 269	52 505	2—8
16	24	3-1/4	3.8	65 340	54 450	51 584	49 005	3—8
16	25	3-3/8	3.6	62 726	52 272	49 521	47 045	3—8

Vacuum Seed Meter Rate Charts

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A43066) 45-Hole Disk (cell-type)						
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
16	26	3-1/2	3.5	60 314	50 262	47 616	45 235	3—8
16	27	3-5/8	3.3	58 080	48 400	45 853	43 560	3—8
16	28	3-3/4	3.2	56 006	46 671	44 215	42 004	3—8

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A43066) 45-Hole Disk (cell-type)						
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
35	24	4	3.1	53 599	44 666	42 315	40 199	3—8
35	25	4-1/8	3.0	51 455	42 879	40 623	38 591	3—8
35	26	4-1/4	2.8	49 476	41 230	39 060	37 107	3—8
35	27	4-3/8	2.7	47 644	39 703	37 613	35 733	3—8
35	28	4-5/8	2.6	45 942	38 285	36 270	34 457	3—8
29	24	4-3/4	2.5	44 411	37 009	35 061	33 308	4—8
29	25	5	2.4	42 634	35 529	33 659	31 976	4—8
29	26	5-1/8	2.3	40 995	34 162	32 364	30 746	4—8
29	27	5-3/8	2.3	39 476	32 897	31 165	29 607	4—8
29	28	5-1/2	2.2	38 066	31 722	30 052	28 550	4—8
24	24	5-3/4	2.1	36 754	30 628	29 016	27 565	4—8
24	25	6	2.0	35 284	29 403	27 855	26 463	4—8
24	26	6-1/4	1.9	33 927	28 272	26 784	25 445	4—8
24	27	6-3/8	1.9	32 670	27 225	25 792	24 503	4—8
24	28	6-5/8	1.8	31 503	26 253	24 871	23 627	4—8
20	24	6-7/8	1.8	30 628	25 523	24 180	22 971	4—8
20	25	7-1/8	1.7	29 403	24 503	23 213	22 052	4—8
20	26	7-3/8	1.6	28 272	23 560	22 320	21 204	4—8
20	27	7-3/4	1.6	27 225	22 688	21 493	20 419	4—8
20	28	9	1.5	26 253	21 877	20 726	19 690	4—8
16	24	8-5/8	1.4	24 503	20 419	19 344	18 377	4—8
16	25	8-7/8	1.3	23 522	19 602	18 570	17 642	4—8
16	26	9-1/4	1.3	22 618	18 848	17 856	16 963	4—8
16	27	9-5/8	1.2	21 780	18 150	17 195	16 335	4—8
16	28	10	1.2	21 002	17 502	16 581	15 752	4—8

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High-Rate Sorghum Disk on 15 to 22 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.							
High-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (A52802) 90-Hole Disk (cell-type)				
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	15 in Rows	20 in Rows	22 in Rows	Recommended Speed Range in mph
35	24	3/4	16.4	571 725	428 794	389 813	2—5
35	25	3/4	15.8	548 856	411 642	374 220	2—5
35	26	7/8	15.2	527 746	395 810	358 827	2—5.5
35	27	7/8	14.6	508 200	381 150	346 500	2—5.5
35	28	7/8	14.1	490 060	367 533	334 126	2—5.5
29	24	7/8	13.6	473 715	355 286	322 988	2—5.5
29	25	1	13.0	454 768	341 075	310 968	2—6
29	26	1	12.5	437 275	327 957	296 142	2—6.5
29	27	1	12.1	421 080	315 810	287 100	2—6.5
29	28	1	11.6	406 041	304 531	276 846	2—7
24	24	1-1/8	11.2	392 040	294 030	267 300	2—7
24	25	1-1/8	10.8	378 358	282 269	258 608	2—7.5
24	26	1-1/4	10.3	361 883	271 412	246 738	2—7.5
24	27	1-1/4	10.0	348 480	261 360	237 680	2—8
24	28	1-1/4	9.6	336 034	252 026	229 114	2—8
20	24	1-1/4	9.3	326 700	245 025	222 750	2—8
20	25	1-3/8	9.0	313 632	235 224	213 840	3—8
20	26	1-3/8	8.6	301 569	226 177	205 615	3—8
20	27	1-1/2	8.3	290 400	217 800	198 000	3—8
20	28	1-1/2	8.0	280 029	210 021	190 929	3—8
16	24	1-5/8	7.5	261 360	196 020	178 200	3—8
16	25	1-3/4	7.1	250 306	188 179	171 072	3—8
16	26	1-3/4	6.9	241 255	180 942	164 492	3—8
16	27	1-7/8	6.6	232 320	174 240	158 400	3—8
16	28	1-7/8	6.4	224 023	168 017	152 743	3—8

Low-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (A52802) 90-Hole Disk (cell-type)				
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	15 in Rows	20 in Rows	22 in Rows	Recommended Speed Range in mph
35	24	2	6.1	214 397	160 798	146 180	3—8
35	25	2	5.9	206 821	154 366	140 333	3—8
35	26	2-1/8	5.6	197 905	148 429	134 936	3—8
35	27	2-1/4	5.4	190 575	142 931	129 338	3—8
35	28	2-1/4	5.2	183 769	137 827	125 297	3—8
29	24	2-3/8	5.1	177 643	133 232	121 120	3—8
29	25	2-1/2	4.9	170 537	127 903	116 276	3—8
29	26	2-5/8	4.7	163 978	122 984	111 803	3—8
29	27	2-5/8	4.5	157 905	118 429	107 663	3—8
29	28	2-3/4	4.3	152 266	114 199	103 817	3—8
24	24	2-7/8	4.2	147 015	110 261	100 233	3—8
24	25	3	4.0	141 134	105 851	96 228	3—8
24	26	3-1/8	3.9	135 706	101 780	92 527	3—8

Vacuum Seed Meter Rate Charts

Low-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A52802) 90-Hole Disk (cell-type)					Recommended Speed Range in mph
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	15 in Rows	20 in Rows	22 in Rows	
24	27	3-1/4	3.7	130 680	98 010	89 100	3—8
24	28	3-3/8	3.6	126 013	94 510	85 918	3—8
20	24	3-1/2	3.5	122 513	91 884	83 631	3—8
20	25	3-5/8	3.3	117 612	88 209	80 190	3—8
20	26	3-3/4	3.2	113 683	84 816	77 106	3—8
20	27	3-7/8	3.1	108 900	81 675	74 250	3—8
20	28	4	3.0	106 011	78 758	71 598	3—8
16	24	4-1/4	2.8	98 010	73 508	66 825	3—8
16	25	4-1/2	2.7	94 090	70 587	64 152	3—8
16	26	4-5/8	2.6	90 471	67 853	61 635	3—8
16	27	4-7/8	2.5	87 120	65 340	59 430	3—8
16	28	5	2.4	84 009	63 806	57 279	3—8

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High-Rate Sorghum Disk on 30 to 40 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.								
High-Range Input Sprocket								
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A52802) 90-Hole Disk (cell-type)						Recommended Speed Range in mph
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	
35	24	3/4	16.4	285 863	238 219	225 681	214 397	2—5
35	25	3/4	15.8	274 428	228 690	216 654	205 821	2—5
35	26	7/8	15.2	263 873	219 894	208 321	197 905	2—5.5
35	27	7/8	14.6	254 100	211 750	200 605	190 575	2—5.5
35	28	7/8	14.1	245 025	204 188	193 441	183 769	2—5.5
29	24	7/8	13.6	236 858	197 381	186 993	177 643	2—5.5
29	25	1	13.0	227 383	189 486	179 513	170 537	2—6
29	26	1	12.5	218 638	182 198	172 609	163 978	2—6.5
29	27	1	12.1	210 540	175 450	166 216	157 905	2—6.5
29	28	1	11.6	203 021	169 184	160 280	152 266	2—7
24	24	1-1/8	11.2	196 020	163 350	154 753	147 015	2—7
24	25	1-1/8	10.8	188 179	156 816	148 563	141 134	2—7.5
24	26	1-1/4	10.3	180 942	150 785	142 849	135 706	2—7.5
24	27	1-1/4	10.0	174 240	145 200	137 558	130 680	2—8
24	28	1-1/4	9.6	168 017	140 014	132 645	126 013	2—8
20	24	1-1/4	9.3	163 350	136 125	128 961	122 513	2—8
20	25	1-3/8	9.0	156 816	130 680	123 802	117 612	3—8
20	26	1-3/8	8.6	150 785	125 654	119 040	113 088	3—8
20	27	1-1/2	8.3	145 200	121 000	114 632	108 900	3—8
20	28	1-1/2	8.0	140 014	116 679	110 538	105 011	3—8
16	24	1-5/8	7.5	130 680	108 900	103 168	90 010	3—8
16	25	1-3/4	7.1	125 453	104 544	99 042	94 090	3—8

Vacuum Seed Meter Rate Charts

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth				Approximate Seed Population per Acre (A52802) 90-Hole Disk (cell-type)				
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
16	26	1-3/4	6.9	120 628	100 523	95 232	90 471	3—8
16	27	1-7/8	6.6	116 160	96 800	91 705	87 120	3—8
16	28	1-7/8	6.4	112 011	93 343	88 430	84 009	3—8

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth				Approximate Seed Population per Acre (A52802) 90-Hole Disk (cell-type)				
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
35	24	2	6.1	107 198	89 332	84 630	80 399	3—8
35	25	2	5.9	102 911	85 759	81 245	77 183	3—8
35	26	2-1/8	5.6	98 952	82 460	78 120	74 214	3—8
35	27	2-1/4	5.4	95 288	79 406	75 227	71 466	3—8
35	28	2-1/4	5.2	91 884	76 570	72 540	68 913	3—8
29	24	2-3/8	5.1	88 822	74 018	70 122	66 616	3—8
29	25	2-1/2	4.9	85 269	71 057	67 317	63 952	3—8
29	26	2-5/8	4.7	81 989	68 324	64 728	61 492	3—8
29	27	2-5/8	4.5	78 953	65 794	62 331	59 214	3—8
29	28	2-3/4	4.3	76 133	63 444	60 105	57 100	3—8
24	24	2-7/8	4.2	73 508	61 256	58 032	55 131	3—8
24	25	3	4.0	70 567	58 806	55 711	52 925	3—8
24	26	3-1/8	3.9	67 853	56 544	53 568	50 890	3—8
24	27	3-1/4	3.7	65 340	54 450	51 584	49 005	3—8
24	28	3-3/8	3.6	63 006	52 505	49 742	47 255	3—8
20	24	3-1/2	3.5	61 256	51 047	48 360	45 942	3—8
20	25	3-5/8	3.3	58 806	49 005	46 426	44 105	3—8
20	26	3-3/4	3.2	56 544	47 120	44 640	42 408	3—8
20	27	3-7/8	3.1	54 450	45 375	42 987	40 838	3—8
20	28	4	3.0	52 505	43 754	41 452	39 379	3—8
16	24	4-1/4	2.8	49 005	40 838	38 688	36 754	3—8
16	25	4-1/2	2.7	47 045	39 204	37 141	35 284	3—8
16	26	4-5/8	2.6	45 235	37 696	35 712	33 927	3—8
16	27	4-7/8	2.5	43 560	36 300	34 389	32 670	3—8
16	28	5	2.4	42 004	35 004	33 161	31 503	3—8

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Soybean Disk on 15 to 20 in Rows

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Average Seeds (per ft)	Approximate Seed Population per Acre (A42586) 108-Hole Disk (cell-type)				Recommended Speed Range in mph
Driver	Driven		15 in Rows	18 in Rows	19 in Rows	20 in Rows	
35	24	19.6	686 070	571 725	541 634	514 552	2—8
35	25	19.0	658 627	548 856	519 969	493 970	2—8
35	26	18.2	633 295	527 746	499 970	474 972	2—8
35	27	17.4	609 840	508 200	481 453	457 380	2—8
35	28	16.9	588 060	490 050	464 258	441 045	2—8
29	24	16.2	568 458	473 715	448 783	426 344	2—8
29	25	15.6	545 720	454 766	430 831	409 290	2—8
29	26	15.0	524 730	437 275	414 261	393 548	2—8
29	27	14.5	505 296	421 080	398 918	378 972	2—8
29	28	14.0	487 250	406 041	384 671	365 437	2—8
24	24	13.5	470 448	392 040	371 406	352 836	2—8
24	25	12.9	451 630	376 358	356 550	338 723	2—8
24	26	12.5	434 260	361 883	342 837	325 695	2—8
24	27	12.0	418 176	348 480	330 139	313 632	2—8
24	28	11.5	403 241	336 034	318 348	302 431	2—8
20	24	11.2	392 040	326 700	309 505	294 030	2—8
20	25	10.8	376 358	313 632	297 125	282 269	2—8
20	26	10.4	361 883	301 569	285 697	271 412	2—8
20	27	10.0	348 480	290 400	275 116	261 360	2—8
20	28	9.7	336 034	280 029	265 290	252 026	2—8
16	24	9.0	313 632	261 360	247 604	235 224	3—8
16	25	8.6	301 087	250 906	237 700	225 815	3—8
16	26	8.3	289 506	241 255	228 558	217 130	3—8
16	27	8.0	278 784	232 320	220 093	209 088	3—8
16	28	7.7	268 827	224 023	212 232	201 621	3—8

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Average Seeds (per ft)	Approximate Seed Population per Acre (A42586) 108-Hole Disk (cell-type)				Recommended Speed Range in mph
Driver	Driven		15 in Rows	18 in Rows	19 in Rows	20 in Rows	
35	24	7.4	257 276	214 397	203 113	192 957	3—8
35	25	7.1	246 985	205 821	194 988	185 239	3—8
35	26	6.8	237 486	197 905	187 489	178 114	3—8
35	27	6.6	228 690	190 575	180 545	171 518	3—8
35	28	6.3	220 523	183 769	174 097	165 392	4—8
29	24	6.1	213 172	177 643	168 293	159 879	4—8
29	25	5.9	204 645	170 537	161 562	153 484	4—8
29	26	5.6	196 774	163 978	155 348	147 580	4—8
29	27	5.4	189 486	157 905	149 594	142 115	4—8
29	28	5.2	182 719	152 266	144 252	137 039	4—8
24	24	5.1	176 418	147 015	139 277	132 314	4—8
24	25	4.9	169 361	141 134	133 706	127 021	4—8
24	26	4.7	162 847	135 706	128 564	122 136	4—8

Vacuum Seed Meter Rate Charts

Low-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A42586) 108-Hole Disk (cell-type)					Recommended Speed Range in mph
Driver	Driven	Average Seeds (per ft)	15 in Rows	18 in Rows	19 in Rows	20 in Rows	
24	27	4.5	156 816	130 680	123 802	117 612	4—8
24	28	4.3	151 215	126 013	119 381	113 412	4—8
20	24	4.2	147 015	122 513	116 064	110 261	4—8
20	25	4.1	141 134	117 612	111 422	105 851	4—8
20	26	3.9	135 706	113 088	107 136	101 780	4—8
20	27	3.8	130 680	108 900	103 168	98 010	4—8
20	28	3.6	126 013	105 011	99 484	94 510	4—8
16	24	3.4	117 612	98 010	92 852	88 209	4—8
16	25	3.2	112 908	94 090	89 138	84 681	4—8
16	26	3.1	108 565	90 471	85 709	81 424	4—8
16	27	3.0	104 544	87 120	82 535	78 408	4—8
16	28	2.9	100 810	84 009	79 587	75 608	4—8

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Soybean Disk on 22 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.				
High-Range Input Sprocket				
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A42586) 108-Hole Disk (cell-type)		Recommended Speed Range in mph
Driver	Driven	Average Seeds (per ft)	22 in Rows	
35	24	19.6	467 775	2—8
35	25	19.0	449 064	2—8
35	26	18.2	431 792	2—8
35	27	17.4	415 800	2—8
35	28	16.9	400 950	2—8
29	24	16.2	387 585	2—8
29	25	15.6	372 082	2—8
29	26	15.0	357 771	2—8
29	27	14.5	344 520	2—8
29	28	14.0	332 216	2—8
24	24	13.5	320 760	2—8
24	25	12.9	307 930	2—8
24	26	12.1	296 086	2—8
24	27	12.0	285 120	2—8
24	28	11.5	274 937	2—8
20	24	11.2	267 300	2—8
20	25	10.8	256 608	2—8
20	26	10.4	246 738	2—8
20	27	10.0	237 600	2—8
20	28	9.7	229 114	2—8
16	24	9.0	213 840	3—8
16	25	8.6	205 286	3—8
16	26	8.3	197 391	3—8
16	27	8.0	190 080	3—8
16	28	7.7	183 291	3—8

Vacuum Seed Meter Rate Charts

Low-Range Input Sprocket				
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A42586) 108-Hole Disk (cell-type)		
Driver	Driven	Average Seeds (per ft)	22 in Rows	Recommended Speed Range in mph
35	24	7.4	175 416	2—8
35	25	7.1	168 399	2—8
35	26	6.8	161 922	2—8
35	27	6.6	155 925	2—8
35	28	6.3	150 356	2—8
29	24	6.1	145 344	3—8
29	25	5.9	139 531	3—8
29	26	5.6	134 164	3—8
29	27	5.4	129 195	3—8
29	28	5.2	124 581	4—8
24	24	5.1	120 285	4—8
24	25	4.9	115 474	4—8
24	26	4.7	111 032	4—8
24	27	4.5	106 920	4—8
24	28	4.3	103 101	4—8
20	24	4.2	100 238	4—8
20	25	4.1	96 228	4—8
20	26	3.9	92 527	4—8
20	27	3.8	89 100	4—8
20	28	3.6	85 918	4—8
16	24	3.4	80 190	4—8
16	25	3.2	76 982	4—8
16	26	3.1	74 022	4—8
16	27	3.0	71 280	4—8
16	28	2.9	68 734	4—8

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Soybean Disk on 30 to 40 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.							
High-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (A42586) 108-Hole Disk (cell-type)				
Driver	Driven	Average Seeds (per ft)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
35	24	19.6	343 035	285 863	270 817	257 276	2—8
35	25	19.0	329 314	274 428	259 984	246 985	2—8
35	26	18.2	316 648	263 873	249 985	237 486	2—8
35	27	17.4	304 920	254 100	240 726	228 690	2—8
35	28	16.9	294 030	245 025	232 129	220 523	2—8
29	24	16.2	284 229	236 858	224 391	213 172	2—8
29	25	15.6	272 860	227 383	215 416	204 645	2—8
29	26	15.0	262 365	218 638	207 130	196 774	2—8
29	27	14.5	252 648	210 540	199 459	189 486	2—8
29	28	14.0	243 625	203 021	192 335	182 719	2—8

Vacuum Seed Meter Rate Charts

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Average Seeds (per ft)	Approximate Seed Population per Acre (A42586) 108-Hole Disk (cell-type)				Recommended Speed Range in mph
Driver	Driven		30 in Rows	36 in Rows	38 in Rows	40 in Rows	
24	24	13.5	235 224	196 020	185 703	176 418	2—8
24	25	12.9	225 815	188 179	178 275	169 361	2—8
24	26	12.5	217 130	180 942	171 418	162 847	2—8
24	27	12.0	209 088	174 240	165 069	156 816	2—8
24	28	11.5	201 621	168 017	159 174	151 215	2—8
20	24	11.2	196 020	163 350	154 753	147 015	2—8
20	25	10.8	188 179	156 816	148 563	141 134	2—8
20	26	10.4	180 942	150 785	142 849	135 706	2—8
20	27	10.0	174 240	145 200	137 558	130 680	2—8
20	28	9.7	168 017	140 014	132 645	126 013	2—8
16	24	9.0	156 816	130 680	123 802	117 612	3—8
16	25	8.6	150 543	125 453	118 850	112 908	3—8
16	26	8.3	144 753	120 628	114 279	108 565	3—8
16	27	8.0	139 392	116 160	110 046	104 544	3—8
16	28	7.7	134 414	112 011	106 116	100 810	3—8

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Average Seeds (per ft)	Approximate Seed Population per Acre (A42586) 108-Hole Disk (cell-type)				Recommended Speed Range in mph
Driver	Driven		30 in Rows	36 in Rows	38 in Rows	40 in Rows	
35	24	7.4	128 638	107 198	101 556	96 479	3—8
35	25	7.1	123 493	102 911	97 494	92 619	3—8
35	26	6.8	118 743	98 952	93 744	89 057	3—8
35	27	6.6	114 345	95 288	90 272	85 759	3—8
35	28	6.3	110 261	91 884	87 048	82 696	4—8
29	24	6.1	106 586	88 822	84 147	79 939	4—8
29	25	5.9	102 322	85 269	80 781	76 742	4—8
29	26	5.6	98 387	81 989	77 674	73 790	4—8
29	27	5.4	94 743	78 953	74 797	71 057	4—8
29	28	5.2	91 359	76 133	72 126	68 519	4—8
24	24	5.1	88 209	73 508	69 639	66 157	4—8
24	25	4.9	84 681	70 567	66 853	63 510	4—8
24	26	4.7	81 424	67 853	64 282	61 068	4—8
24	27	4.5	78 408	65 340	61 901	58 806	4—8
24	28	4.3	75 608	63 006	59 690	56 706	4—8
20	24	4.2	73 508	61 256	58 032	55 131	4—8
20	25	4.1	70 567	58 806	55 711	52 925	4—8
20	26	3.9	67 853	56 544	53 568	50 890	4—8
20	27	3.8	65 340	54 450	51 584	49 005	4—8
20	28	3.6	63 006	52 505	49 742	47 255	4—8
16	24	3.4	58 806	49 005	46 426	44 105	4—8
16	25	3.2	56 454	47 045	44 569	42 340	4—8
16	26	3.1	54 282	45 235	42 855	40 712	4—8
16	27	3.0	52 272	43 560	41 267	39 204	4—8
16	28	2.9	50 405	42 004	39 794	37 804	4—8

Vacuum Seed Meter Rate Charts

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ProMax 64 x 4.5 Disk on 15 to 22 in Rows

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A105848) 64-Hole Disk (flat-type)				Recommended Speed Range in mph
Driver	Driven	Average Seed Spacing (in)	15 in Rows	20 in Rows	22 in Rows	
35	24	1	406 560	304 920	277 200	2—5
35	25	1-1/8	390 297	292 723	266 112	2—5
35	26	1-1/8	375 286	281 465	255 877	2—5
35	27	1-1/8	361 386	271 040	246 400	2—5
35	28	1-1/4	348 480	261 360	237 600	2—5
29	24	1-1/4	336 864	252 648	229 680	2—6
29	25	1-3/8	323 390	242 542	220 493	2—6
29	26	1-3/8	311 637	233 214	212 013	2—6
29	27	1-1/2	300 463	224 576	204 160	4
29	28	1-1/2	288 741	216 558	196 869	4
24	24	1-1/2	278 786	209 099	190 080	4
24	25	1-5/8	267 633	200 725	181 357	4.5
24	26	1-5/8	257 339	193 005	186 887	4.5
24	27	1-3/4	247 808	185 856	168 731	4.5
24	28	1-3/4	238 949	179 218	162 926	5
20	24	1-7/8	232 320	174 240	158 400	5
20	25	1-7/8	224 170	167 271	152 064	5
20	26	2	214 449	160 837	146 215	5.5
20	27	2	206 506	154 994	140 800	5.5
20	28	2-1/8	199 131	149 349	135 771	6
16	24	2-1/4	185 856	139 392	126 720	6.5
16	25	2-3/8	178 422	133 816	121 651	6.5
16	26	2-1/2	171 559	128 670	116 973	7
16	27	2-1/2	165 217	123 904	112 640	7
16	28	2-5/8	159 305	119 479	108 960	7

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A105848) 64-Hole Disk (flat-type)				Recommended Speed Range in mph
Driver	Driven	Average Seed Spacing (in)	15 in Rows	20 in Rows	22 in Rows	
35	24	2-3/4	152 461	114 345	103 950	7
35	25	2-7/8	146 361	109 771	99 792	7
35	26	3	140 733	105 550	95 954	7
35	27	3-1/8	135 520	101 640	92 400	7
35	28	3-1/4	130 680	98 022	89 101	7
29	24	3-3/8	126 325	94 743	87 273	7
29	25	3-1/2	121 271	91 067	82 685	7
29	26	3-5/8	116 607	87 455	79 505	7
29	27	3-3/4	112 288	84 216	76 446	7

Vacuum Seed Meter Rate Charts

Low-Range Input Sprocket						
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (A105848) 64-Hole Disk (flat-type)			
Driver	Driven	Average Seed Spacing (in)	15 in Rows	20 in Rows	22 in Rows	Recommended Speed Range in mph
29	28	3-7/8	108 278	81 219	73 826	7
24	24	4	104 544	78 511	71 280	7
24	25	4-1/4	100 362	75 272	68 429	7
24	26	4-3/8	96 502	72 377	65 797	7
24	27	4-1/2	92 928	69 696	63 360	7
24	28	4-3/4	89 609	67 207	61 097	7
20	24	4-7/8	87 120	65 341	59 400	7
20	25	5	83 635	62 727	57 024	7
20	26	5-1/4	80 418	60 314	54 831	7
20	27	5-1/2	77 440	58 080	52 800	7
20	28	5-5/8	75 817	56 920	50 914	7
16	24	6	69 696	52 272	47 523	7
16	25	6-1/4	66 909	50 181	45 619	7
16	26	6-1/2	64 335	48 251	43 865	7
16	27	6-3/4	62 021	46 464	42 240	7
16	28	7	59 739	44 805	40 731	7

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Cotton and Small Soybean Disk on 15 to 22 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.						
High-Range Input Sprocket						
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (A56251) 64-Hole Disk (cell-type)			
Driver	Driven	Average Seed Spacing (in)	15 in Rows	20 in Rows	22 in Rows	Recommended Speed Range in mph
35	24	1	406 560	304 920	277 200	2—5
35	25	1-1/8	390 297	292 723	266 112	2—5
35	26	1-1/8	375 286	281 465	255 877	2—5
35	27	1-1/8	361 386	271 040	246 400	2—5
35	28	1-1/4	348 480	261 360	237 600	2—5
29	24	1-1/4	336 864	252 648	229 680	2—6
29	25	1-3/8	323 390	242 542	220 493	2—6
29	26	1-3/8	311 637	233 214	212 013	2—6
29	27	1-1/2	300 463	224 576	204 160	2—6
29	28	1-1/2	288 741	216 558	196 869	2—6
24	24	1-1/2	278 786	209 099	190 080	2—7
24	25	1-5/8	267 633	200 725	181 357	2—7
24	26	1-5/8	257 339	193 005	186 887	2—7
24	27	1-3/4	247 808	185 856	168 731	2—7
24	28	1-3/4	238 949	179 218	162 926	2—7
20	24	1-7/8	232 320	174 240	158 400	2—7.5
20	25	1-7/8	224 170	167 271	152 064	2—7.5
20	26	2	214 449	160 837	146 215	2—8
20	27	2	206 506	154 994	140 800	2—8
20	28	2-1/8	199 131	149 349	135 771	2—8

Vacuum Seed Meter Rate Charts

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A56251) 64-Hole Disk (cell-type)				Recommended Speed Range in mph
Driver	Driven	Average Seed Spacing (in)	15 in Rows	20 in Rows	22 in Rows	
16	24	2-1/4	185 856	139 392	126 720	3—8
16	25	2-3/8	178 422	133 816	121 651	3—8
16	26	2-1/2	171 559	128 670	116 973	3—8
16	27	2-1/2	165 217	123 904	112 640	3—8
16	28	2-5/8	159 305	119 479	108 960	3—8

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A56251) 64-Hole Disk (cell-type)				Recommended Speed Range in mph
Driver	Driven	Average Seed Spacing (in)	15 in Rows	20 in Rows	22 in Rows	
35	24	2-3/4	152 461	114 345	103 950	3—8
35	25	2-7/8	146 361	109 771	99 792	3—8
35	26	3	140 733	105 550	95 954	3—8
35	27	3-1/8	135 520	101 640	92 400	3—8
35	28	3-1/4	130 680	98 022	89 101	3—8
29	24	3-3/8	126 325	94 743	87 273	3—8
29	25	3-1/2	121 271	91 067	82 685	4—8
29	26	3-5/8	116 607	87 455	79 505	4—8
29	27	3-3/4	112 288	84 216	76 446	4—8
29	28	3-7/8	108 278	81 219	73 826	4—8
24	24	4	104 544	78 511	71 280	4—8
24	25	4-1/4	100 362	75 272	68 429	4—8
24	26	4-3/8	96 502	72 377	65 797	4—8
24	27	4-1/2	92 928	69 696	63 360	4—8
24	28	4-3/4	89 609	67 207	61 097	4—8
20	24	4-7/8	87 120	65 341	59 400	4—8
20	25	5	83 635	62 727	57 024	4—8
20	26	5-1/4	80 418	60 314	54 831	4—8
20	27	5-1/2	77 440	58 080	52 800	4—8
20	28	5-5/8	75 817	56 920	50 914	4—8
16	24	6	69 696	52 272	47 523	4—8
16	25	6-1/4	66 909	50 181	45 619	4—8
16	26	6-1/2	64 335	48 251	43 865	4—8
16	27	6-3/4	62 021	46 464	42 240	4—8
16	28	7	59 739	44 805	40 731	4—8

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Sugar Beet Disk on 22 to 38 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.						
High-Range Input Sprocket						
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (A51712, H136445, or A51713) 45-Hole Disk (cell-type)			
Driver	Driven	Average Seed Spacing (in)	22 in Rows	30 in Rows	38 in Rows	Recommended Speed Range in mph
35	24	1-1/2	194 906	142 931	112 840	2—3
35	25	1-1/2	187 110	137 214	108 327	2—3
35	26	1-5/8	179 913	131 937	104 160	2—3.5
35	27	1-5/8	173 250	127 050	100 303	2—3.5
35	28	1-3/4	167 063	122 513	96 720	2—4
29	24	1-3/4	161 494	118 429	93 496	2—4
29	25	1-7/8	155 034	113 692	89 757	2—4
29	26	2	149 071	109 319	86 304	2—4.5
29	27	2	143 550	105 270	83 108	2—4.5
29	28	2-1/8	138 423	101 510	80 140	2—4.5
24	24	2-1/8	133 650	98 010	77 376	2—5
24	25	2-1/4	128 304	94 090	74 281	2—5
24	26	2-3/8	123 369	90 471	71 424	2—5
24	27	2-3/8	118 800	87 120	68 779	2—5.5
24	28	2-1/2	114 557	84 009	66 323	2—5.5
20	24	2-5/8	111 375	81 675	64 480	2—6
20	25	2-3/4	106 920	78 408	61 901	2—6
20	26	2-3/4	102 808	75 392	59 520	2—6.5
20	27	2-7/8	99 000	72 600	57 316	2—6.5
20	28	3	95 464	70 007	55 269	2—7
16	24	3-1/4	89 100	65 340	51 584	3—7.5
16	25	3-3/8	85 536	62 726	49 521	3—7.5
16	26	3-1/2	82 246	60 314	47 616	3—8
16	27	3-5/8	79 200	58 080	45 853	3—8
16	28	3-3/4	76 371	56 006	44 215	3—8

Low-Range Input Sprocket						
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (A51712, H136445, or A51713) 45-Hole Disk (cell-type)			
Driver	Driven	Average Seed Spacing (in)	22 in Rows	30 in Rows	38 in Rows	Recommended Speed Range in mph
35	24	3-7/8	73 090	53 599	42 315	3—8
35	25	4-1/8	70 166	51 455	40 623	3—8
35	26	4-1/4	67 468	49 476	39 060	3—8
35	27	4-3/8	64 969	47 644	37 613	3—8
35	28	4-5/8	62 648	45 942	36 270	3—8
29	24	4-3/4	60 560	44 411	35 061	4—8
29	25	4-7/8	58 138	42 634	33 659	4—8
29	26	5-1/8	55 902	40 995	32 364	4—8
29	27	5-3/8	53 831	39 476	31 165	4—8
29	28	5-1/2	51 909	38 066	30 052	4—8
24	24	5-3/4	50 119	36 754	29 016	4—8
24	25	6	48 114	35 284	27 855	4—8
24	26	6-1/4	46 263	33 927	26 784	4—8

Vacuum Seed Meter Rate Charts

Low-Range Input Sprocket						
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A51712, H136445, or A51713) 45-Hole Disk (cell-type)				
Driver	Driven	Average Seed Spacing (in)	22 in Rows	30 in Rows	38 in Rows	Recommended Speed Range in mph
24	27	6-3/8	44 550	32 670	25 792	4—8
24	28	6-5/8	42 959	31 503	24 871	4—8
20	24	6-7/8	41 766	30 628	24 180	4—8
20	25	7-1/8	40 095	29 403	23 213	4—8
20	26	7-3/8	38 553	28 272	22 320	4—8
20	27	7-3/4	37 125	27 225	21 493	4—8
20	28	8	35 799	26 253	20 726	4—8
16	24	8-1/2	33 413	24 503	19 344	4—8
16	25	8-7/8	32 076	23 522	18 570	4—8
16	26	9-1/4	30 842	22 618	17 856	4—8
16	27	10	29 700	21 780	17 195	4—8
16	28	10	28 639	21 002	16 581	4—8

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Small Edible Bean Disk on 15 to 22 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.						
High-Range Input Sprocket						
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (H136468) 108-Hole Disk (cell-type)				
Driver	Driven	Average Seeds (per ft)	15 in Rows	20 in Rows	22 in Rows	Recommended Speed Range in mph
35	24	19.6	686 080	514 552	467 775	2—4
35	25	19.0	658 627	493 970	449 064	2—4
35	26	18.2	633 295	474 972	431 792	2—4
35	27	17.4	609 840	457 380	415 800	2—4
35	28	16.9	588 060	441 045	400 950	2—4
29	24	16.2	568 458	426 344	387 585	2—4.5
29	25	15.6	545 720	409 290	372 082	2—4.5
29	26	15.0	524 730	393 548	357 771	2—5
29	27	14.5	505 296	378 972	344 520	2—5
29	28	14.0	487 250	365 437	332 216	2—5.5
24	24	13.5	470 448	352 836	320 760	2—5.5
24	25	12.9	451 630	338 723	307 930	3—6
24	26	12.5	434 260	325 695	296 086	3—6
24	27	12.0	418 176	313 632	285 120	3—6
24	28	11.5	403 241	302 431	274 937	3—6.5
20	24	11.2	392 040	294 030	267 300	3—6.5
20	25	10.8	376 358	282 269	256 608	4—7
20	26	10.4	361 883	271 412	246 738	4—7
20	27	10.0	348 480	261 360	237 600	4—7.5
20	28	9.7	336 034	252 026	229 114	4—7.5
16	24	9.0	313 632	235 224	213 840	4—8
16	25	8.6	301 087	225 218	205 286	4—8
16	26	8.3	289 506	217 130	197 391	4—8
16	27	8.0	278 784	209 088	190 080	4—8

Vacuum Seed Meter Rate Charts

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (H136468) 108-Hole Disk (cell-type)				Recommended Speed Range in mph
Driver	Driven	Average Seeds (per ft)	15 in Rows	20 in Rows	22 in Rows	
16	28	7.7	268 827	201 621	183 291	4—8

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (H136468) 108-Hole Disk (cell-type)				Recommended Speed Range in mph
Driver	Driven	Average Seeds (per ft)	15 in Rows	20 in Rows	22 in Rows	
35	24	7.4	257 276	192 957	175 416	4—8
35	25	7.1	246 985	185 239	168 399	4—8
35	26	6.8	237 486	178 114	161 922	4—8
35	27	6.6	228 690	171 518	155 925	4—8
35	28	6.3	220 523	165 392	150 356	4—8
29	24	6.1	213 172	159 879	145 344	4—8
29	25	5.9	204 645	153 484	139 531	4—8
29	26	5.6	196 774	147 580	134 164	4—8
29	27	5.4	189 486	142 115	129 195	4—8
29	28	5.2	182 719	137 039	124 581	4—8
24	24	5.1	176 418	132 314	120 285	4—8
24	25	4.9	169 361	127 021	115 474	4—8
24	26	4.7	162 847	122 136	111 032	4—8
24	27	4.5	156 816	117 612	106 920	4—8
24	28	4.3	151 215	113 412	103 101	4—8
20	24	4.2	147 015	110 261	100 238	4—8
20	25	4.1	141 134	105 851	96 228	4—8
20	26	3.9	135 706	101 780	92 527	4—8
20	27	3.8	130 680	98 010	89 100	4—8
20	28	3.6	126 013	94 510	85 918	4—8
16	24	3.4	117 612	88 209	80 190	4—8
16	25	3.2	112 908	84 681	76 982	4—8
16	26	3.1	108 565	81 424	74 022	4—8
16	27	3.0	104 544	78 408	71 280	4—8
16	28	2.9	100 810	75 608	68 734	4—8

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Small Edible Bean Disk on 30 to 40 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.							
High-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (H136468) 108-Hole Disk (cell-type)				
Driver	Driven	Average Seeds (per ft)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range (mph)
35	24	19.6	343 035	285 863	270 817	257 276	2—4
35	25	19.0	329 314	274 428	259 984	246 985	2—4
35	26	18.2	316 648	263 873	249 985	237 486	2—4
35	27	17.4	304 920	254 100	240 726	228 690	2—4
35	28	16.9	294 030	245 025	232 129	220 523	2—4
29	24	16.2	284 229	236 858	224 391	213 172	2—4.5
29	25	15.6	272 860	227 383	215 416	204 645	2—4.5
29	26	15.0	262 365	218 638	207 130	196 774	2—5
29	27	14.5	252 648	210 540	199 459	189 486	2—5
29	28	14.0	243 625	203 021	192 335	182 719	2—5.5
24	24	13.5	235 224	196 020	185 703	176 418	2—5.5
24	25	12.9	225 815	188 179	178 275	169 361	3—6
24	26	12.5	217 130	180 942	171 418	162 847	3—6
24	27	12.0	209 088	174 240	165 069	156 816	3—6
24	28	11.5	201 621	168 017	159 174	151 215	3—6.5
20	24	11.2	196 020	163 350	154 753	147 015	3—6.5
20	25	10.8	188 179	156 816	148 563	141 134	4—7
20	26	10.4	180 942	150 785	142 849	135 706	4—7
20	27	10.0	174 240	145 200	137 558	130 680	4—7.5
20	28	9.7	168 017	140 014	132 645	126 013	4—7.5
16	24	9.0	156 816	130 680	123 802	117 612	4—8
16	25	8.6	150 543	125 453	118 850	112 908	4—8
16	26	8.3	144 753	120 628	114 279	108 565	4—8
16	27	8.0	139 392	116 160	110 046	104 544	4—8
16	28	7.7	134 414	112 011	106 116	100 810	4—8

Low-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (H136468) 108-Hole Disk (cell-type)				
Driver	Driven	Average Seeds (per ft)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range (mph)
35	24	7.4	128 638	107 798	101 556	96 479	4—8
35	25	7.1	123 493	102 911	97 494	92 619	4—8
35	26	6.8	118 743	98 952	93 744	89 057	4—8
35	27	6.6	114 345	95 288	90 272	85 759	4—8
35	28	6.3	110 261	91 884	87 048	82 696	4—8
29	24	6.1	106 586	88 822	84 147	79 939	4—8
29	25	5.9	102 322	85 269	80 781	76 742	4—8
29	26	5.6	98 387	81 989	77 674	73 790	4—8
29	27	5.4	94 743	78 953	74 797	71 057	4—8
29	28	5.2	91 359	76 133	72 126	68 519	4—8
24	24	5.1	88 209	73 508	69 639	66 157	4—8
24	25	4.9	84 681	70 567	66 853	63 510	4—8
24	26	4.7	81 424	67 853	64 282	61 068	4—8

Vacuum Seed Meter Rate Charts

Low-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth		Average Seeds (per ft)	Approximate Seed Population per Acre (H136468) 108-Hole Disk (cell-type)				Recommended Speed Range (mph)
Driver	Driven		30 in Rows	36 in Rows	38 in Rows	40 in Rows	
24	27	4.5	78 408	65 340	61 901	58 806	4—8
24	28	4.3	75 608	63 006	59 690	56 706	4—8
20	24	4.2	73 508	61 256	58 032	55 131	4—8
20	25	4.1	70 567	58 806	55 711	52 925	4—8
20	26	3.9	67 853	56 544	53 568	50 890	4—8
20	27	3.8	65 340	54 450	51 584	49 005	4—8
20	28	3.6	63 006	52 505	49 742	47 255	4—8
16	24	3.4	58 806	49 005	46 426	44 105	4—8
16	25	3.2	56 454	47 045	44 569	42 340	4—8
16	26	3.1	54 282	45 235	42 855	40 712	4—8
16	27	3.0	52 272	43 560	41 267	39 204	4—8
16	28	2.9	50 405	42 004	39 794	37 804	4—8

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Medium Edible Bean Disk on 15 to 22 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.						
High-Range Input Sprocket						
Planting Rate Sprockets Number of Teeth		Average Seeds (per ft)	Approximate Seed Population per Acre (A51696) 56-Hole Disk (cell-type)			Recommended Speed Range (mph)
Driver	Driven		15 in Rows	20 in Rows	22 in Rows	
35	24	10.2	335 740	266 805	242 550	4—4.5
35	25	9.8	341 510	256 133	232 848	4—4.5
35	26	9.4	328 375	246 282	223 892	4—5
35	27	9	316 213	237 160	215 600	4—5
35	28	8.8	304 920	228 690	207 900	4—5
29	24	8.4	294 756	221 067	200 970	4—5
29	25	8.1	282 966	212 224	192 931	4—5.5
29	26	7.8	272 682	204 062	185 511	4—5.5
29	27	7.5	262 905	196 504	178 640	4—6
29	28	7.3	252 648	189 488	172 260	4—6
24	24	7	243 938	182 962	166 320	4—6.5
24	25	6.7	234 179	175 634	158 687	4—6.5
24	26	6.5	225 172	168 879	163 526	4—7
24	27	6.2	216 832	162 624	147 640	4—7
24	28	6	209 080	156 816	142 560	4—7.5
20	24	5.8	203 280	152 460	138 600	4—8
20	25	5.6	196 149	146 362	133 056	4—8
20	26	5.4	187 643	140 732	127 938	4—8
20	27	5.2	180 693	135 620	123 200	4—8
20	28	5	174 240	130 680	118 800	4—8
16	24	4.7	162 624	121 968	110 880	4—8
16	25	4.5	156 119	117 089	106 445	4—8
16	26	4.3	150 114	112 586	102 351	4—8
16	27	4.2	144 565	108 416	98 560	4—8

Vacuum Seed Meter Rate Charts

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A51696) 56-Hole Disk (cell-type)				Recommended Speed Range (mph)
Driver	Driven	Average Seeds (per ft)	15 in Rows	20 in Rows	22 in Rows	
16	28	4	139 392	104 544	95 340	4—8

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A51696) 56-Hole Disk (cell-type)				Recommended Speed Range (mph)
Driver	Driven	Average Seeds (per ft)	15 in Rows	20 in Rows	22 in Rows	
35	24	3.8	133 403	100 052	90 956	4—8
35	25	3.7	128 066	96 050	87 318	4—8
35	26	3.5	123 141	92 356	83 960	4—8
35	27	3.4	118 580	88 935	80 850	4—8
35	28	3.3	114 345	85 769	77 963	4—8
29	24	3.2	110 534	82 900	76 364	4—8
29	25	3.1	106 112	79 684	72 349	4—8
29	26	2.9	102 031	76 523	69 567	4—8
29	27	2.8	98 252	73 869	66 890	4—8
29	28	2.7	94 743	71 067	64 598	4—8
24	24	2.6	91 476	68 697	62 370	4—8
24	25	2.5	87 817	65 863	59 875	4—8
24	26	2.4	84 439	63 330	57 572	4—8
24	27	2.3	81 312	60 984	55 440	4—8
24	28	2.3	78 408	58 806	53 460	4—8
20	24	2.2	76 230	57 173	51 975	4—8
20	25	2.1	73 181	54 886	49 896	4—8
20	26	2	70 366	52 775	47 977	4—8
20	27	1.9	67 760	50 820	46 200	4—8
20	28	1.9	66 340	49 805	44 550	4—8
16	24	1.8	60 984	45 738	41 583	4—8
16	25	1.7	58 545	43 908	39 917	4—8
16	26	1.6	56 293	42 220	38 382	4—8
16	27	1.6	54 268	40 656	36 960	4—8
16	28	1.5	52 272	39 204	35 640	4—8

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Medium Edible Bean Disk on 30 to 40 in Rows

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Average Seeds (per ft)	Approximate Seed Population per Acre (A51696) 56-Hole Disk (cell-type)				Recommended Speed Range (mph)
Driver	Driven		30 in Rows	36 in Rows	38 in Rows	40 in Rows	
35	24	10.2	177 870	148 225	140 424	133 403	4—4.5
35	25	9.8	170 755	142 296	134 807	128 066	4—4.5
35	26	9.4	164 188	136 823	129 622	123 141	4—5
35	27	9.1	158 107	131 756	124 821	118 580	4—5
35	28	8.8	152 460	127 050	120 363	114 345	4—5
29	24	8.5	147 378	122 815	116 651	110 534	4—5
29	25	8.1	141 483	117 902	111 697	106 112	4—5.5
29	26	7.3	136 041	113 368	107 401	102 031	4—5.5
29	27	7.5	131 003	109 169	103 423	98 252	4—6
29	28	7.3	126 324	105 270	99 729	94 743	4—6
24	24	7	121 968	101 640	96 291	91 476	4—6.5
24	25	6.7	117 089	97 574	92 439	87 817	4—6.5
24	26	6.5	112 586	93 822	88 884	84 439	4—7
24	27	6.2	108 416	90 347	85 592	81 312	4—7
24	28	6	104 544	87 120	82 535	78 408	4—7.5
20	24	5.8	101 640	84 700	80 242	76 230	4—8
20	25	5.6	97 574	81 312	77 032	73 181	4—8
20	26	5.4	93 822	78 185	74 070	70 366	4—8
20	27	5.2	90 347	75 289	71 326	67 760	4—8
20	28	5	87 120	72 600	68 779	65 340	4—8
16	24	4.7	81 312	67 760	64 194	60 984	4—8
16	25	4.5	78 060	65 050	61 626	58 545	4—8
16	26	4.3	75 057	62 548	59 256	56 293	4—8
16	27	4.2	72 277	60 231	57 061	54 208	4—8
16	28	4	69 696	58 080	55 023	52 272	4—8

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Average Seeds (per ft)	Approximate Seed Population per Acre (A51696) 56-Hole Disk (cell-type)				Recommended Speed Range (mph)
Driver	Driven		30 in Rows	36 in Rows	38 in Rows	40 in Rows	
35	24	3.8	66 701	55 584	52 659	50 026	4—8
35	25	3.7	64 033	53 361	50 553	48 025	4—8
35	26	3.5	61 570	51 309	48 608	46 178	4—8
35	27	3.4	59 290	49 408	46 808	44 468	4—8
35	28	3.3	57 173	47 644	45 136	42 879	4—8
29	24	3.2	55 265	46 056	43 632	41 450	4—8
29	25	3.1	53 056	44 213	41 886	39 792	4—8
29	26	2.9	51 015	42 513	40 275	38 262	4—8
29	27	2.8	49 126	40 938	38 784	36 845	4—8
29	28	2.7	47 372	39 476	37 399	35 529	4—8
24	24	2.6	45 738	38 115	36 109	34 304	4—8
24	25	2.5	43 908	36 590	34 665	32 931	4—8
24	26	2.4	42 220	35 183	33 331	31 665	4—8

Vacuum Seed Meter Rate Charts

Low-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth		Average Seeds (per ft)	Approximate Seed Population per Acre (A51696) 56-Hole Disk (cell-type)				Recommended Speed Range (mph)
Driver	Driven		30 in Rows	36 in Rows	38 in Rows	40 in Rows	
24	27	2.3	40 656	33 880	32 097	30 492	4—8
24	28	2.3	39 204	32 670	30 951	29 403	4—8
20	24	2.2	38 115	31 763	30 091	28 586	4—8
20	25	2.1	36 590	30 492	28 887	27 443	4—8
20	26	2	35 183	29 319	27 776	26 387	4—8
20	27	1.9	33 880	28 233	26 747	25 410	4—8
20	28	1.9	32 670	27 225	25 792	24 503	4—8
16	24	1.8	30 492	25 410	24 073	22 869	4—8
16	25	1.7	29 272	24 394	23 110	21 954	4—8
16	26	1.6	28 146	23 455	22 221	21 110	4—8
16	27	1.6	27 104	22 587	21 398	20 328	4—8
16	28	1.5	26 136	21 780	20 634	19 602	4—8

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Large Edible Bean Disk on 15 to 22 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.						
High-Range Input Sprocket						
Planting Rate Sprockets Number of Teeth		Average Seeds (per ft)	Approximate Seed Population per Acre (H136092) 50-Hole Disk (cell-type)			Recommended Speed Range (mph)
Driver	Driven		15 in Rows	20 in Rows	22 in Rows	
35	24	9.1	317 626	238 218	216 563	4—4.5
35	25	8.8	304 920	228 690	207 900	4—4.5
35	26	8.4	293 192	219 894	199 904	4—4.5
35	27	8.1	282 334	211 750	192 500	4—4.5
35	28	7.8	272 250	204 188	185 625	4—4.5
29	24	7.6	263 176	197 382	179 438	4—5
29	25	7.3	252 648	189 486	172 260	4—5.5
29	26	7	242 930	182 198	165 635	4—5.5
29	27	6.7	233 934	175 450	159 500	4—5.5
29	28	6.5	225 578	169 184	153 804	4—6
24	24	6.3	217 800	163 350	148 500	4—6
24	25	6	209 088	156 618	142 560	4—6.5
24	26	5.8	201 046	150 748	137 077	4—6.5
24	27	5.6	193 600	145 200	132 000	4—7
24	28	5.4	186 686	140 014	127 286	4—7
20	24	5.2	181 500	136 126	123 750	4—7.5
20	25	5	174 240	130 680	118 800	4—7.5
20	26	4.8	167 538	125 654	114 231	4—8
20	27	4.6	161 344	121 000	110 000	4—8
20	28	4.5	155 572	116 678	106 071	4—8
16	24	4.2	145 200	108 900	99 000	4—8
16	25	4	139 392	104 544	95 040	4—8
16	26	3.9	134 030	100 524	91 385	4—8
16	27	3.7	129 066	96 800	88 000	4—8

Vacuum Seed Meter Rate Charts

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (H136092) 50-Hole Disk (cell-type)				Recommended Speed Range (mph)
Driver	Driven	Average Seeds (per ft)	15 in Rows	20 in Rows	22 in Rows	
16	28	3.6	124 458	93 342	84 857	4—8

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (H136092) 50-Hole Disk (cell-type)				Recommended Speed Range (mph)
Driver	Driven	Average Seeds (per ft)	15 in Rows	20 in Rows	22 in Rows	
35	24	3.4	119 110	89 332	81 211	4—8
35	25	3.3	114 346	85 758	77 963	4—8
35	26	3.2	109 948	82 460	74 964	4—8
35	27	3	105 876	79 406	72 188	4—8
35	28	2.9	102 094	76 570	69 609	4—8
29	24	2.8	98 690	74 018	67 289	4—8
29	25	2.7	94 744	71 058	62 113	4—8
29	26	2.6	91 100	68 324	59 813	4—8
29	27	2.5	87 726	65 794	57 676	4—8
29	28	2.4	84 592	63 444	55 688	4—8
24	24	2.3	81 676	61 254	53 460	4—8
24	25	2.3	78 408	58 806	51 404	4—8
24	26	2.2	75 392	56 544	49 500	4—8
24	27	2.1	72 600	54 450	47 732	4—8
24	28	2	70 008	52 506	46 406	4—8
20	24	2	68 062	51 046	44 550	4—8
20	25	1.9	65 340	49 006	42 837	4—8
20	26	1.8	62 826	47 120	41 250	4—8
20	27	1.7	60 500	45 376	39 777	4—8
20	28	1.7	58 340	43 754	37 125	4—8
16	24	1.6	54 450	40 298	35 640	4—8
16	25	1.5	52 272	39 204	34 269	4—8
16	26	1.4	50 262	37 696	33 000	4—8
16	27	1.4	48 400	36 300	31 821	4—8
16	28	1.3	46 672	35 004	29 700	4—8

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Large Edible Bean Disk on 30 to 40 in Rows

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Average Seeds (per ft)	Approximate Seed Population per Acre (H136092) 50-Hole Disk (cell-type)				Recommended Speed Range (mph)
Driver	Driven		30 in Rows	36 in Rows	38 in Rows	40 in Rows	
35	24	9.1	158 813	132 344	125 378	119 109	4—4.5
35	25	8.8	152 460	127 050	120 363	114 345	4—4.5
35	26	8.4	146 596	122 163	115 734	109 947	4—4.5
35	27	8.1	141 167	117 639	111 447	105 875	4—4.5
35	28	7.8	136 125	113 438	107 467	102 094	4—4.5
29	24	7.6	131 588	109 656	103 885	98 691	4—5
29	25	7.3	126 324	105 270	99 729	94 743	4—5.5
29	26	7	121 465	101 221	95 894	91 099	4—5.5
29	27	6.7	116 967	97 472	92 342	87 725	4—5.5
29	28	6.5	112 789	93 991	89 044	84 592	4—6
24	24	6.3	108 900	90 750	85 974	81 675	4—6
24	25	6	104 544	87 120	82 535	78 408	4—6.5
24	26	5.8	100 523	83 769	79 360	75 392	4—6.5
24	27	5.6	96 800	80 667	76 421	72 600	4—7
24	28	5.4	93 343	77 786	73 692	70 007	4—7
20	24	5.2	90 750	75 625	71 645	68 063	4—7.5
20	25	5	87 120	72 600	68 779	65 340	4—7.5
20	26	4.8	83 769	69 808	66 134	62 827	4—8
20	27	4.6	80 667	67 222	63 684	60 500	4—8
20	28	4.5	77 786	64 821	61 410	58 339	4—8
16	24	4.2	72 600	60 500	57 316	54 450	4—8
16	25	4	69 696	58 080	55 023	52 272	4—8
16	26	3.9	67 015	55 846	52 907	50 262	4—8
16	27	3.7	64 533	53 778	50 947	48 400	4—8
16	28	3.6	62 229	51 857	49 128	46 671	4—8

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Average Seeds (per ft)	Approximate Seed Population per Acre (H136092) 50-Hole Disk (cell-type)				Recommended Speed Range (mph)
Driver	Driven		30 in Rows	36 in Rows	38 in Rows	40 in Rows	
35	24	3.4	59 555	49 629	47 017	44 666	4—8
35	25	3.3	57 173	47 644	45 136	42 879	4—8
35	26	3.2	54 974	45 811	43 400	41 230	4—8
35	27	3	52 938	44 115	41 793	39 703	4—8
35	28	2.9	51 047	42 539	40 300	38 285	4—8
29	24	2.8	49 345	41 121	38 957	34 009	4—8
29	25	2.7	47 372	39 476	37 399	35 529	4—8
29	26	2.6	45 550	37 958	35 960	34 162	4—8
29	27	2.5	43 863	36 552	34 638	32 897	4—8
29	28	2.4	42 296	35 247	33 392	31 722	4—8
24	24	2.3	40 838	34 031	32 240	30 628	4—8
24	25	2.3	39 204	32 670	30 951	29 403	4—8
24	26	2.2	37 696	31 413	29 760	28 272	4—8

Vacuum Seed Meter Rate Charts

Low-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth		Average Seeds (per ft)	Approximate Seed Population per Acre (H136092) 50-Hole Disk (cell-type)				Recommended Speed Range (mph)
Driver	Driven		30 in Rows	36 in Rows	38 in Rows	40 in Rows	
24	27	2.1	36 300	30 250	28 658	27 225	4—8
24	28	2	35 004	29 170	27 634	26 253	4—8
20	24	2	34 031	28 539	26 867	25 523	4—8
20	25	1.9	32 670	27 225	25 792	24 503	4—8
20	26	1.8	31 413	26 178	24 800	23 560	4—8
20	27	1.7	30 250	25 208	23 882	22 688	4—8
20	28	1.7	29 170	24 308	23 029	21 877	4—8
16	24	1.6	27 225	22 688	21 493	20 419	4—8
16	25	1.5	26 136	21 780	20 634	19 602	4—8
16	26	1.4	25 131	20 942	19 840	18 848	4—8
16	27	1.4	24 200	20 167	19 105	18 150	4—8
16	28	1.3	23 336	19 446	18 423	17 502	4—8

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Peanuts (Runner and Spanish) Disk on 30 to 40 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.							
High-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth		Average Seeds (per ft)	Approximate Seed Population per Acre (H136092) 50-Hole Disk (cell-type)				Recommended Speed Range (mph)
Driver	Driven		30 in Rows	36 in Rows	38 in Rows	40 in Rows	
35	24	9.1	158 813	132 344	125 378	119 109	0—3.5
35	25	8.8	152 460	127 050	120 363	114 345	0—3.5
35	26	8.4	146 596	122 163	115 734	109 947	0—3.5
35	27	8.1	141 167	117 639	111 447	105 875	3.5—4
35	28	7.8	136 125	113 438	107 467	102 094	3.5—4
29	24	7.6	131 588	109 656	103 885	98 691	3.5—4
29	25	7.3	126 324	105 270	99 729	94 743	3.5—4.5
29	26	7	121 465	101 221	95 894	91 099	3.5—4.5
29	27	6.7	116 967	97 472	92 342	87 725	3.5—4.5
29	28	6.5	112 789	93 991	89 044	84 592	3.5—5
24	24	6.3	108 900	90 750	85 974	81 675	3.5—5
24	25	6	104 544	87 120	82 535	78 408	3.5—5.5
24	26	5.8	100 523	83 769	79 360	75 392	3.5—5.5
24	27	5.6	96 800	80 667	76 421	72 600	3.5—5.5
24	28	5.4	93 343	77 786	73 692	70 007	3.5—6
20	24	5.2	90 750	75 625	71 645	68 063	3.5—6
20	25	5	87 120	72 600	68 779	65 340	3.5—6.5
20	26	4.8	83 769	69 808	66 134	62 827	3.5—6.5
20	27	4.6	80 667	67 222	63 684	60 500	3.5—7
20	28	4.5	77 786	64 821	61 410	58 339	3.5—7
16	24	4.2	72 600	60 500	57 316	54 450	4—7.5
16	25	4	69 696	58 080	55 023	52 272	4—8
16	26	3.9	67 015	55 846	52 907	50 262	4—8
16	27	3.7	64 533	53 778	50 947	48 400	4—8

Vacuum Seed Meter Rate Charts

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (H136092) 50-Hole Disk (cell-type)				
Driver	Driven	Average Seeds (per ft)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range (mph)
16	28	3.6	62 229	51 857	49 128	46 671	4—8

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (H136092) 50-Hole Disk (cell-type)				
Driver	Driven	Average Seeds (per ft)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range in mph
35	24	3.4	59 555	49 629	47 017	44 666	4—8
35	25	3.3	57 173	47 644	45 136	42 879	4—8
35	26	3.2	54 974	45 811	43 400	41 230	4—8
35	27	3	52 938	44 115	41 793	39 703	4—8
35	28	2.9	51 047	42 539	40 300	38 285	4—8
29	24	2.8	49 345	41 121	38 957	37 009	4—8
29	25	2.7	47 372	39 476	37 399	35 529	4—8
29	26	2.6	45 550	37 958	35 960	34 162	4—8
29	27	2.5	43 863	36 552	34 638	32 897	4—8
29	28	2.4	42 296	35 247	33 392	31 772	4—8
24	24	2.3	40 838	34 031	32 240	30 628	4—8
24	25	2.3	39 204	32 670	30 951	29 403	4—8
24	26	2.2	37 696	31 413	29 760	28 272	4—8
24	27	2.1	36 300	30 250	28 658	27 225	4—8
24	28	2	35 004	29 170	27 634	26 253	4—8
20	24	2	34 031	28 359	26 867	25 523	4—8
20	25	1.9	32 670	27 225	25 792	24 503	4—8
20	26	1.8	31 413	26 178	24 800	23 560	4—8
20	27	1.7	30 250	25 208	23 882	22 688	4—8
20	28	1.7	29 170	24 308	23 029	21 877	4—8
16	24	1.6	27 225	22 688	21 493	20 149	4—8
16	25	1.5	25 136	21 780	20 634	19 602	4—8
16	26	1.4	25 131	20 942	19 840	18 848	4—8
16	27	1.4	24 200	20 167	19 105	18 150	4—8
16	28	1.3	23 336	19 446	18 423	17 502	4—8

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Peanuts (Virginia) Disk on 30 to 40 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.							
High-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (H138722) 46-Hole Disk (cell-type)				
Driver	Driven	Average Seed Spacing (ft)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range (mph)
35	24	8.4	146 108	121 756	115 348	109 581	0—3
35	25	8.1	140 263	116 886	110 734	105 197	0—3
35	26	7.7	134 868	112 390	106 475	101 151	0—3
35	27	7.5	129 873	108 228	102 532	97 405	0—3
35	28	7.2	125 235	104 363	98 870	93 926	0—3
29	24	6.9	121 061	100 884	95 574	90 795	0—3
29	25	6.7	116 218	96 848	91 751	87 164	3—3.5
29	26	6.4	111 748	93 123	88 222	83 811	3—3.5
29	27	6.2	107 609	89 674	84 955	80 707	3—4
29	28	6.0	103 766	86 472	81 921	77 825	3—4
24	24	5.8	100 188	83 490	79 096	75 141	3—4
24	25	5.5	96 180	80 150	75 932	72 135	3—4
24	26	5.3	92 481	77 068	73 011	69 361	3—4.5
24	27	5.1	89 056	74 213	70 307	66 792	3—4.5
24	28	4.9	85 875	71 563	67 796	64 407	3—4.5
20	24	4.8	83 490	69 575	65 913	62 618	3—5
20	25	4.6	80 150	66 792	63 277	60 113	3—5
20	26	4.4	77 068	64 223	60 843	57 801	3—5
20	27	4.3	74 213	61 844	58 589	55 660	3—5.5
20	28	4.1	71 563	59 636	56 497	53 672	3—6
16	24	3.8	66 792	55 660	52 731	50 094	3—6
16	25	3.7	64 120	53 434	50 621	48 090	3—6.5
16	26	3.5	61 654	51 378	48 674	46 241	3—6.5
16	27	3.4	59 371	49 476	46 872	44 528	3—7
16	28	3.3	57 250	47 709	45 198	42 938	3—7.5

Low-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre (H138722) 46-Hole Disk (cell-type)				
Driver	Driven	Average Seed Spacing (ft)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range (mph)
35	24	3.1	54 790	45 659	43 256	41 093	3—7.5
35	25	3.0	52 599	43 832	41 525	39 449	3—8
35	26	2.9	50 576	42 146	39 928	37 932	3—8
35	27	2.8	48 703	40 585	38 449	36 527	3—8
35	28	2.7	46 963	39 136	37 076	35 222	3—8
29	24	2.6	45 398	37 831	35 840	34 048	4—8
29	25	2.5	43 582	36 318	34 407	32 686	4—8
29	26	2.4	41 906	34 921	33 083	31 429	4—8
29	27	2.3	40 354	33 628	31 858	30 265	4—8
29	28	2.2	38 912	32 427	30 720	29 184	4—8
24	24	2.2	37 571	31 309	29 661	28 178	4—8
24	25	2.1	36 068	30 056	28 474	27 051	4—8
24	26	2.0	34 680	28 900	27 379	26 010	4—8

Vacuum Seed Meter Rate Charts

Low-Range Input Sprocket							
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (H138722) 46-Hole Disk (cell-type)					Recommended Speed Range (mph)
Driver	Driven	Average Seed Spacing (ft)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	
24	27	1.9	33 396	27 830	26 365	25 047	4—8
24	28	1.8	32 203	26 836	25 424	24 152	4—8
20	24	1.8	31 309	26 091	24 717	23 482	4—8
20	25	1.7	30 056	25 047	23 729	22 542	4—8
20	26	1.7	28 900	24 084	22 816	21 675	4—8
20	27	1.6	27 830	23 192	21 971	20 873	4—8
20	28	1.5	26 836	22 363	21 186	20 127	4—8
16	24	1.4	25 047	20 873	19 774	18 765	4—8
16	25	1.4	24 045	20 038	18 983	18 034	4—8
16	26	1.3	23 120	19 267	18 253	17 340	4—8
16	27	1.3	22 265	18 553	17 577	16 698	4—8
16	28	1.2	21 469	17 891	16 949	16 102	4—8

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Edible Bean Disk on 15 and 20 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.						
High-Range Input Sprocket						
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A52903, A52904, or A52878) 50-Hole ProMax Disk (flat-type)				Recommended Speed Range (mph)
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	15 in Rows	20 in Rows	
35	24	1-3/8	9.1	317 626	238 218	3—4
35	25	1-3/8	8.8	304 920	228 690	3—4
35	26	1-1/2	8.4	293 192	219 894	3—4
35	27	1-1/2	8.1	282 334	211 750	3—4
35	28	1-1/2	7.8	272 250	204 188	3—4.5
29	24	1-5/8	7.6	263 176	197 382	3—4.5
29	25	1-3/4	8.3	252 648	189 486	3—4.5
29	26	1-3/4	7	242 930	182 198	3—4.5
29	27	1-3/4	6.7	233 934	175 450	3—4.5
29	28	1-7/8	6.5	225 578	169 184	3—4.5
24	24	1-7/8	6.3	217 800	163 350	3—4.5
24	25	2	6	209 088	156 618	3—4.5
24	26	2	5.8	201 046	150 748	4—5
24	27	2-1/8	5.6	193 600	145 200	4—5
24	28	2-1/4	5.4	186 686	140 014	4—5
20	24	2-3/8	5.2	181 500	136 126	4—5
20	25	2-1/2	5	174 240	130 680	4—5
20	26	2-1/2	4.8	167 538	125 654	4—5
20	27	2-1/2	4.6	161 344	121 000	4—6
20	28	2-5/8	4.5	155 572	116 678	4—6
16	24	2-7/8	4.2	145 200	108 900	4—6
16	25	3	4	139 392	104 544	4—6
16	26	3-1/8	3.9	134 030	100 524	4—6
16	27	3-1/4	3.7	129 066	96 800	4—6

Vacuum Seed Meter Rate Charts

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A52903, A52904, or A52878) 50-Hole ProMax Disk (flat-type)				
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	15 in Rows	20 in Rows	Recommended Speed Range (mph)
16	28	3-3/8	3.5	124 458	93 342	4—6

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A52903, A52904, or A52878) 50-Hole ProMax Disk (flat-type)				
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	15 in Rows	20 in Rows	Recommended Speed Range (mph)
35	24	3-1/2	3.4	119 110	89 332	4—6
35	25	3-5/8	3.3	114 346	85 758	4—6
35	26	3-3/4	3.2	109 948	82 460	4—6
35	27	4	3	105 876	79 406	4—6
35	28	4-1/8	2.9	102 094	76 570	4—6
29	24	4-1/2	2.8	98 690	74 018	4—6
29	25	4-3/8	2.7	94 744	71 058	4—6
29	26	4-5/8	2.6	91 100	68 324	4—6
29	27	4-3/4	2.5	87 726	65 794	4—6
29	28	5	2.4	84 592	63 444	4—6
24	24	5-1/8	2.3	81 676	61 254	4—6
24	25	5-3/8	2.3	78 408	58 806	4—6
24	26	5-1/2	2.2	75 392	56 544	4—6
24	27	5-3/4	2.1	72 600	54 450	4—6
24	28	6	2	70 008	52 506	4—6
20	24	6-1/8	2	68 062	51 046	4—6
20	25	6-3/8	1.9	65 340	49 006	4—6
20	26	6-5/8	1.8	62 826	47 120	4—6
20	27	7	1.7	60 500	45 376	4—6
20	28	7-1/8	1.7	58 340	43 754	4—6
16	24	7-5/8	1.6	54 450	40 298	4—6
16	25	8	1.5	52 277	39 204	4—6
16	26	8-3/8	1.4	50 262	37 696	4—6
16	27	8-5/8	1.4	48 400	36 300	4—6
16	28	9	1.3	46 672	35 004	4—6

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Edible Bean Disk on 22 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.					
High-Range Input Sprocket					
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A52903, A52904, or A52878) 50-Hole ProMax Disk (flat-type)			
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	22 in Rows	Recommended Speed Range (mph)
35	24	1-3/8	9.1	216 563	3—4
35	25	1-3/8	8.8	207 900	3—4
35	26	1-1/2	8.4	199 904	3—4
35	27	1-1/2	8.1	192 500	3—4
35	28	1-1/2	7.8	185 625	3—4.5
29	24	1-5/8	7.6	179 438	3—4.5
29	25	1-3/4	7.3	172 260	3—4.5
29	26	1-3/4	7	165 635	3—4.5
29	27	1-3/4	6.7	159 500	3—4.5
29	28	1-7/8	6.5	153 804	3—4.5
24	24	1-7/8	6.3	148 500	3—4.5
24	25	2	6	142 560	3—4.5
24	26	2	5.8	137 077	4—5
24	27	2-1/8	5.6	132 000	4—5
24	28	2-1/4	5.4	127 286	4—5
20	24	2-3/8	5.2	123 750	4—5
20	25	2-1/2	5	118 800	4—5
20	26	2-1/2	4.8	114 231	4—5
20	27	2-1/2	4.6	110 000	4—6
20	28	2-5/8	4.5	106 071	4—6
16	24	2-7/8	4.2	99 000	4—6
16	25	3	4	95 040	4—6
16	26	3-1/8	3.9	91 385	4—6
16	27	3-1/4	3.7	88 000	4—6
16	28	3-3/8	3.5	84 857	4—6

Low-Range Input Sprocket					
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A52903, A52904, or A52878) 50-Hole ProMax Disk (flat-type)			
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	22 in Rows	Recommended Speed Range (mph)
35	24	3-1/2	3.4	81 211	4—6
35	25	3-5/8	3.3	77 963	4—6
35	26	3-3/4	3.2	74 964	4—6
35	27	4	3	72 188	4—6
35	28	4-1/8	2.9	69 609	4—6
29	24	4-1/2	2.8	67 289	4—6
29	25	4-3/8	2.7	62 113	4—6
29	26	4-5/8	2.6	59 813	4—6
29	27	4-3/4	2.5	57 676	4—6
29	28	5	2.4	55 688	4—6
24	24	5-1/8	2.3	53 460	4—6
24	25	5-3/8	2.3	51 404	4—6
24	26	5-1/2	2.2	49 500	4—6

Vacuum Seed Meter Rate Charts

Low-Range Input Sprocket					
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A52903, A52904, or A52878) 50-Hole ProMax Disk (flat-type)			
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	22 in Rows	Recommended Speed Range (mph)
24	27	5-3/4	2.1	47 732	4—6
24	28	6	2	46 406	4—6
20	24	6-1/8	2	44 550	4—6
20	25	6-3/8	1.9	42 837	4—6
20	26	6-5/8	1.8	41 250	4—6
20	27	7	1.7	39 777	4—6
20	28	7-1/8	1.7	37 125	4—6
16	24	7-5/8	1.6	35 640	4—6
16	25	8	1.5	34 269	4—6
16	26	8-3/8	1.4	33 000	4—6
16	27	8-5/8	1.4	31 821	4—6
16	28	9	1.3	35 640	4—6

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Edible Bean Disk on 30 to 40 in Rows

Rates are approximate. Perform a rate check before planting. See the Vacuum Seed Meter Setup for the optimum configuration. See How to Use Rate Charts in this section for assistance with chart.								
High-Range Input Sprocket								
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A52903, A52904, or A52878) 50-Hole ProMax Disk (flat-type)						
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range (mph)
35	24	1-3/8	9.1	158 813	132 344	125 378	119 109	3—4
35	25	1-3/8	8.8	152 460	127 050	120 363	114 345	3—4
35	26	1-1/2	8.4	146 596	122 163	115 734	109 947	3—4
35	27	1-1/2	8.1	141 167	117 639	111 447	108 875	3—4
35	28	1-1/2	7.8	136 125	113 438	109 467	102 094	3—4.5
29	24	1-5/8	7.6	131 588	109 656	103 885	98 691	3—4.5
29	25	1-3/4	7.3	126 324	105 270	99 729	94 743	3—4.5
29	26	1-3/4	7	121 465	101 221	95 894	91 099	3—4.5
29	27	1-3/4	6.7	116 967	97 472	92 342	87 725	3—4.5
29	28	1-7/8	6.5	112 789	93 991	89 044	84 592	3—4.5
24	24	1-7/8	6.3	108 900	90 750	85 974	81 675	3—4.5
24	25	2	6	104 544	87 120	82 535	78 408	3—4.5
24	26	2	5.8	100 523	83 769	79 360	75 392	4—5
24	27	2-1/8	5.6	96 800	80 667	76 421	72 600	4—5
24	28	2-1/4	5.4	93 343	77 786	73 692	70 007	4—5
20	24	2-3/8	5.2	90 750	75 625	71 645	68 063	4—5
20	25	2-1/2	5	87 120	72 600	68 779	65 340	4—5
20	26	2-1/2	4.8	83 769	69 808	66 134	62 827	4—5
20	27	2-1/2	4.6	80 667	67 222	63 684	60 500	4—6
20	28	2-5/8	4.5	77 786	64 821	61 410	58 339	4—6
16	24	2-7/8	4.2	72 600	60 500	57 316	54 450	4—6
16	25	3	4	69 696	58 080	55 023	52 272	4—6

Vacuum Seed Meter Rate Charts

Rates are approximate. Perform a rate check before planting.
See the Vacuum Seed Meter Setup for the optimum configuration.
See How to Use Rate Charts in this section for assistance with chart.

High-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A52903, A52904, or A52878) 50-Hole ProMax Disk (flat-type)						
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range (mph)
16	26	3-1/8	3.9	67 015	55 846	52 907	50 262	4—6
16	27	3-1/4	3.7	64 533	53 778	50 947	48 400	4—6
16	28	3-3/8	3.5	62 229	51 857	49 128	46 671	4—6

Low-Range Input Sprocket

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre (A52903, A52904, or A52878) 50-Hole ProMax Disk (flat-type)						
Driver	Driven	Average Seed Spacing (in)	Average Seeds (per ft)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range (mph)
35	24	3-1/2	3.4	59 555	49 629	47 017	44 666	4—6
35	25	3-5/8	3.3	57 173	47 644	45 136	42 879	4—6
35	26	3-3/4	3.2	54 974	45 811	43 400	41 230	4—6
35	27	4	3	52 938	44 115	41 793	39 703	4—6
35	28	4-1/8	2.9	51 047	42 539	40 300	38 285	4—6
29	24	4-1/2	2.8	49 345	41 121	38 957	37 009	4—6
29	25	4-3/8	2.7	47 372	39 476	37 399	35 529	4—6
29	26	4-5/8	2.6	45 550	37 958	35 960	34 162	4—6
29	27	4-3/4	2.5	43 863	36 552	34 638	32 897	4—6
29	28	5	2.4	42 296	35 247	33 392	31 722	4—6
24	24	5-1/8	2.3	40 838	34 031	32 240	30 628	4—6
24	25	5-3/8	2.3	39 204	32 670	30 951	29 403	4—6
24	26	5-1/2	2.2	37 696	31 413	29 760	28 272	4—6
24	27	5-3/4	2.1	36 300	30 250	28 658	27 225	4—6
24	28	6	2	35 004	29 170	27 634	26 253	4—6
20	24	6-1/8	2	34 031	28 359	26 867	25 523	4—6
20	25	6-3/8	1.9	32 670	27 225	25 792	24 503	4—6
20	26	6-5/8	1.8	31 413	26 178	24 800	23 560	4—6
20	27	7	1.7	30 250	25 208	23 882	22 688	4—6
20	28	7-1/8	1.7	29 170	24 308	23 029	21 877	4—6
16	24	7-5/8	1.6	27 225	22 688	21 493	20 419	4—6
16	25	8	1.5	26 136	21 780	20 634	19 602	4—6
16	26	8-3/8	1.4	25 131	20 942	19 840	18 848	4—6
16	27	8-5/8	1.4	24 200	20 167	19 105	18 150	4—6
16	28	9	1.3	23 336	19 446	18 423	17 502	4—6

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Finger Pick-Up Meter Rate Charts

How to Use Planting Rate Charts

IMPORTANT: The actual planting rate must be checked in the field. See Checking Seed Population section.

NOTE: All rates in the following charts are based on typical drive wheel slippage. Drive wheel slippage is affected by crop residue, unit downforce, tire pressure, and soil conditions.

1. Select desired row spacing and seed population under proper column.
2. Choose proper input sprocket:

A higher population can require the use of the high

range input sprocket and HIGH RANGE chart for that particular seed.

A lower population can require the use of the low range input sprocket and LOW RANGE chart for that particular seed.

3. Determine correct seed drive transmission sprocket combination.
4. Determine recommended planting speed range. The faster speed in the speed range is for optimum field conditions. Reduce speed and increase unit downforce if planting in rough conditions.

AG, OUC6074, 1262-19-17APR09

Corn—Finger Pick-Up—15 in to 20 in Rows

Rates are approximate. Perform a rate check before planting. See Finger Pick-Up section to configure the meter. See HOW TO USE RATE CHARTS in this section for assistance with chart.					
HIGH RANGE INPUT SPROCKET					
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre			
Driver	Driven	Average Seed Spacing (in)	15 in Rows	20 in Rows	Recommended Speed Range (mph)
35	24	3-3/4	112 338	84 254	2 to 3
35	25	3-7/8	107 846	80 848	2 to 3
35	26	4	103 689	77 774	2 to 3
35	27	4-1/4	99 856	74 892	2 to 4
35	28	4-3/8	96 290	72 218	2 to 4
29	24	4-1/2	93 080	69 810	3 to 4
29	25	4-5/8	89 358	67 018	3 to 4
29	26	4-7/8	85 920	64 440	3 to 4
29	27	5	82 738	62 054	3 to 4
29	28	5-1/4	66 486	59 838	3 to 4
24	24	5-1/2	77 032	57 774	3 to 5
24	25	5-5/8	73 952	55 464	3 to 5
24	26	5-7/8	71 106	53 330	3 to 5
24	27	6-1/8	68 654	51 334	3 to 5
24	28	6-3/8	66 028	49 520	3 to 5
20	24	6-1/2	64 194	48 146	4 to 6
20	25	6-3/4	61 626	46 220	4 to 6
20	26	7	59 256	44 442	4 to 6
20	27	7-3/8	57 062	42 796	4 to 7
20	28	7-5/8	55 024	41 268	4 to 7
16	24	8-1/8	51 334	38 516	4 to 7
16	25	8-1/2	49 300	36 976	5 to 8
16	26	8-7/8	47 404	35 554	5 to 8
16	27	9-1/8	45 648	34 236	5 to 8
16	28	9-1/2	44 018	33 014	5 to 8

Finger Pick-Up Meter Rate Charts

LOW RANGE INPUT SPROCKET					
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre		
Driver	Driven	Average Seed Spacing (in.)	15 in Rows	20 in Rows	Recommended Speed Range (mph)
35	24	9-7/8	42 128	31 596	5 to 8
35	25	10-3/8	40 442	30 332	5 to 8
35	26	10-3/4	38 886	29 164	5 to 8
35	27	11-1/8	37 446	28 084	6 to 8
35	28	11-5/8	36 108	27 082	6 to 8
29	24	12	34 906	26 178	6 to 8
29	25	12-1/2	33 510	25 132	6 to 8
29	26	13	32 220	24 166	6 to 8
29	27	13-1/2	31 026	23 270	7 to 8
29	28	14	29 918	22 440	7 to 8
24	24	14-1/2	28 888	21 666	7 to 8
24	25	15	27 732	20 798	7 to 8
24	26	15-5/8	26 666	19 948	8
24	27	16-1/4	25 678	19 258	8
24	28	16-7/8	24 760	18 570	8
20	24	17-3/8	24 072	18 054	8

OUO6074,0000CC0-19-27MAR23

Corn—Finger Pick-Up—30 in to 40 in Rows

Rates are approximate. Perform a rate check before planting. See Finger Pick-Up section to configure the meter. See HOW TO USE RATE CHARTS in this section for assistance with chart.							
HIGH RANGE INPUT SPROCKET							
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre				
Driver	Driven	Average Seed Spacing (in)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range (mph)
35	24	3-3/4	56 169	46 808	44 344	42 127	2 to 3
35	25	3-7/8	53 923	44 936	42 571	40 442	2 to 3
35	26	4	51 849	43 207	40 933	38 887	2 to 3
35	27	4-1/4	49 928	41 607	39 417	37 446	2 to 4
35	28	4-3/8	48 145	40 121	39 009	36 109	2 to 4
29	24	4-1/2	46 540	36 784	36 742	34 905	3 to 4
29	25	4-5/8	44 679	37 232	35 273	33 509	3 to 4
29	26	4-7/8	42 960	35 800	33 916	32 220	3 to 4
29	27	5	41 369	34 474	32 660	31 027	3 to 4
29	28	5-1/4	39 892	33 243	31 494	29 919	3 to 4
24	24	5-1/2	38 516	32 097	30 408	28 887	3 to 5
24	25	5-5/8	36 976	30 813	29 191	27 732	3 to 5
24	26	5-7/8	35 553	29 628	28 068	26 665	3 to 5
24	27	6-1/8	34 237	28 531	27 029	25 667	3 to 5
24	28	6-3/8	33 014	27 512	26 064	24 760	3 to 5
20	24	6-1/2	32 097	26 747	25 340	24 073	4 to 6
20	25	6-3/4	30 813	25 677	24 326	23 110	4 to 6
20	26	7	29 628	24 690	23 390	22 221	4 to 6
20	27	7-3/8	28 531	23 775	22 524	21 398	4 to 7
20	28	7-5/8	27 512	22 926	21 720	20 634	4 to 7

Finger Pick-Up Meter Rate Charts

Rates are approximate. Perform a rate check before planting.
See Finger Pick-Up section to configure the meter.
See HOW TO USE RATE CHARTS in this section for assistance with chart.

HIGH RANGE INPUT SPROCKET

Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre				
Driver	Driven	Average Seed Spacing (in)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range (mph)
16	24	8-1/8	25 677	21 398	20 272	19 258	4 to 7
16	25	8-1/2	24 650	20 542	19 461	18 488	5 to 8
16	26	8-7/8	23 702	19 752	18 712	17 777	5 to 8
16	27	9-1/8	22 824	19 020	18 019	17 118	5 to 8
16	28	9-1/2	22 009	18 341	17 376	16 507	5 to 8

LOW RANGE INPUT SPROCKET

Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre				
Driver	Driven	Average Seed Spacing (in)	30 in Rows	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range (mph)
35	24	9-7/8	21 064	17 553	16 629	15 798	5 to 8
35	25	10-3/8	20 221	16 851	15 964	15 166	5 to 8
35	26	10-3/4	19 443	16 203	15 350	14 582	5 to 8
35	27	11-1/8	18 723	15 603	14 781	14 042	6 to 8
35	28	11-5/8	18 054	15 045	14 254	13 541	6 to 8
29	24	12	17 453	14 544	13 778	13 089	6 to 8
29	25	12-1/2	16 755	13 962	13 227	12 566	6 to 8
29	26	13	16 110	13 425	12 719	12 083	6 to 8
29	27	13-1/2	15 513	12 928	12 247	11 365	7 to 8
29	28	14	14 959	12 466	11 810	11 220	7 to 8
24	24	14-1/2	14 444	12 036	11 403	10 833	7 to 8
24	25	15	13 866	11 555	10 947	10 399	7 to 8
24	26	15-5/8	13 333	11 110	10 526	9 999	8
24	27	16-1/4	12 839	10 699	10 136	9 629	8
24	28	16-7/8	12 380	10 317	9 774	9 285	8
20	24	17-3/8	12 036	10 030	9 502	9 027	8

OUO6074,0000CE6-19-27MAR23

Radial Bean Meter Rate Charts

How to Use Planting Rate Charts

IMPORTANT: The actual planting rate must be checked in the field. See **Checking Seed Population** section.

NOTE: All rates in the following charts are based on typical drive wheel slippage. Drive wheel slippage is affected by crop residue, unit downforce, tire pressure, and soil conditions.

1. Select desired row spacing and seed population under proper column.

2. Choose proper input sprocket:

A higher population can require the use of the high

range input sprocket and HIGH RANGE chart for that particular seed.

A lower population can require the use of the low range input sprocket and LOW RANGE chart for that particular seed.

3. Determine correct seed drive transmission sprocket combination.

4. Determine recommended planting speed range. The faster speed in the speed range is for optimum field conditions. Reduce speed and increase unit downforce if planting in rough conditions.

AG, OOU6074, 1262-19-17APR09

Soybeans—18 in to 22 in Rows

Rates are approximate. Perform a rate check before planting.
See Radial Bean Meter Setup section to configure the meter.
See HOW TO USE RATE CHARTS in this section for assistance with chart.

HIGH RANGE INPUT SPROCKET

Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre				Recommended Speed Range (mph)
Driver	Driven	Average Seed Spacing (in)	18 in Rows	19 in Rows	22 in Rows	
35	24	0.80	436 874	413 880	357 442	2 to 6
35	25	0.83	419 399	397 325	343 144	2 to 6
35	26	0.86	403 268	382 043	329 947	2 to 6
35	27	0.90	388 332	367 894	317 726	2 to 6
35	28	0.93	374 463	354 755	306 379	2 to 6
29	24	0.96	361 981	342 929	296 166	2 to 7
29	25	1.00	347 502	329 212	284 320	2 to 7
29	26	1.04	334 136	316 550	273 384	2 to 7
29	27	1.08	321 761	304 828	263 259	2 to 7
29	28	1.12	310 269	293 940	253 857	2 to 8
24	24	1.16	299 571	283 804	245 103	2 to 8
24	25	1.21	287 588	272 452	235 299	2 to 8
24	26	1.26	276 527	261 973	226 249	2 to 8
24	27	1.31	266 285	252 270	217 869	2 to 8
24	28	1.36	256 776	243 260	210 088	2 to 8
20	24	1.40	249 642	236 503	204 253	2 to 8
20	25	1.45	239 656	227 043	196 083	2 to 8
20	26	1.51	230 439	218 311	188 541	2 to 8
20	27	1.57	221 904	210 225	181 558	2 to 8
20	28	1.63	213 979	202 717	175 074	2 to 8
16	24	1.74	199 714	189 202	163 402	2 to 8
16	25	1.82	191 725	181 634	156 866	2 to 8
16	26	1.89	184 351	174 648	150 833	2 to 8
16	27	1.96	177 523	168 180	145 246	2 to 8
16	28	2.04	171 183	162 174	140 059	2 to 8

Radial Bean Meter Rate Charts

LOW RANGE INPUT SPROCKET						
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre				Recommended Speed Range (mph)
Driver	Driven	Average Seed Spacing (in)	18 in Rows	19 in Rows	22 in Rows	
35	24	2.13	163 828	155 205	134 041	2 to 8
35	25	2.22	157 275	148 997	128 679	2 to 8
35	26	2.30	151 226	143 266	123 730	2 to 8
35	27	2.39	145 626	137 960	119 147	2 to 8
35	28	2.48	140 240	133 033	114 892	2 to 8
29	24	2.57	135 743	128 599	111 062	2 to 8
29	25	2.67	130 313	123 455	106 620	2 to 8
29	26	2.78	125 301	118 706	102 519	2 to 8
29	27	2.89	120 660	114 310	98 722	2 to 8
29	28	3.00	116 351	110 227	95 196	2 to 8
24	24	3.10	112 339	106 426	91 914	2 to 8
24	25	3.23	107 845	102 169	88 237	2 to 8
24	26	3.36	103 697	98 240	84 843	2 to 8
24	27	3.49	99 857	94 601	81 701	2 to 8
24	28	3.62	96 291	91 223	78 783	2 to 8
20	24	3.72	93 616	88 689	76 595	2 to 8
20	25	3.88	89 871	85 141	73 531	2 to 8
20	26	4.03	86 415	81 866	70 703	2 to 8
20	27	4.19	83 214	78 834	68 084	2 to 8
20	28	4.34	80 242	76 019	65 653	2 to 8
16	24	4.65	74 893	70 951	61 276	2 to 8
16	25	4.85	71 897	68 113	58 825	2 to 8
16	26	5.04	69 132	65 493	56 562	2 to 8
16	27	5.23	66 571	63 067	54 467	2 to 8
16	28	5.43	64 194	60 815	62 522	2 to 8

OUC6074,0000CE7-19-27MAR23

Soybeans—15 in to 30 in Rows

Rates are approximate. Perform a rate check before planting. See Radial Bean Meter Setup section to configure the meter. See HOW TO USE RATE CHARTS in this section for assistance with chart.						
HIGH RANGE INPUT SPROCKET						
Planting Rate Sprockets Number of Teeth		Approximate Seed Population per Acre				Recommended Speed Range (mph)
Driver	Driven	Average Seed Spacing (in)	15 in Rows	20 in Rows	30 in Rows	
35	24	0.80	524 248	393 186	262 124	2 to 6
35	25	0.83	503 278	377 459	251 639	2 to 6
35	26	0.86	483 922	362 941	241 961	2 to 6
35	27	0.90	465 999	349 499	232 999	2 to 6
35	28	0.93	449 356	337 017	224 678	2 to 6
29	24	0.96	434 377	325 783	217 189	2 to 7
29	25	1.00	417 002	312 752	208 501	2 to 7
29	26	1.04	400 964	300 723	200 482	2 to 7
29	27	1.08	386 113	289 585	193 057	2 to 7
29	28	1.12	372 323	279 243	186 162	2 to 8
24	24	1.16	359 485	269 613	179 742	2 to 8

Radial Bean Meter Rate Charts

Rates are approximate. Perform a rate check before planting.
See Radial Bean Meter Setup section to configure the meter.
See HOW TO USE RATE CHARTS in this section for assistance with chart.

HIGH RANGE INPUT SPROCKET

Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre			
Driver	Driven	Average Seed Spacing (in)	15 in Rows	20 in Rows	30 in Rows	Recommended Speed Range (mph)
24	25	1.21	345 105	258 829	172 553	2 to 8
24	26	1.26	331 832	248 874	165 916	2 to 8
24	27	1.31	319 542	239 656	159 771	2 to 8
24	28	1.36	308 130	231 097	154 065	2 to 8
20	24	1.40	299 571	224 678	149 785	2 to 8
20	25	1.45	287 588	215 691	143 794	2 to 8
20	26	1.51	276 527	207 395	138 263	2 to 8
20	27	1.57	266 285	199 714	133 142	2 to 8
20	28	1.63	256 775	192 581	128 387	2 to 8
16	24	1.74	239 656	179 742	119 828	2 to 8
16	25	1.82	230 070	172 553	115 035	2 to 8
16	26	1.89	221 221	165 916	110 611	2 to 8
16	27	1.96	213 028	159 771	106 514	2 to 8
16	28	2.04	205 420	154 065	102 710	2 to 8

LOW RANGE INPUT SPROCKET

Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre			
Driver	Driven	Average Seed Spacing (in)	15 in Rows	20 in Rows	30 in Rows	Recommended Speed Range (mph)
35	24	2.13	196 593	147 445	98 297	2 to 8
35	25	2.22	188 729	141 547	94 365	2 to 8
35	26	2.30	181 471	136 103	90 735	2 to 8
35	27	2.39	174 749	131 062	87 375	2 to 8
35	28	2.48	168 508	126 381	84 254	2 to 8
29	24	2.57	162 891	122 169	81 446	2 to 8
29	25	2.67	156 376	117 282	78 188	2 to 8
29	26	2.78	150 361	112 771	75 181	2 to 8
29	27	2.89	144 792	108 594	72 396	2 to 8
29	28	3.00	139 621	104 716	69 811	2 to 8
24	24	3.10	134 807	101 105	67 403	2 to 8
24	25	3.23	129 414	97 061	64 707	2 to 8
24	26	3.36	124 437	93 328	62 218	2 to 8
24	27	3.49	119 828	89 871	59 914	2 to 8
24	28	3.62	115 549	86 661	57 774	2 to 8
20	24	3.72	112 339	84 254	56 169	2 to 8
20	25	3.88	107 845	80 884	53 923	2 to 8
20	26	4.03	103 697	77 773	51 849	2 to 8
20	27	4.19	99 857	74 893	49 928	2 to 8
20	28	4.34	96 291	72 218	48 145	2 to 8
16	24	4.65	89 871	67 403	44 936	2 to 8
16	25	4.85	86 276	64 707	43 138	2 to 8
16	26	5.04	82 958	62 218	41 479	2 to 8
16	27	5.23	79 885	59 914	39 943	2 to 8
16	28	5.43	77 032	57 774	38 516	2 to 8

Soybeans—36 in to 40 in Rows

Rates are approximate. Perform a rate check before planting.
See Radial Bean Meter Setup section to configure the meter.
See HOW TO USE RATE CHARTS in this section for assistance with chart.

HIGH RANGE INPUT SPROCKET						
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre			
Driver	Driven	Average Seed Spacing (in)	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range (mph)
35	24	0.80	218 437	206 940	196 593	2 to 6
35	25	0.83	209 699	198 663	188 729	2 to 6
35	26	0.86	201 634	191 022	181 471	2 to 6
35	27	0.90	194 166	183 947	174 749	2 to 6
35	28	0.93	187 232	177 377	168 508	2 to 6
29	24	0.96	180 991	171 465	162 891	2 to 7
29	25	1.00	173 751	164 606	156 376	2 to 7
29	26	1.04	167 068	158 275	150 361	2 to 7
29	27	1.08	160 880	152 413	144 792	2 to 7
29	28	1.12	155 135	146 970	139 621	2 to 8
24	24	1.16	149 785	141 902	134 807	2 to 8
24	25	1.21	143 794	136 226	129 414	2 to 8
24	26	1.26	138 263	130 986	124 437	2 to 8
24	27	1.31	133 142	126 135	119 828	2 to 8
24	28	1.36	128 387	121 630	115 549	2 to 8
20	24	1.40	124 821	118 252	112 339	2 to 8
20	25	1.45	119 828	113 521	107 845	2 to 8
20	26	1.51	115 219	109 155	103 697	2 to 8
20	27	1.57	110 952	105 112	99 857	2 to 8
20	28	1.63	106 989	101 358	96 291	2 to 8
16	24	1.74	99 857	94 601	89 871	2 to 8
16	25	1.82	95 863	90 817	86 276	2 to 8
16	26	1.89	92 176	87 324	82 958	2 to 8
16	27	1.96	88 762	84 090	79 885	2 to 8
16	28	2.04	85 592	81 087	77 032	2 to 8

LOW RANGE INPUT SPROCKET						
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre			
Driver	Driven	Average Seed Spacing (in)	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range (mph)
35	24	2.13	81 914	77 603	73 722	2 to 8
35	25	2.22	78 637	74 498	70 774	2 to 8
35	26	2.30	75 613	71 633	68 051	2 to 8
35	27	2.39	72 812	68 980	65 531	2 to 8
35	28	2.48	70 212	66 516	63 191	2 to 8
29	24	2.57	67 871	64 299	61 084	2 to 8
29	25	2.67	65 157	61 727	58 641	2 to 8
29	26	2.78	62 651	59 353	56 386	2 to 8
29	27	2.89	60 330	57 155	54 297	2 to 8

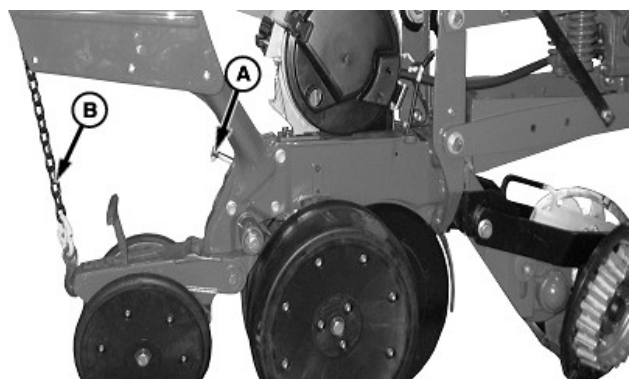
Radial Bean Meter Rate Charts

LOW RANGE INPUT SPROCKET						
Planting Rate Sprockets Number of Teeth			Approximate Seed Population per Acre			
Driver	Driven	Average Seed Spacing (in)	36 in Rows	38 in Rows	40 in Rows	Recommended Speed Range (mph)
29	28	3.00	58 176	55 114	52 358	2 to 8
24	24	3.10	56 169	53 213	50 553	2 to 8
24	25	3.23	53 923	51 085	48 530	2 to 8
24	26	3.36	51 849	49 120	46 664	2 to 8
24	27	3.49	49 928	47 301	44 936	2 to 8
24	28	3.62	48 145	45 611	43 331	2 to 8
20	24	3.72	46 808	44 344	42 127	2 to 8
20	25	3.88	44 936	42 571	40 442	2 to 8
20	26	4.03	43 207	40 933	38 887	2 to 8
20	27	4.19	41 607	39 417	37 446	2 to 8
20	28	4.34	40 121	38 009	36 109	2 to 8
16	24	4.65	37 446	35 475	33 702	2 to 8
16	25	4.85	35 948	34 056	32 354	2 to 8
16	26	5.04	34 556	32 747	31 109	2 to 8
16	27	5.23	33 286	31 534	29 957	2 to 8
16	28	5.43	32 097	30 408	28 887	2 to 8

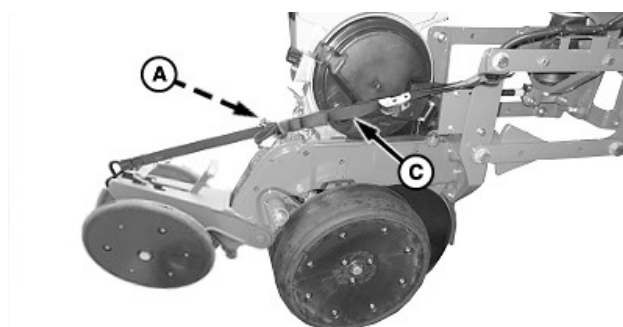
OUO6074,0000CE9-19-27MAR23

Checking the Seed Population

Check the Seed Population



A78826—UN—04OCT13



A78827—UN—04OCT13

A—Depth Handle
B—Chain
C—Ratchet Strap

NOTE: Disregard the seed spacing when planting at a shallow depth with the closing wheels raised. Seeds roll or bounce under these conditions, which affects seed spacing.

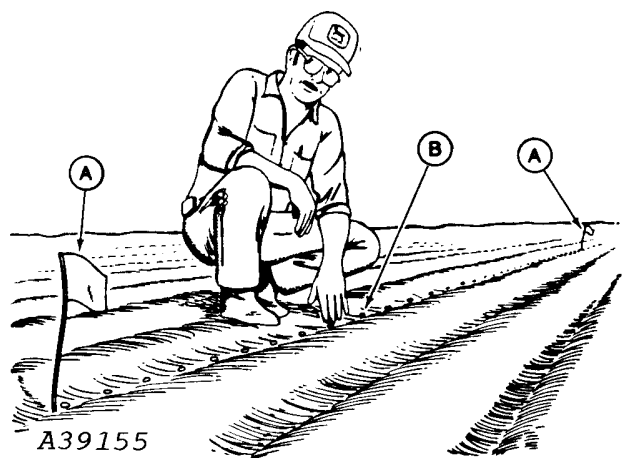
1. Set the depth handle (A) two settings from the minimum.
2. Attach a chain (B) or a ratchet strap (C) to one or more closing wheels so the seed furrow remains open.
3. Plant a short distance and verify that the seeds are visible in the furrow. Adjust the depth handle as needed.
4. Plant approximately 91 m (100 yd) at the target ground speed.
5. Consult the following table. Determine what distance equals 1/1000 of a hectare, 1/1000 of an acre, or 1/200 of an acre for the row width.

	Row Width (in)								
	15	18	19	20	22	30	36	38	40
Fraction of an Acre	Distance (ft) to Count for Population Check								
1/1000 ^a	34 ft 10 in	24 ft	27 ft 7 in	26 ft 1 in	23 ft 10 in	17 ft 5 in	14 ft 6 in	13 ft 10 in	13 ft 1 in
1/200 ^b	174 ft	145 ft	138 ft	131 ft	119 ft	87 ft	72.5 ft	69 ft	66 ft
Distance Calculation for Row Width (in) Not Shown									
1/1000	$(522\,722 \div \text{Row Width}) \div 1000 = \text{Feet to Count}$								
1/200	$(522\,722 \div \text{Row Width}) \div 200 = \text{Feet to Count}$								

^aUsed when the population is 100 000 seeds/acre or more.

^bUsed when the population is less than 100 000 seeds/acre.

	Row Width (cm)										
	38	46	48	51	56	70	76	80	91	97	101
Fraction of a Hectare	Distance (m) to Count for Population Check										
1/1000	26.24	21.88	20.72	19.68	17.90	14.29	13.12	12.5	10.94	10.36	9.84
Distance Calculation for Row Width (cm) Not Shown											
1/1000	$(1\,000\,000 \div \text{Row Width}) \div 1000 = \text{Meters to Count}$										



A—Flag
B—Seeds

A39155—UN—13FEB96

6. Mark the distance with flags (A).

7. Count the seeds (B) between the flags.

8. Calculate the population.

If 1/1000 of an area was counted, multiply the number of seeds by 1000.

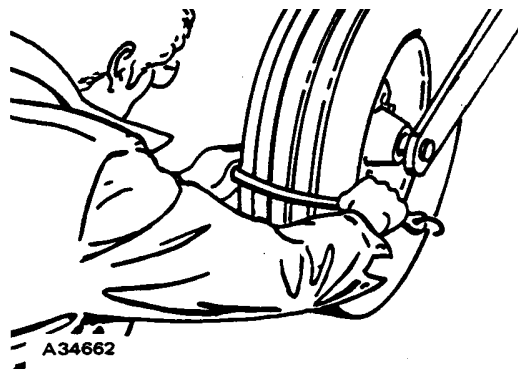
If 1/200 of an area was counted, multiply the number of seeds by 200.

If the in-field checks are different from the target population, investigate the following in the order listed:

1. Check the monitor setup and settings.
2. Check the meter setup and condition. Adjust or repair the meters as needed.
3. Adjust the vacuum in 25 mm (1 in) increments. To reduce skips, increase the vacuum. To reduce doubles, decrease the vacuum.
4. Avoid excessive bounce of the row units. Increase the row unit downforce or reduce the ground speed.

WP29706,0000B9E-19-20MAR19

Drive Wheel Slippage (Machines with Seed Transmission)



A34662—UN—10OCT88

Drive wheel slippage can cause a different rate than what is listed in the rate charts.

Some wheel slippage is normal. Rates listed in the charts are based on approximately 12 percent drive wheel slippage.

Binding or poorly lubricated parts, misaligned bearings, or packed material in pesticide or fertilizer hoppers can cause drive wheel slippage.

Down pressure springs, coulters, fertilizer openers, or other attachments can remove weight from drive wheels and cause slippage.

The amount of drive wheel slippage can be calculated.

1. Mark the transmission drive wheel so the mark is visible from the tractor seat.
2. Place a flag next to the drive wheel.
3. Raise the planter and drive until the wheel rotates 30 times. Stop and place another flag next to the drive wheel.
4. Turn around and lower the planter with the drive wheel next to the flag.
5. Actually plant as intended, to the other flag, while counting wheel revolutions.

Wheel Slippage Calculation

30 - Counted Revolutions While Planting ÷ 30 x 100 = Percent Wheel Slippage

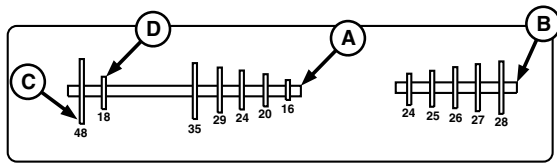
Example: 30 - 28 = 2 ÷ 30 = 0.066 x 100 = 6.6 percent slippage

6. If calculated slippage is greater or less than the 12 percent baseline slippage, adjust transmission accordingly.

OOU6074,0000CBE-19-26APR13

Setting the Seed Transmission 1705, 1725, 1735

Changing Input Sprocket Combinations

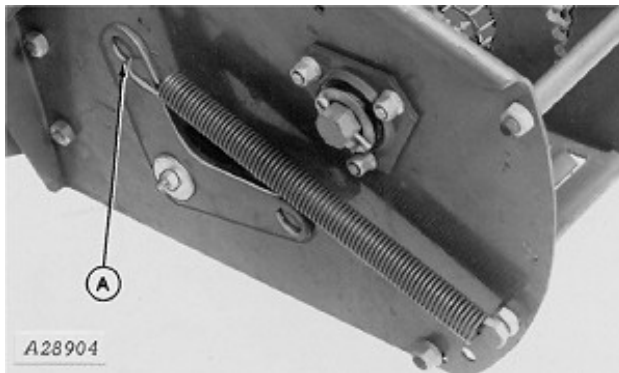


A56188—UN—12APR05

Number of Sprocket Teeth

- A—Rear Shaft (Driver)
- B—Front Shaft (Driven)
- C—Low Range
- D—High Range

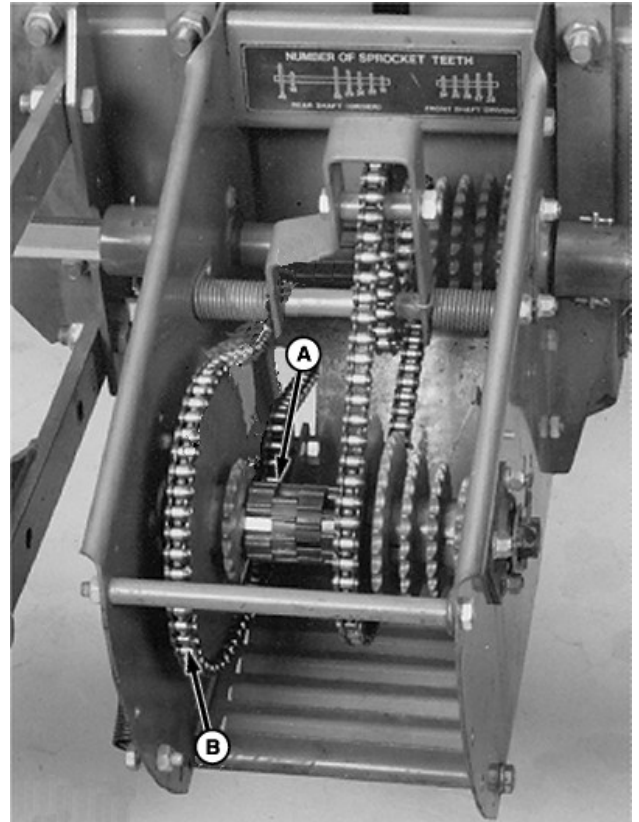
1. Consult planting rate chart to determine desired sprocket combinations.



A28904—UN—14OCT88

- A—Spring

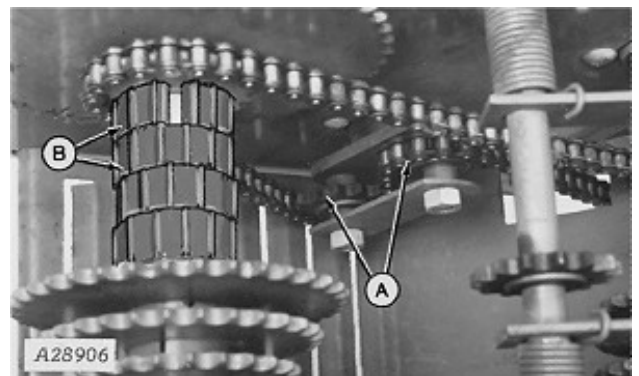
2. Remove spring (A) from chain tightener.



A47173—UN—16MAR01

- A—Rubber Sprocket Spacers
- B—Chain

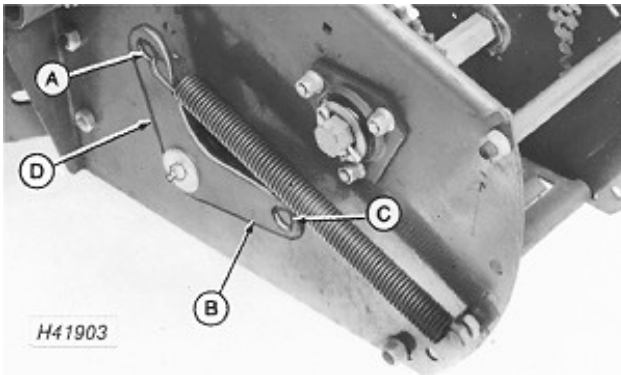
3. Remove required number of rubber sprocket spacers (A).
4. Remove chain (B) from input sprocket.



A28906—UN—14OCT88

- A—Sprockets
- B—Rubber Sprocket Spacers

5. Align desired input sprocket with chain tightener sprockets (A).
6. Install chain on sprocket and rubber sprocket spacers (B) on shaft.



H41903—UN—03MAY90

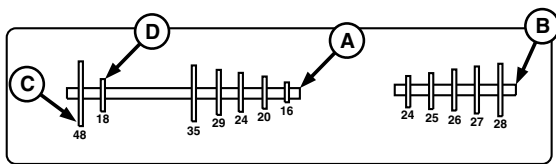
A—Hole
B—Arm
C—Hole
D—Arm

7. If chain is aligned on high-range input sprocket, locate spring in hole (A) of chain tightener. Arm (B) must point rearward.
8. If chain is installed on low-range input sprocket, locate spring in hole (C) of chain tightener. Arm (D) must point forward.

OOU01074,00001B6-19-12APR05

Changing Planting Rate Sprocket Combinations

NOTE: Rate charts are based on average planter wheel slip in tilled soil conditions. No-till conditions will likely result in a higher population than what is shown in rate charts. Adjust accordingly. Always verify population and spacing with a field check.

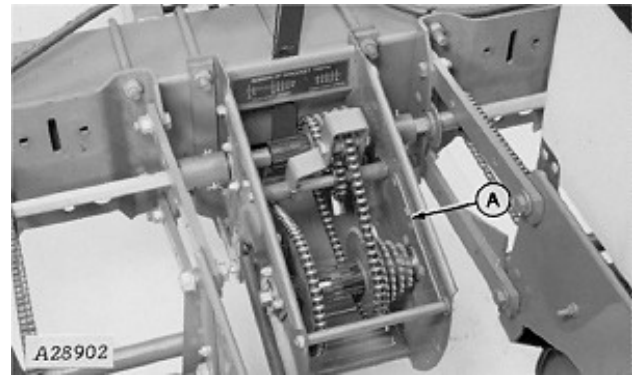


A56188—UN—12APR05

Number of Sprocket Teeth

A—Rear Shaft (Driver)
B—Front Shaft (Driven)
C—Low Range
D—High Range

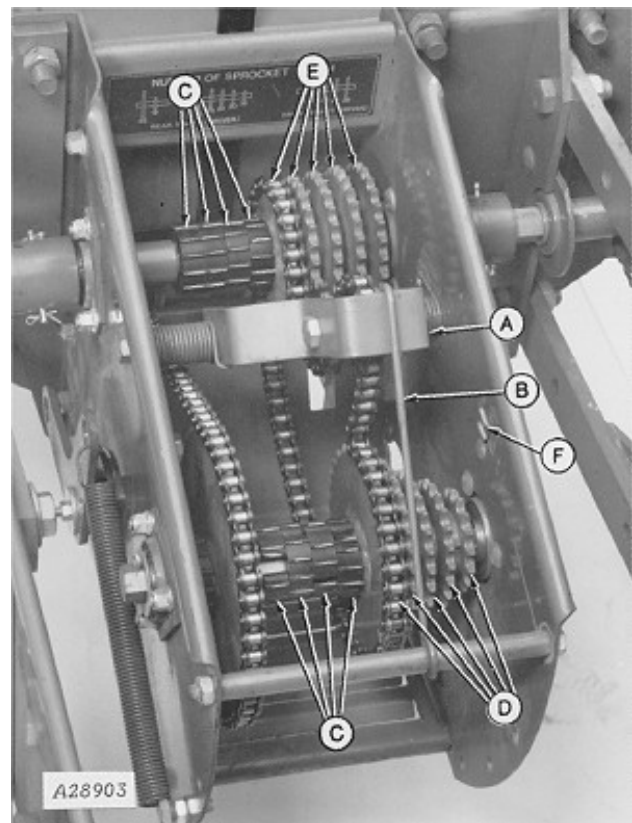
1. Consult planting rate chart to determine desired sprocket combinations.



A28902—UN—14OCT88

A—Hook

2. Remove retaining hook (A) from storage position.



A28903—UN—14OCT88

A—Chain Tightener
B—Retaining Hook
C—Rubber Sprocket Spacers
D—Driver Sprockets
E—Driven Sprockets
F—Clip

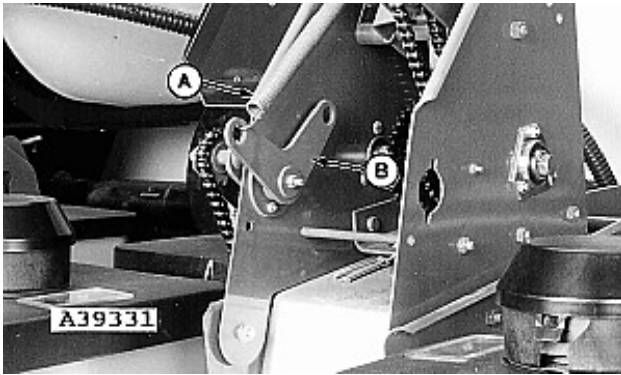
3. Pull chain tightener (A) downward and attach hook (B) to tightener.
4. Remove required number of rubber sprocket spacers (C).
5. Remove chain from sprockets. Slide desired driver and driven sprockets (D) and (E) into alignment with chain tightener and replace chain.

6. Remove hook from chain tightener. Reposition hook in storage position by pressing it into clip (F).
7. Replace rubber sprocket spacers on upper and lower shafts.

OUO1074,00001B7-19-09SEP05

Setting the Seed Transmission 1765

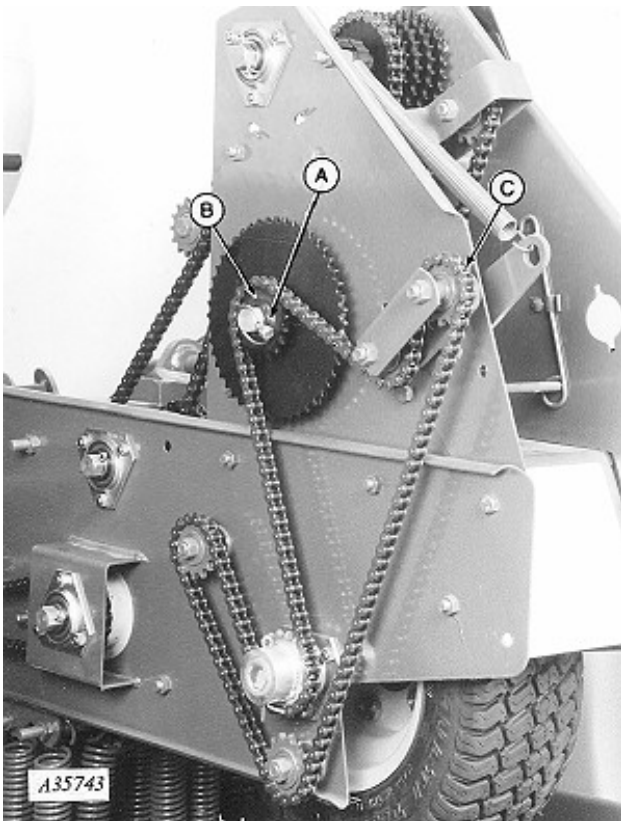
Change Input Sprocket Combinations—Seed Transmission



A39331—UN—13MAR96

A—Spring
B—Chain Tightener

1. Consult appropriate planting rate chart to determine desired sprocket combinations.
2. Remove spring (A) from chain tightener (B).

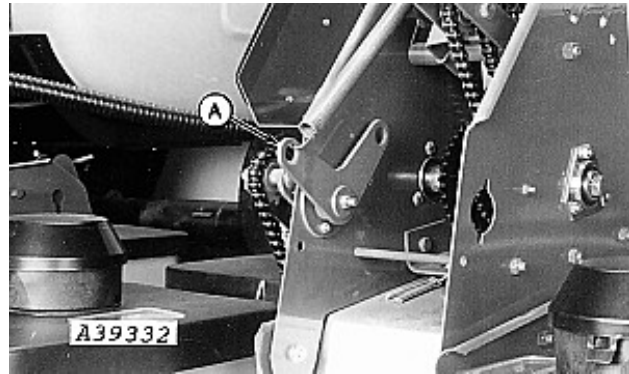


A35743—UN—15NOV94

A—Quick-Lock Pin
B—Input Sprocket
C—Chain Tightener Sprockets

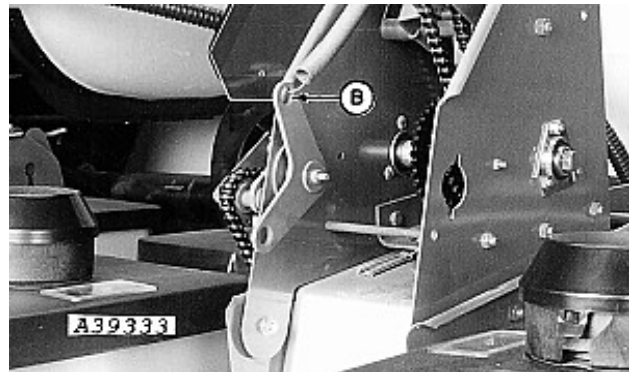
3. Remove quick-lock pin (A) from input shaft.
4. Remove chain from input sprocket (B).
5. Install input sprocket until desired sprocket is aligned with chain tightener sprockets (C).

6. Replace chain on sprocket.



A39332—UN—13MAR96

High-Range



A39333—UN—10APR96

Low-Range

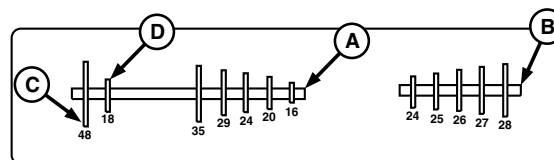
A—Hole
B—Hole

7. If chain is installed on high range input sprocket, install spring in hole (A) of chain tightener.
8. If chain is installed on low range input sprocket, locate spring in hole (B) of chain tightener.

OUO1011,000500F-19-23FEB16

Changing Planting Rate Sprocket Combinations

NOTE: Rate charts are based on average planter wheel slip in tilled soil conditions. No-till conditions will likely result in a higher population than what is shown in rate charts. Adjust accordingly. Always verify population and spacing with a field check.

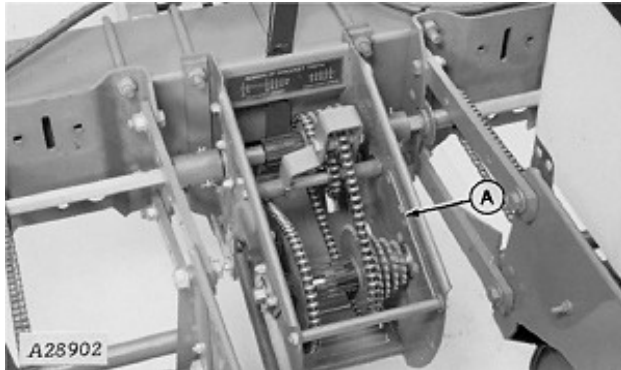


A56188—UN—12APR05

Number of Sprocket Teeth

A—Rear Shaft (Driver)
B—Front Shaft (Driven)
C—Low Range
D—High Range

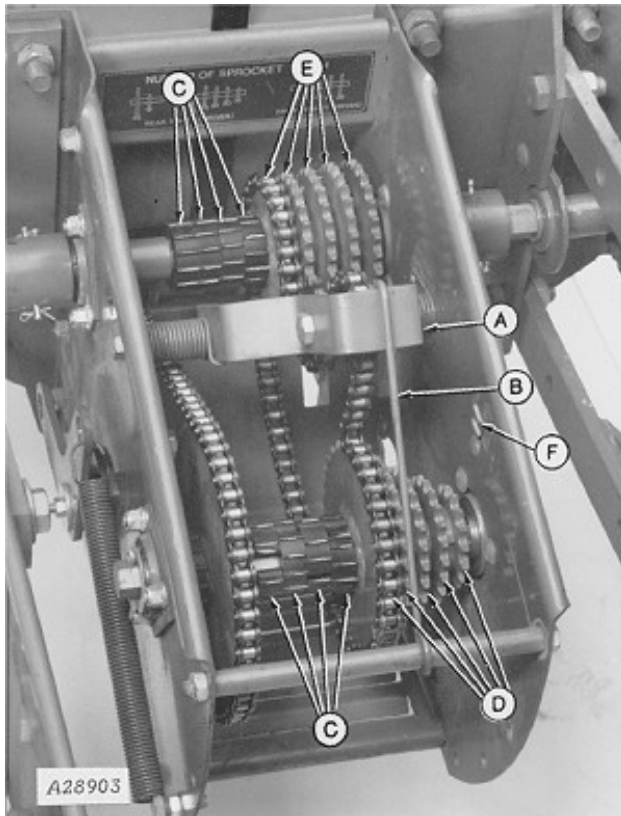
1. Consult planting rate chart to determine desired sprocket combinations.



A28902—UN—14OCT88

A—Hook

2. Remove retaining hook (A) from storage position.



A28903—UN—14OCT88

A—Chain Tightener
B—Retaining Hook
C—Rubber Sprocket Spacers
D—Driver Sprockets
E—Driven Sprockets
F—Clip

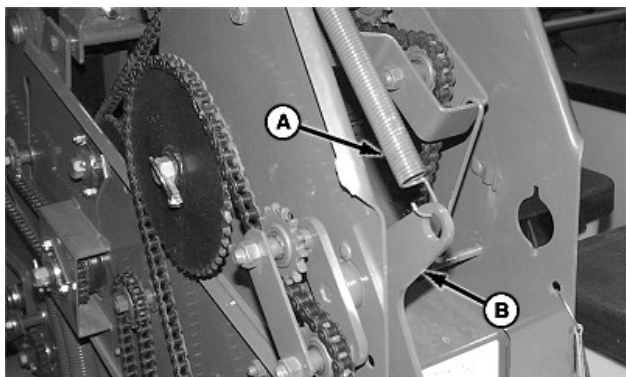
3. Pull chain tightener (A) downward and attach hook (B) to tightener.

4. Remove required number of rubber sprocket spacers (C).
5. Remove chain from sprockets. Slide desired driver and driven sprockets (D) and (E) into alignment with chain tightener and replace chain.
6. Remove hook from chain tightener. Reposition hook in storage position by pressing it into clip (F).
7. Replace rubber sprocket spacers on upper and lower shafts.

OUO1074,00001B7-19-09SEP05

Setting the Seed Transmission 1775NT 12 and 16-Row

Changing Input Sprocket Combinations—Seed Transmission

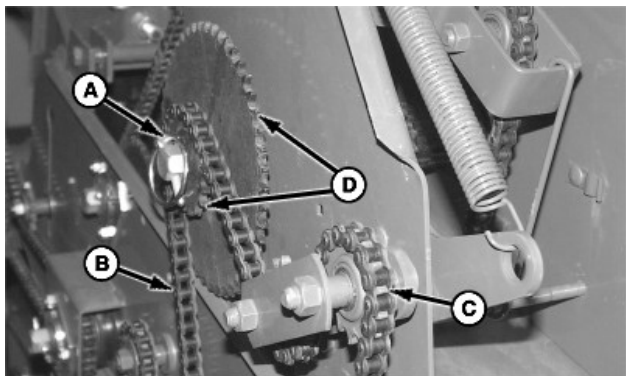


Low Range

A47807—UN—02AUG01

A—Spring
B—Chain Tightener

1. Consult appropriate planting rate chart to determine desired sprocket combinations.
2. Remove spring (A) from chain tightener (B).

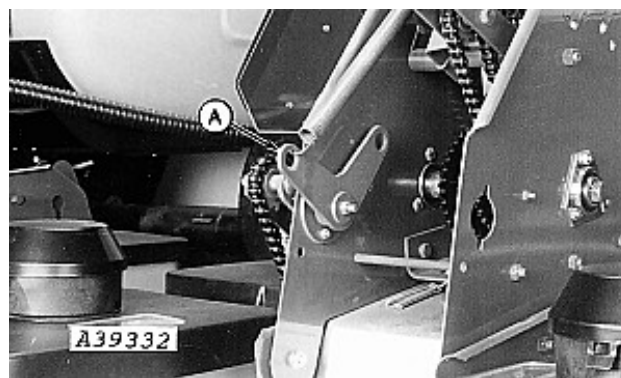


High Range

A47808—UN—02AUG01

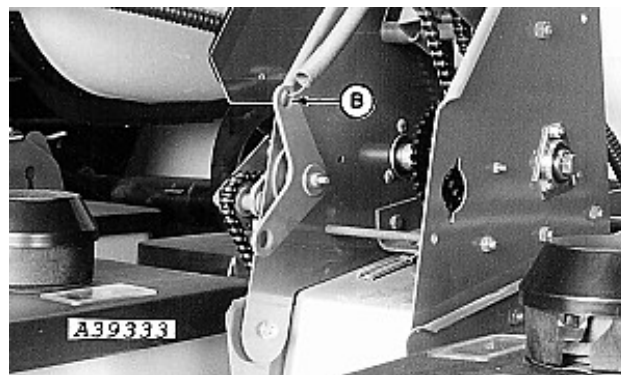
A—Quick-Lock Pin
B—Chain
C—Chain Tightener Sprockets
D—Input Sprocket

3. Remove quick-lock pin (A) from input shaft.
4. Remove chain (B) from input sprocket (D).
5. Flip input sprocket until desired side is aligned with chain tightener sprockets (C). Small sprocket is high range and large sprocket is low range.
6. Replace chain on sprocket.



High-Range

A39332—UN—13MAR96



Low-Range

A39333—UN—10APR96

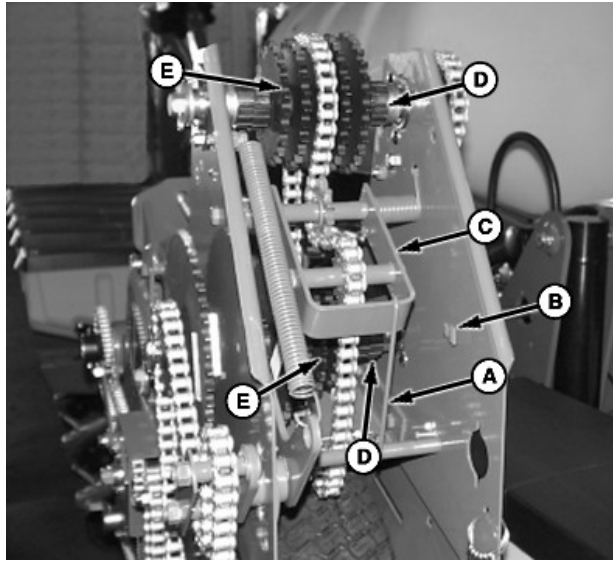
A—Hole
B—Hole

7. If chain is installed on (small) high-range input sprocket, install spring in hole (A) on chain tightener.
8. If chain is installed on (large) low-range input sprocket, locate spring in hole (B) on chain tightener.

OUC6074,0000816-19-05NOV03

Changing Planting Rate Sprocket Combinations—Seed Transmission

NOTE: Rate charts are based on average planter wheel slip in tilled soil conditions. No-till conditions will likely result in a higher population than what is shown in rate charts. Adjust accordingly. Always verify population and spacing with a field check.



A47981—UN—14SEP01

A—Retaining Hook
B—Storage Clip
C—Chain Tightener
D—Rubber Sprocket Spacers
E—Sprockets

1. Consult appropriate planting rate chart to determine desired sprocket combinations.
2. Remove retaining hook (A) from storage clip (B).
3. Pull chain tightener (C) downward and fasten with hook (A).
4. Remove required number of rubber sprocket spacers (D).
5. Remove chain from sprockets. Slide desired driver and driven sprockets (E) into alignment with chain tightener and replace chain.
6. Remove hook from chain tightener and reposition in storage clip.
7. Replace all rubber sprocket spacers on upper and lower shafts.

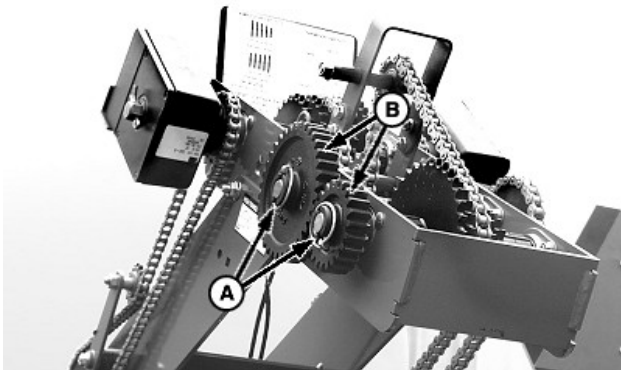
OUO6074.0000817-19-03JUN05

Setting the Seed Transmission 175NT 24-Row

Changing To High or Low Range—Seed Transmission

IMPORTANT: Apply a small amount of grease to spur gear teeth daily to ensure smooth operation.

NOTE: Consult appropriate planting rate chart to determine desired sprocket combinations.



A53412—UN—02DEC03

High Range Setting Shown

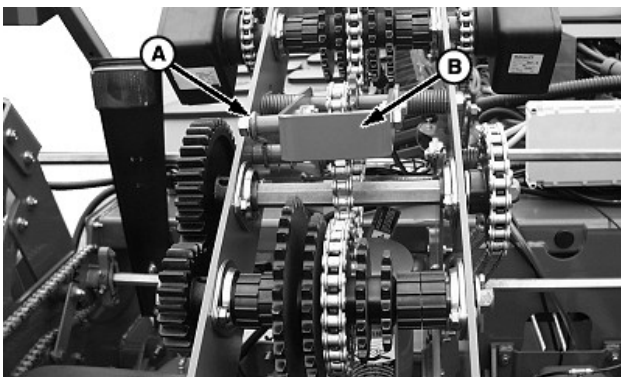
A—Pins
B—Spur Gears

1. Remove pins (A).
2. Switch spur gears (B) to change from high range to low range settings as necessary.

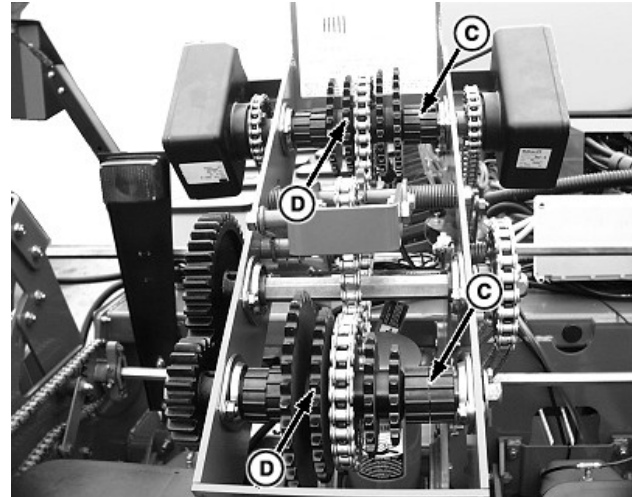
OUO6074,00003D4-19-26JUN06

Changing Planting Rate Sprocket Combinations—Seed Transmission

NOTE: Rate charts are based on average planter wheel slip in tilled soil conditions. No-till conditions will likely result in a higher population than what is shown in rate charts. Adjust accordingly. Always verify population and spacing with a field check.



A53410—UN—02DEC03



A53416—UN—02DEC03

A—Retaining Hook
B—Chain Tightener
C—Rubber Sprocket Spacers
D—Sprockets

Consult appropriate planting rate chart to determine desired sprocket combinations.

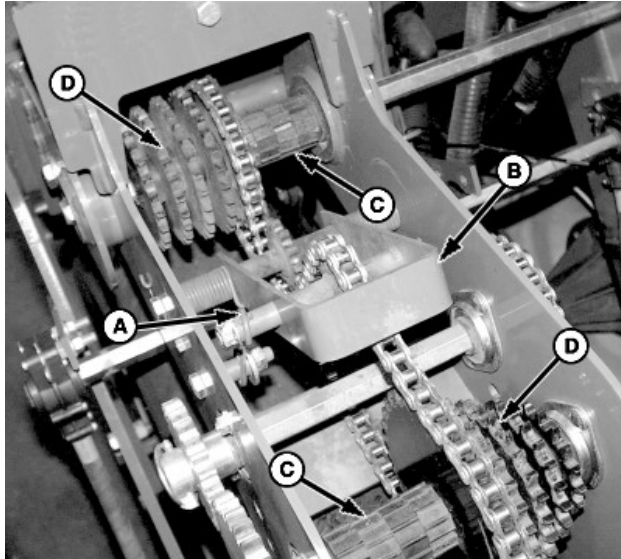
1. Remove retaining hook (A) from storage position.
2. Pull chain tightener (B) downward and fasten with hook (A).
3. Remove required number of rubber sprocket spacers (C).
4. Remove chain from sprockets. Slide desired driver and driven sprockets (D) into alignment with chain tightener and replace chain.
5. Replace all rubber sprocket spacers on upper and lower shafts.
6. Remove hook from chain tightener and reposition in storage clip.

OUO6074,00003D5-19-03JUN05

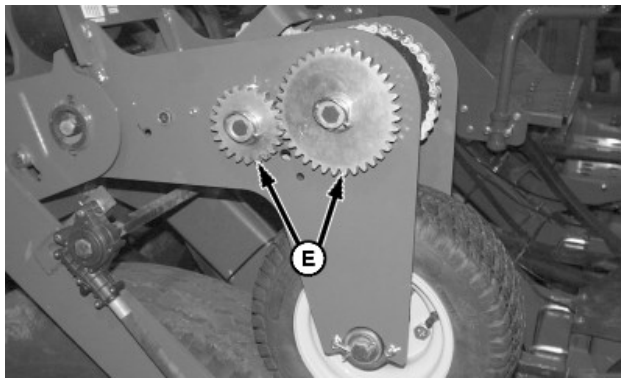
Setting the Seed Transmission 1795

Changing Population Settings— Mechanical Transmission

NOTE: Rate charts are based on average planter wheel slip in tilled soil conditions. No-till conditions will likely result in a higher population than what is shown in rate charts. Adjust accordingly. Always verify population and spacing with a field check.



A52499—UN—30JUL03



A52500—UN—30JUL03

Low Range Shown

- A—Hook
- B—Tightener
- C—Spacers
- D—Sprocket
- E—High/Low Range Spur Gears

Consult appropriate planting rate chart to determine desired sprocket combinations.

1. Remove retaining hook (A) from storage clip.
2. Pull chain tightener (B) downward and fasten with hook (A).
3. Remove required number of rubber sprocket spacers (C).
4. Remove chain from sprockets. Slide desired driver

and driven sprockets (D) into alignment with chain tightener and replace chain.

5. Replace all rubber sprocket spacers on upper and lower shafts.
6. Remove hook from chain tightener and reposition in storage clip.

IMPORTANT: Apply a small amount of grease to spur gear teeth daily to ensure smooth operation.

7. Switch spur gears (E) to change from high range or low range settings as necessary.

OUO6023,000149F-19-27JUN06

Attachments—Granular Chemical

Granular Chemical Attachment



A78517—UN—02AUG13

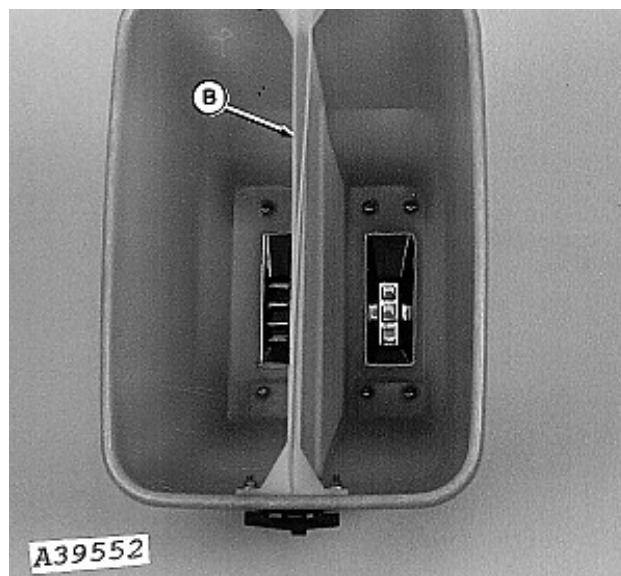


A78501—UN—02AUG13



A41131—UN—17APR97

Single Chemical Hopper



A39552—UN—29MAR96

Dual Chemical Hopper

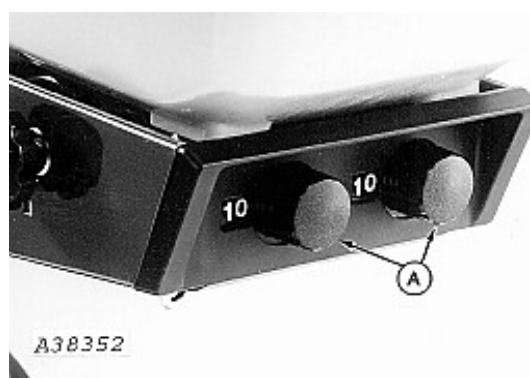
A—Granular Hopper
B—Divider

The granular chemical attachment can be used to deliver one or two different granular chemicals.

The granular hopper (A) holds 32 kg (70 lb) of one type of chemical or 16 kg (35 lb) of insecticide and herbicide using a dual chemical hopper with divider (B).

The application rate is determined by:

- Size of opening in meter housing assembly
- Planting speed



A38352—UN—19DEC95

A—Knobs

Turn knobs (A) on rear of granular meters to adjust the opening size. There are 80 increments which indicate the relative application rate. The delivery rate will increase from 1 through 79. Setting 00 closes the opening completely. A fluted roller or CHEMMIZER™ meter delivers the granular chemical to the adjustable opening.

The granular chemical flows through a given opening

CHEMMIZER is a trademark of Deere & Company

size at a nearly uniform rate regardless of rotor rpm. Therefore, SPEED has the greatest impact on application rate and resulting chemical concentration in the row.

EXAMPLE:

If planting speed is reduced from 10 km/h to 5 km/h (6 mph to 3 mph), chemical concentration will nearly double, since the delivery rate through the orifice remains nearly the same, while distance traveled in a given period of time has been cut in half. Therefore, twice as much chemical is placed on the ground due to the decrease in ground speed.

Rotor rpm will not change the chemical meter delivery rate unless the seed population is changed significantly (± 25 percent or more from the original setting).

The rate charts in this section are approximate and based on a planting speed of 8 km/h (5 mph). They are to be used only as a guide to determine a starting point for the meter dial setting.

Always check rate of application as outlined in this section to confirm desired rate.



A—Knob

A78511—UN—02AUG13

To engage insecticide and/or herbicide drive, rotate knob (A) until spring-loaded knob engages spring pin in insecticide/herbicide drive shaft.

CAUTION: Agricultural chemicals can be dangerous. Improper selection or use can injure persons, animals, plants, soils, or other property. **BE SAFE:** Select the right chemical for the job. Use rubber gloves and respirator and apply the chemical with care. Follow instructions of the chemical manufacturer.

Most insecticides and herbicides readily accumulate moisture and may damage the granular attachment if allowed to remain in the hopper when the machine is not in use. Even during periods of operation, deposits of insecticide may build up in the hopper and interfere with working parts. Therefore, the hoppers should be

checked every day for any material buildup and thoroughly cleaned if the machine is not to be used for a period greater than two days.

See Service and Adjustments section in machine operator's manual for cleaning instructions.

IMPORTANT: Because the available chemical materials vary widely in consistency and composition, their “flow-ability” is affected by temperature and humidity conditions. It is important to calibrate each individual meter to the particular chemical being used.

NOTE: Application rates greater than 227 gm (8 oz) per 305 m (1000 ft) at 10 km/h (6 mph) require installation of the high rate fluted roller in meter.

Follow chemical manufacturer's application rate and meter setting recommendations as a starting point for the meter dial setting.

If meter setting is not available from chemical manufacturer, use the charts in this section as a starting point for meter dial setting.

To determine application rate and initial meter setting, proceed to DETERMINING APPLICATION RATE AND INITIAL METER SETTING in this section.

MH69740,0000551-19-02AUG13

Determining Application Rate and Initial Meter Setting

The chemical manufacturer may recommend the rate of application for granular chemicals in the following ways:

- Grams per 305 linear row meters
- Ounces per 1000 linear row feet
- Kilograms per hectare for a given band width and row spacing
- Pounds per acre for a given band width and row spacing
- Kilograms per hectare for complete (broadcast) coverage
- Pounds per acre for complete (broadcast) coverage

When the chemical manufacturer recommends a rate (linear distance or area) for a given band width and row spacing, proceed to the chemical manufacturer's recommended meter setting or to the meter setting recommended in the rate charts in this section.

When the chemical manufacturer recommends a rate (area) for complete (broadcast) coverage only, it is necessary to calculate the appropriate rate for band width and row spacing being planted. This will give the same chemical concentration in the band area as the chemical manufacturer recommends for complete (broadcast) coverage.

NOTE: We recommend measuring the actual band width applied and using this width in application rate calculations.

Use the following formula to convert broadcast coverage into specific band width and row spacing coverage.

FORMULA:

$(A \times B) \div C =$ Delivery rate per area for a given band width and row spacing

A—Chemical manufacturers recommended rate in kilograms per hectare or pounds per acre for complete (broadcast) coverage

B—Band width in cm or in

C—Row spacing in cm or in

EXAMPLE:

The chemical manufacturer recommends 5 kg/ha (20 lb/acre) for complete broadcast coverage. The band width is 36 cm (14 in). The row spacing is 76 cm (30 in).

$(5 \text{ kg} \times 36 \text{ cm}) \div 76 \text{ cm} = 2.4 \text{ kg/ha}$

$(20 \text{ lb} \times 14 \text{ in}) \div 30 \text{ in.} = 9.3 \text{ lb/acre}$

The required delivery rate for 36 cm (14 in) bands and 76 cm (30 in) row spacings would be 2.4 kg/ha (9.3 lb/acre).

Delivery of 2.4 kg/ha (9.3 lb/acre) of chemical in a 36 cm (14 in) band area will provide the same chemical concentration on the soil surface as delivery of 5 kg/ha (20 lb/acre) broadcast coverage.

Proceed to chemical manufacturer's recommended meter setting or to meter setting recommended in the rate charts in this section which will deliver 2.4 kg/ha (9.3 lb/acre).

To check exact number of kilograms per hectare or pounds per acre of chemical that will be delivered, attach a plastic bag to each chemical diffuser, lower machine, and proceed as follows:

Drive 150 m (500 ft) at planting speed. Weigh chemical (in ounces) that was caught in one bag. Multiply amount

caught by factor in table, to determine kilograms per hectare or pounds per acre.

Check the chemical caught in each bag in the same manner.

Kilograms Per Hectare Factor for Given Row Width	
Row Width	Factor
51 cm	0.131
56 cm	0.119
70 cm	0.095
76 cm	0.086
91 cm	0.071
97 cm	0.067

Pounds Per Acre Factor for Given Row Width	
Row Width	Factor
20 in	3.3
22 in	3.0
30 in	2.2
36 in	1.8
38 in	1.7

EXAMPLES:

- Assume row width is 76 cm and 160 grams are caught in one bag (one row). 160 grams times 0.086 (factor for 76 cm rows) equals 13.8 kg/ha.
- Assume row width is 30 in and 5.6 ounces is caught in one bag (one row). 5.6 ounces times 2.2 (factor for 30 in rows) equals 12.3 lb/acre.

NOTE: If a significant difference in rate is observed between rows, the meter dial mechanism may require recalibration. See **CALIBRATING INSECTICIDE/HERBICIDE METER** in this section.

If desired amount is not obtained for each row unit with the first setting, turn metering knob and repeat check until desired amount is delivered.

AG,OUO6074,1303-19-27MAR23

Insecticide Rate Chart—Sand Granules—20 in Rows

INSECTICIDE APPLICATION RATES (Sand Granules)						
Meter Setting	Approximate Rate in lb per Acre 20 in Rows			Ounces per 1000 Row ft		
	4 mph	6 mph	8 mph	4 mph	6 mph	8 mph
6	2.4	1.7	1.2	1.5	1.0	0.7
7	3.5	2.3	1.8	2.1	1.4	1.1
8	4.7	3.2	2.4	2.8	1.9	1.4
9	5.9	3.9	3.5	3.6	2.4	1.8
10	7.2	4.8	3.6	4.4	2.9	2.2
11	8.6	5.7	4.4	5.2	3.5	2.6

Attachments—Granular Chemical

INSECTICIDE APPLICATION RATES (Sand Granules)						
	Approximate Rate in lb per Acre 20 in Rows			Ounces per 1000 Row ft		
Meter Setting	4 mph	6 mph	8 mph	4 mph	6 mph	8 mph
12	10.1	6.8	5.1	6.2	4.1	3.1
13	11.6	7.7	5.9	7.1	4.7	3.5
14	13.2	8.9	6.6	8.1	5.4	4.0
15	14.7	9.8	7.4	9.0	6.0	4.5
16	16.1	10.7	8.1	9.8	6.6	4.9
17	17.4	11.6	8.7	10.7	7.1	5.3
18	18.8	12.5	9.5	11.5	7.7	5.7
19	19.9	13.4	10.1	12.2	8.1	6.1
20	21.3	14.3	10.7	13.0	8.7	6.5
21	22.7	15.2	11.4	13.9	9.2	6.9
22	24.0	16.1	12.0	14.7	9.8	7.3
23	25.4	16.9	12.8	15.5	10.3	7.8
24	26.7	17.9	13.4	16.3	10.9	8.2
25	28.1	18.8	14.1	17.2	11.4	8.6
26	29.6	19.7	14.9	18.1	12.1	9.0
27	30.9	20.6	15.5	18.9	12.6	9.5
28	32.4	21.6	16.2	19.8	13.2	9.9
29	33.9	22.7	17.0	20.8	13.8	10.4
30	35.4	23.6	17.7	21.7	14.4	10.8
31	37.1	24.8	18.6	22.7	15.1	11.3
32	38.6	25.7	19.4	23.6	15.7	11.8
33	40.2	26.9	20.1	24.6	16.4	12.3
34	41.9	27.9	21.0	25.6	17.1	12.8
35	43.5	29.0	21.8	26.6	17.8	13.3
36	45.3	30.2	22.7	27.7	18.5	13.9
37	47.1	31.4	23.6	28.8	19.2	14.4
38	48.9	32.5	24.5	29.9	20.0	15.0
39	50.7	33.8	25.4	31.0	20.7	15.5
40	52.5	35.0	26.3	32.1	21.4	16.1
41	54.5	36.3	27.3	33.3	22.2	16.7
42	56.4	37.7	28.2	34.5	23.0	17.3
43	58.4	38.9	29.3	35.7	23.8	17.9
44	60.3	40.2	30.2	36.9	24.6	18.5
45	62.4	41.6	31.2	38.2	25.5	19.1
46	64.5	43.1	32.3	39.5	26.3	19.7
47	66.6	44.4	33.3	40.8	27.2	20.4
48	68.9	45.9	34.5	42.1	28.1	21.1
49	71.0	47.3	35.6	43.4	29.0	21.7
50	73.4	48.9	36.8	44.9	29.9	22.5

OUO6074,0000CEA-19-27MAR23

Insecticide Rate Chart—Sand Granules—22 in Rows

INSECTICIDE APPLICATION RATES (Sand Granules)						
Meter Setting	Approximate Rate in lb per Acre 22 in Rows			Ounces per 1000 Row ft		
	4 mph	6 mph	8 mph	4 mph	6 mph	8 mph
6	1.2	1.5	1.1	1.5	1.0	0.7
7	3.2	2.1	1.6	2.1	1.4	1.1
8	4.2	2.9	2.2	2.8	1.9	1.4
9	5.3	3.6	2.7	3.6	2.4	1.8
10	6.6	4.4	3.3	4.4	2.9	2.2
11	7.8	5.2	4.0	5.2	3.5	2.6
12	9.2	6.2	4.7	6.2	4.1	3.1
13	10.5	7.0	5.3	7.1	4.7	3.5
14	12.1	8.1	6.0	8.1	5.4	4.0
15	13.5	8.9	6.7	9.0	6.0	4.5
16	14.7	9.7	7.4	9.8	6.6	4.9
17	15.9	10.5	7.9	10.7	7.1	5.3
18	17.1	11.4	8.6	11.5	7.7	5.7
19	18.2	12.2	9.2	12.2	8.1	6.1
20	19.5	13.0	9.7	13.0	8.7	6.5
21	20.7	13.8	10.4	13.9	9.2	6.9
22	21.9	14.7	11.0	14.7	9.8	7.3
23	23.2	15.5	11.6	15.5	10.3	7.8
24	24.4	16.3	12.2	16.3	10.9	8.2
25	25.6	17.1	12.9	17.2	11.4	8.6
26	27.0	17.9	13.6	18.1	12.1	9.0
27	28.2	18.8	14.1	18.9	12.6	9.5
28	29.6	19.7	14.8	19.8	13.2	9.9
29	31.0	20.7	15.5	20.8	13.8	10.4
30	24.9	21.5	16.2	21.7	14.4	10.8
31	33.8	22.6	17.0	22.7	15.1	11.3
32	35.2	23.4	17.7	23.6	15.7	11.8
33	36.7	24.5	18.4	24.6	16.4	12.3
34	38.2	25.5	19.2	25.6	17.1	12.8
35	39.7	26.4	19.9	26.6	17.8	13.3
36	41.3	27.5	20.7	27.7	18.5	13.9
37	43.0	28.6	21.5	28.8	19.2	14.4
38	44.7	29.7	22.3	29.9	20.0	15.0
39	46.3	30.8	23.2	31.0	20.7	15.5
40	47.9	31.9	24.0	32.1	21.4	16.1
41	49.7	33.2	24.9	33.3	22.2	16.7
42	51.5	34.1	25.8	34.5	23.0	17.3
43	53.3	35.5	26.7	35.7	23.8	17.9
44	55.1	36.7	27.5	36.9	24.6	18.5
45	57.0	37.9	28.5	38.2	25.5	19.1
46	58.9	39.3	29.5	39.5	26.3	19.7
47	60.8	40.6	30.4	40.8	27.2	20.4
48	62.9	41.9	31.5	42.1	28.1	21.1
49	64.8	43.2	32.5	43.4	29.0	21.7
50	67.0	44.7	33.6	44.9	29.9	22.5

Insecticide Rate Chart—Sand Granules—30 in to 38 in Rows

INSECTICIDE APPLICATION RATES (Sand Granules)												
Meter Setting	Approximate Rate in lb Per Acre									Ounces per 1000 Row ft		
	30 in Rows			36 in Rows			38 in Rows			4 mph	6 mph	8 mph
	4 mph	6 mph	8 mph	4 mph	6 mph	8 mph	4 mph	6 mph	8 mph	4 mph	6 mph	8 mph
6	1.6	1.1	0.8	1.3	0.9	0.7	1.3	0.8	0.6	1.5	1.0	0.7
7	2.3	1.5	1.2	1.9	1.3	1.0	1.8	1.2	0.9	2.1	1.4	1.1
8	3.1	2.1	1.6	2.6	1.7	1.3	2.4	1.6	1.2	2.8	1.9	1.4
9	3.9	2.6	2.0	3.3	2.2	1.6	3.1	2.1	1.5	3.6	2.4	1.8
10	4.8	3.2	2.4	4.0	2.7	2.0	3.8	2.5	1.9	4.4	2.9	2.2
11	5.7	3.8	2.9	4.8	3.2	2.4	4.5	3.0	2.3	5.2	3.5	2.6
12	6.7	4.5	3.4	5.6	3.7	2.8	5.3	3.5	2.6	6.2	4.1	3.1
13	7.7	5.1	3.9	6.4	4.3	3.2	6.1	4.1	3.0	7.1	4.7	3.5
14	8.8	5.9	4.4	7.3	4.9	3.7	6.9	4.6	3.5	8.1	5.4	4.0
15	9.8	6.5	4.9	8.2	5.4	4.1	7.7	5.2	3.9	9.0	6.0	4.5
16	10.7	7.1	5.4	8.9	5.9	4.5	8.4	5.6	4.2	9.8	6.6	4.9
17	11.6	7.7	5.8	9.7	6.4	4.8	9.2	6.1	4.6	10.7	7.1	5.3
18	12.5	8.3	6.3	10.4	6.9	5.2	9.9	6.6	4.9	11.5	7.7	5.7
19	13.3	8.9	6.7	11.1	7.4	5.5	10.5	7.0	5.3	12.2	8.1	6.1
20	14.2	9.5	7.1	11.8	7.9	5.9	11.2	7.5	5.6	13.0	8.7	6.5
21	15.1	10.1	7.6	12.6	8.4	6.3	11.9	7.9	6.0	13.9	9.2	6.9
22	16.0	10.7	8.0	13.3	8.9	6.7	12.6	8.4	6.3	14.7	9.8	7.3
23	16.9	11.3	8.5	14.1	9.4	7.0	13.3	8.9	6.7	15.5	10.3	7.8
24	17.8	11.9	8.9	14.8	9.9	7.4	14.1	9.4	7.0	16.3	10.9	8.2
25	18.7	12.5	9.4	15.6	10.4	7.8	14.8	9.8	7.4	17.2	11.4	8.6
26	19.7	13.1	9.9	16.4	10.9	8.2	15.6	10.4	7.8	18.1	12.1	9.0
27	20.6	13.7	10.3	17.2	11.4	8.6	16.3	10.8	8.1	18.9	12.6	9.5
28	21.6	14.4	10.8	18.0	12.0	9.0	17.1	11.4	8.5	19.8	13.2	9.9
29	22.6	15.1	11.3	18.8	12.6	9.4	17.8	11.9	8.9	20.8	13.8	10.4
30	23.6	15.7	11.8	19.7	13.1	9.8	18.6	12.4	9.3	21.7	14.4	10.8
31	24.7	16.5	12.4	20.6	13.7	10.3	19.5	13.0	9.8	22.7	15.1	11.3
32	25.7	17.1	12.9	21.4	14.3	10.7	20.3	13.5	10.1	23.6	15.7	11.8
33	26.8	17.9	13.4	22.3	14.9	11.2	21.2	14.1	10.6	24.6	16.4	12.3
34	27.9	18.6	14.0	23.3	15.5	11.6	22.0	14.7	11.0	25.6	17.1	12.8
35	29.0	19.3	14.5	24.2	16.1	12.1	22.9	15.3	11.4	26.6	17.8	13.3
36	30.2	20.1	15.1	25.2	16.8	12.6	23.8	15.9	11.9	27.7	18.5	13.9
37	31.4	20.9	15.7	26.2	17.4	13.1	24.8	16.5	12.4	28.8	19.2	14.4
38	32.6	21.7	16.3	27.2	18.1	13.6	25.7	17.2	12.9	29.9	20.0	15.0
39	33.8	22.5	16.9	28.2	18.8	14.1	26.7	17.8	13.3	31.0	20.7	15.5
40	35.0	23.3	17.5	29.2	19.4	14.6	27.6	18.4	13.8	32.1	21.4	16.1
41	36.3	24.2	18.2	30.3	20.2	15.1	28.7	19.1	14.3	33.3	22.2	16.7
42	37.6	25.1	18.8	31.3	20.9	15.7	29.7	19.8	14.8	34.5	23.0	17.3
43	38.9	25.9	19.5	32.4	21.6	16.2	30.7	20.5	15.4	35.7	23.8	17.9
44	40.2	26.8	20.1	33.5	22.3	16.8	31.7	21.2	15.9	36.9	24.6	18.5
45	41.6	27.7	20.8	34.7	23.1	17.3	32.8	21.9	16.4	38.2	25.5	19.1
46	43.0	28.7	21.5	35.8	23.9	17.9	33.9	22.6	17.0	39.5	26.3	19.7
47	44.4	29.6	22.2	37.0	24.7	18.5	35.1	23.4	17.5	40.8	27.2	20.4
48	45.9	30.6	23.0	38.3	25.5	19.1	36.2	24.2	18.1	42.1	28.1	21.1
49	47.3	31.5	23.7	39.4	26.3	19.7	37.3	24.9	18.7	43.4	29.0	21.7
50	48.9	32.6	24.5	40.8	27.2	20.4	38.6	25.7	19.3	44.9	29.9	22.5

Insecticide Rate Chart—Clay Granules—20 in Rows

INSECTICIDE APPLICATION RATES (Clay Granules)						
	Approximate Rate in lb per Acre 20 in Rows			Ounces per 1000 Row ft		
Meter Setting	4 mph	6 mph	8 mph	4 mph	6 mph	8 mph
10	3.8	2.6	2.0	2.3	1.5	1.1
11	4.5	3.0	2.3	2.8	1.8	1.4
12	5.4	3.6	2.7	3.3	2.2	1.7
13	6.6	4.4	3.3	4.0	2.7	2.0
14	7.8	5.3	3.9	4.8	3.2	2.4
15	9.0	6.0	4.5	5.5	3.7	2.8
16	10.2	6.8	5.1	6.3	4.2	3.1
17	11.4	7.7	5.7	7.0	4.7	3.5
18	12.3	8.3	6.2	7.5	5.0	3.8
19	13.1	8.7	6.6	8.0	5.3	4.0
20	14.0	9.3	7.1	8.6	5.7	4.3
21	14.7	9.8	7.4	9.0	6.0	4.5
22	15.5	10.2	7.7	9.4	6.3	4.7
23	16.1	10.7	8.1	9.8	6.6	4.9
24	16.8	11.3	8.4	10.3	6.8	5.1
25	17.4	11.6	8.7	10.6	7.1	5.3
26	17.9	11.9	9.0	10.9	7.3	5.5
27	18.6	12.5	9.3	11.4	7.6	5.7
28	19.1	12.8	9.6	11.7	7.8	5.8
29	19.8	13.2	9.9	12.1	8.1	6.1
30	20.3	13.5	10.2	12.4	8.3	6.2
31	20.7	13.8	10.4	12.6	8.4	6.3
32	21.3	14.3	10.7	13.1	8.7	6.5
33	21.9	14.6	11.0	13.4	8.9	6.7
34	22.7	15.2	11.4	13.9	9.2	6.9
35	23.4	15.6	11.7	14.3	9.6	7.2
36	24.2	16.1	12.0	14.8	9.8	7.4
37	24.8	16.5	12.3	15.1	10.1	7.6
38	25.5	17.0	12.8	15.6	10.4	7.8
39	26.3	17.6	13.1	16.1	10.7	8.0
40	27.0	18.0	13.5	16.5	11.0	8.2
41	27.6	18.5	13.8	16.9	11.3	8.4
42	28.7	19.1	14.4	17.6	11.7	8.8
43	30.0	20.0	15.0	18.4	12.2	9.2
44	31.5	21.0	15.8	19.3	12.9	9.6
45	33.2	22.2	16.6	20.3	13.5	10.2
46	35.1	23.4	17.6	21.5	14.3	10.7
47	36.8	24.5	18.5	22.5	15.0	11.2
48	38.4	25.7	19.2	23.5	15.7	11.8
49	40.2	26.7	20.1	24.6	16.4	12.3
50	41.9	27.9	20.9	25.6	17.1	12.8
51	43.5	29.0	21.8	26.6	17.8	13.3
52	45.5	30.3	22.7	27.8	18.5	13.9
53	47.4	31.7	23.7	29.0	19.4	14.5
54	49.5	33.0	24.8	30.3	20.2	15.2
55	51.8	34.5	26.0	31.7	21.1	15.8
56	54.0	36.0	27.0	33.1	22.0	16.5
57	56.1	37.4	28.1	34.3	22.9	17.2

INSECTICIDE APPLICATION RATES (Clay Granules)						
Meter Setting	Approximate Rate in lb per Acre 20 in Rows			Ounces per 1000 Row ft		
	4 mph	6 mph	8 mph	4 mph	6 mph	8 mph
58	58.4	38.9	29.1	35.7	23.8	17.8
59	60.6	40.4	30.3	37.1	24.7	18.5
60	62.4	41.7	31.2	38.2	25.5	19.1

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Insecticide Rate Chart—Clay Granules—22 in Rows

INSECTICIDE APPLICATION RATES (Clay Granules)						
Meter Setting	Approximate Rate in lb per Acre 22 in Rows			Ounces per 1000 Row ft		
	4 mph	6 mph	8 mph	4 mph	6 mph	8 mph
10	3.4	2.3	1.8	2.3	1.5	1.1
11	4.1	2.7	2.1	2.8	1.8	1.4
12	4.9	3.3	2.5	3.3	2.2	1.7
13	6.0	4.0	3.0	4.0	2.7	2.0
14	7.3	4.8	3.6	4.8	3.2	2.4
15	8.2	5.5	4.1	5.5	3.7	2.8
16	9.3	6.2	4.7	6.3	4.2	3.1
17	10.4	7.0	5.2	7.0	4.7	3.5
18	11.2	7.5	5.6	7.5	5.0	3.8
19	12.0	8.0	6.0	8.0	5.3	4.0
20	12.7	8.5	6.4	8.6	5.7	4.3
21	13.4	8.9	6.7	9.0	6.0	4.5
22	14.0	9.3	7.0	9.4	6.3	4.7
23	14.7	9.7	7.4	9.8	6.6	4.9
24	15.3	10.3	7.7	10.3	6.8	5.1
25	15.9	10.5	7.9	10.6	7.1	5.3
26	16.3	10.8	8.2	10.9	7.3	5.5
27	17.0	11.4	8.5	11.4	7.6	5.7
28	17.4	11.6	8.8	11.7	7.8	5.8
29	18.1	12.1	9.0	12.1	8.1	6.1
30	18.5	12.3	9.3	12.4	8.3	6.2
31	18.9	12.6	9.5	12.6	8.4	6.3
32	19.5	13.0	9.7	13.1	8.7	6.5
33	20.0	13.2	10.0	13.4	8.9	6.7
34	20.7	13.8	10.4	13.9	9.2	6.9
35	21.4	14.2	10.7	14.3	9.6	7.2
36	22.1	14.7	11.0	14.8	9.8	7.4
37	22.6	15.1	11.2	15.1	10.1	7.6
38	23.3	15.5	11.6	15.6	10.4	7.8
39	23.9	16.0	11.9	16.1	10.7	8.0
40	24.7	16.4	12.3	16.5	11.0	8.2
41	25.2	16.9	12.5	16.9	11.3	8.4
42	26.2	17.4	13.2	17.6	11.7	8.8
43	27.4	18.2	13.7	18.4	12.2	9.2
44	28.8	19.2	14.4	19.3	12.9	9.6
45	30.3	20.3	15.2	20.3	13.5	10.2
46	32.1	21.4	16.0	21.5	14.3	10.7

INSECTICIDE APPLICATION RATES (Clay Granules)						
Meter Setting	Approximate Rate in lb per Acre 22 in Rows			Ounces per 1000 Row ft		
	4 mph	6 mph	8 mph	4 mph	6 mph	8 mph
47	33.6	22.3	16.8	22.5	15.0	11.2
48	35.1	23.4	17.5	23.5	15.7	11.8
49	36.7	24.4	22.8	24.6	16.4	12.3
50	38.2	25.5	19.0	25.6	17.1	12.8
51	39.7	26.4	19.9	26.6	17.8	13.3
52	41.5	27.7	20.7	27.8	18.5	13.9
53	43.3	28.9	21.6	29.0	19.4	14.5
54	45.2	30.1	22.6	30.3	20.2	15.2
55	47.3	31.5	23.7	31.7	21.1	15.8
56	49.3	32.9	24.7	33.1	22.0	16.5
57	51.2	34.1	25.6	34.3	22.9	17.2
58	53.3	35.5	26.6	35.7	23.8	17.8
59	55.3	36.8	27.7	37.1	24.7	18.5
60	57.0	38.1	28.5	38.2	25.5	19.1

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Insecticide Rate Chart—Clay Granules—30 in to 38 in Rows

INSECTICIDE APPLICATION RATES (Clay Granules)												
Meter Setting	Approximate Rate in lb per Acre									Ounces per 1000 Row ft		
	30 in Rows			36 in Rows			38 in Rows			4 mph	6 mph	8 mph
	4 mph	6 mph	8 mph	4 mph	6 mph	8 mph	4 mph	6 mph	8 mph			
10	2.5	1.7	1.3	2.1	1.4	1.0	2.0	1.3	1.0	2.3	1.5	1.1
11	3.0	2.0	1.5	2.5	1.7	1.3	2.4	1.6	1.2	2.8	1.8	1.4
12	3.6	2.4	1.8	3.0	2.0	1.5	2.9	1.9	1.4	3.3	2.2	1.7
13	4.4	2.9	2.2	3.6	2.4	1.8	3.5	2.3	1.7	4.0	2.7	2.0
14	5.3	3.5	2.6	4.4	2.9	2.2	4.1	2.8	2.1	4.8	3.2	2.4
15	6.0	4.0	3.0	5.0	3.3	2.5	4.7	3.2	2.4	5.5	3.7	2.8
16	6.8	4.5	3.4	5.7	3.8	2.8	5.4	3.6	2.7	6.3	4.2	3.1
17	7.6	5.1	3.8	6.3	4.2	3.2	6.0	4.0	3.0	7.0	4.7	3.5
18	8.2	5.5	4.1	6.8	4.6	3.4	6.5	4.3	3.2	7.5	5.0	3.8
19	8.7	5.8	4.4	7.3	4.8	3.6	6.9	4.6	3.4	8.0	5.3	4.0
20	9.3	6.2	4.7	7.8	5.2	3.9	7.4	4.9	3.7	8.6	5.7	4.3
21	9.8	6.5	4.9	8.2	5.4	4.1	7.7	5.2	3.9	9.0	6.0	4.5
22	10.3	6.8	5.1	8.6	5.7	4.3	8.1	5.4	4.1	9.4	6.3	4.7
23	10.7	7.1	5.4	8.9	6.0	4.5	8.5	5.6	4.2	9.8	6.6	4.9
24	11.2	7.5	5.6	9.3	6.2	4.7	8.8	5.9	4.4	10.3	6.8	5.1
25	11.6	7.7	5.8	9.6	6.4	4.8	9.1	6.1	4.6	10.6	7.1	5.3
26	11.9	7.9	6.0	9.9	6.6	5.0	9.4	6.3	4.7	10.9	7.3	5.5
27	12.4	8.3	6.2	10.3	6.9	5.2	9.8	6.5	4.9	11.4	7.6	5.7
28	12.7	8.5	6.4	10.6	7.1	5.3	10.1	6.7	5.0	11.7	7.8	5.8
29	13.2	8.8	6.6	11.0	7.3	5.5	10.4	6.9	5.2	12.1	8.1	6.1
30	13.5	9.0	6.8	11.3	7.5	5.6	10.7	7.1	5.3	12.4	8.3	6.2
31	13.8	9.2	6.9	11.5	7.6	5.7	10.9	7.2	5.4	12.6	8.4	6.3
32	14.2	9.5	7.1	11.9	7.9	5.9	11.2	7.5	5.6	13.1	8.7	6.5
33	14.6	9.7	7.3	12.2	8.1	6.1	11.5	7.7	5.8	13.4	8.9	6.7
34	15.1	10.1	7.6	12.6	8.4	6.3	11.9	7.9	6.0	13.9	9.2	6.9

INSECTICIDE APPLICATION RATES (Clay Granules)												
	Approximate Rate in lb per Acre									Ounces per 1000 Row ft		
	30 in Rows			36 in Rows			38 in Rows					
Meter Setting	4 mph	6 mph	8 mph	4 mph	6 mph	8 mph	4 mph	6 mph	8 mph	4 mph	6 mph	8 mph
35	15.6	10.4	7.8	13.0	8.7	6.5	12.3	8.2	6.2	14.3	9.6	7.2
36	16.1	10.7	8.0	13.4	8.9	6.7	12.7	8.5	6.3	14.8	9.8	7.4
37	16.5	11.0	8.2	13.7	9.2	6.9	13.0	8.7	6.5	15.1	10.1	7.6
38	17.0	11.3	8.5	14.2	9.4	7.1	13.4	8.9	6.7	15.6	10.4	7.8
39	17.5	11.7	8.7	14.6	9.7	7.3	13.8	9.2	6.9	16.1	10.7	8.0
40	18.0	12.0	9.0	15.0	10.0	7.5	14.2	9.5	7.1	16.5	11.0	8.2
41	18.4	12.3	9.2	15.3	10.2	7.7	14.5	9.7	7.3	16.9	11.3	8.4
42	19.1	12.7	9.6	15.9	10.6	8.0	15.1	10.1	7.5	17.6	11.7	8.8
43	20.0	13.3	10.0	16.7	11.1	8.3	15.8	10.5	7.9	18.4	12.2	9.2
44	21.0	14.0	10.5	17.5	11.7	8.8	16.6	11.1	8.3	19.3	12.9	9.6
45	22.1	14.8	11.1	18.4	12.3	9.2	17.5	11.6	8.7	20.3	13.5	10.2
46	23.4	15.6	11.7	19.5	13.0	9.7	18.5	12.3	9.2	21.5	14.3	10.7
47	24.5	16.3	12.3	20.4	13.6	10.2	19.3	12.9	9.7	22.5	15.0	11.2
48	25.6	17.1	12.8	21.4	14.2	10.7	20.2	13.5	10.1	23.5	15.7	11.8
49	26.8	17.8	13.4	22.3	14.9	11.1	21.1	14.1	10.6	24.6	16.4	12.3
50	27.9	18.6	13.9	23.2	15.5	11.6	22.0	14.7	11.0	25.6	17.1	12.8
51	29.0	19.3	14.5	24.2	16.1	12.1	22.9	15.3	11.4	26.6	17.8	13.3
52	30.3	20.2	15.1	25.2	16.8	12.6	23.9	15.9	11.9	27.8	18.5	13.9
53	31.6	21.1	15.8	26.4	17.6	13.2	25.0	16.6	12.5	29.0	19.4	14.5
54	33.0	22.0	16.5	27.5	18.3	13.8	26.1	17.4	13.0	30.3	20.2	15.2
55	34.5	23.0	17.3	28.8	19.2	14.4	27.2	18.2	13.6	31.7	21.1	15.8
56	36.0	24.0	18.0	30.0	20.0	15.0	28.4	18.9	14.2	33.1	22.0	16.5
57	37.4	24.9	18.7	31.1	20.8	15.6	29.5	19.7	14.8	34.3	22.9	17.2
58	38.9	25.9	19.4	32.4	21.6	16.2	30.7	20.5	15.3	35.7	23.8	17.8
59	40.4	26.9	20.2	33.6	22.4	16.8	31.9	21.2	15.9	37.1	24.7	18.5
60	41.6	27.8	20.8	34.7	23.1	17.3	32.9	21.9	16.4	38.2	25.5	19.1

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Herbicide Rate Chart—Clay Granules—20 in Rows

HERBICIDE APPLICATION RATES (Clay Granules)			
Meter Setting	Approximate Rate in lb per Acre 20 in Rows		
	4 mph	6 mph	8 mph
10	3.2	2.1	1.7
11	3.8	2.4	1.8
12	4.5	2.9	2.1
13	5.3	3.5	2.6
14	6.0	3.9	3.0
15	7.2	4.7	3.5
16	8.3	5.4	3.9
17	9.3	6.0	4.4
18	10.1	6.6	4.8
19	10.8	7.1	5.1
20	11.9	7.7	5.6
21	12.6	8.1	6.0
22	13.5	8.7	6.3

HERBICIDE APPLICATION RATES (Clay Granules)			
	Approximate Rate in lb per Acre 20 in Rows		
Meter Setting	4 mph	6 mph	8 mph
23	14.3	9.2	6.8
24	15.2	9.8	7.1
25	15.9	10.1	7.4
26	16.6	10.7	7.8
27	17.6	11.1	8.1
28	18.4	11.6	8.4
29	19.2	12.2	8.7
30	19.8	12.6	9.2
31	20.3	12.9	9.5
32	21.2	13.4	9.8
33	21.9	13.8	10.1
34	22.7	14.4	10.4
35	23.6	14.9	10.7
36	24.3	15.3	11.1
37	24.9	15.8	11.6
38	26.0	16.4	11.9
39	26.4	16.7	12.0
40	27.0	17.1	12.3
41	27.6	17.3	12.6
42	28.5	17.9	13.1
43	29.7	18.6	13.5
44	30.5	19.2	14.0
45	32.3	20.3	14.6
46	33.6	21.3	15.6
47	35.9	22.8	16.5
48	37.7	24.0	17.6
49	39.8	25.5	18.5
50	42.2	27.5	20.1
51	44.6	29.3	21.6
52	47.1	31.2	23.1
53	49.5	33.0	24.8
54	52.4	35.1	26.4
55	55.2	37.2	28.5
56	57.0	38.9	30.3
57	60.0	41.1	32.3
58	62.6	43.1	33.8
59	64.5	44.6	35.3
60	66.9	46.5	37.1

OUO6074,0000CF0-19-27MAR23

Herbicide Rate Chart—Clay Granules—22 in Rows

HERBICIDE APPLICATION RATES (Clay Granules)			
	Approximate Rate in lb per Acre 22 in Rows		
Meter Setting	4 mph	6 mph	8 mph
10	2.9	1.9	1.5
11	3.4	2.2	1.6

Attachments—Granular Chemical

HERBICIDE APPLICATION RATES (Clay Granules)			
	Approximate Rate in lb per Acre 22 in Rows		
Meter Setting	4 mph	6 mph	8 mph
12	4.1	2.6	1.9
13	4.8	3.1	2.3
14	5.5	3.6	2.7
15	6.6	4.2	3.2
16	7.5	4.9	3.7
17	8.5	5.5	4.0
18	9.2	6.0	4.4
19	9.9	6.4	4.7
20	10.8	7.0	5.1
21	11.5	7.4	5.5
22	12.3	7.9	5.8
23	13.0	8.3	6.2
24	13.8	8.9	6.4
25	14.5	9.2	6.7
26	15.2	9.7	7.1
27	16.0	10.1	7.4
28	16.7	10.6	7.6
29	17.5	11.1	7.9
30	18.1	11.5	8.4
31	18.5	11.8	8.6
32	19.3	12.2	8.9
33	20.0	12.6	9.2
34	20.7	13.2	9.5
35	21.5	13.6	9.7
36	22.2	13.9	10.1
37	22.7	14.4	10.5
38	23.7	14.9	10.8
39	24.1	15.2	11.0
40	24.7	15.6	11.2
41	25.2	15.8	11.5
42	26.0	16.3	11.9
43	27.1	17.0	12.3
44	27.8	17.5	12.7
45	29.5	18.5	13.3
46	30.7	19.5	14.1
47	32.7	20.8	15.1
48	34.4	21.9	16.0
49	36.3	23.3	16.9
50	38.5	25.1	18.4
51	40.7	26.7	19.7
52	43.0	28.5	21.1
53	45.2	30.1	22.6
54	47.8	32.1	24.1
55	50.4	34.0	26.0
56	52.1	35.5	27.7
57	54.8	37.5	29.5
58	57.1	39.3	31.8
59	58.9	40.7	32.2
60	61.1	42.5	33.8

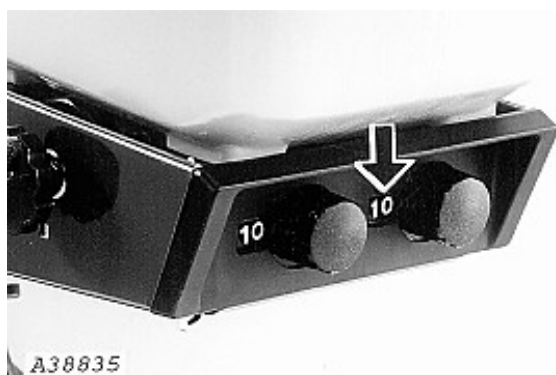
Herbicide Rate Chart—Clay Granules—30 in to 38 in Rows

HERBICIDE APPLICATION RATES (Clay Granules)									
Meter Setting	Approximate Rate in lb per Acre								
	30 in Rows			36 in Rows			38 in Rows		
	4 mph	6 mph	8 mph	4 mph	6 mph	6 mph	4 mph	6 mph	8 mph
10	2.1	1.4	1.1	1.7	1.2	0.9	1.7	1.1	0.9
11	2.5	1.6	1.2	2.1	1.4	1.0	2.0	1.3	1.0
12	3.0	1.9	1.4	2.5	1.6	1.2	2.3	1.5	1.1
13	3.5	2.3	1.7	2.9	1.9	1.4	2.8	1.8	1.3
14	4.0	2.6	2.0	3.3	2.2	1.6	3.2	2.1	1.5
15	4.8	3.1	2.3	4.0	2.6	1.9	3.8	2.4	1.8
16	5.5	3.6	2.6	4.6	3.0	2.2	4.4	2.8	2.1
17	6.2	4.0	2.9	5.1	3.3	2.4	4.9	3.2	2.3
18	6.7	4.4	3.2	5.6	3.6	2.7	5.3	3.4	2.5
19	7.2	4.7	3.4	6.0	3.9	2.8	5.7	3.7	2.7
20	7.9	5.1	3.7	6.6	4.2	3.1	6.2	4.0	2.9
21	8.4	5.4	4.0	7.0	4.5	3.3	6.6	4.3	3.1
22	9.0	5.8	4.2	7.5	4.8	3.5	7.1	4.6	3.4
23	9.5	6.1	4.5	7.9	5.1	3.7	7.5	4.8	3.5
24	10.1	6.5	4.7	8.4	5.4	3.9	8.0	5.1	3.7
25	10.6	6.7	4.9	8.8	5.6	4.1	8.4	5.3	3.9
26	11.1	7.1	5.2	9.2	5.9	4.3	8.7	5.6	4.1
27	11.7	7.4	5.4	9.8	6.2	4.5	9.2	5.9	4.3
28	12.3	7.8	5.6	10.3	6.5	4.6	9.6	6.2	4.4
29	12.8	8.1	5.8	10.7	6.7	4.8	10.1	6.4	4.6
30	13.2	8.4	6.1	11.0	7.0	5.1	10.4	6.6	4.8
31	13.5	8.6	6.3	11.3	7.2	5.2	10.7	6.8	4.9
32	14.1	8.9	6.5	11.7	7.5	5.4	11.1	7.1	5.1
33	14.6	9.2	6.7	12.1	7.7	5.6	11.5	7.3	5.3
34	15.1	9.6	6.9	12.6	8.0	5.8	11.9	7.6	5.5
35	15.7	9.9	7.1	13.1	8.3	6.0	12.4	7.8	5.6
36	16.2	10.2	7.4	13.5	8.5	6.2	12.8	8.1	5.8
37	16.6	10.5	7.7	13.9	8.7	6.4	13.1	8.3	6.0
38	17.3	10.9	7.9	14.4	9.0	6.5	13.7	8.6	6.2
39	17.6	11.1	8.0	14.7	9.2	6.7	13.9	8.7	6.3
40	18.0	11.4	8.2	15.0	9.5	6.9	14.2	9.0	6.5
41	18.4	11.5	8.4	15.4	9.6	7.0	14.5	9.1	6.6
42	19.0	11.9	8.7	15.8	9.9	7.2	15.0	9.4	6.8
43	19.8	12.4	9.0	16.5	10.4	7.5	15.6	9.8	7.1
44	20.3	12.8	9.3	16.9	10.6	7.7	16.0	10.1	7.3
45	21.5	13.5	9.7	17.9	11.2	8.1	16.9	10.7	7.7
46	22.4	14.2	10.3	18.7	11.8	8.6	17.7	11.2	8.2
47	23.9	15.2	11.0	19.9	12.7	9.2	18.9	12.0	8.7
48	25.1	16.0	11.7	20.9	13.3	9.7	19.8	12.6	9.2
49	26.5	17.0	12.3	22.1	14.2	10.3	20.9	13.5	9.7
50	28.1	18.3	13.4	23.5	15.3	11.2	22.2	14.4	10.6
51	29.7	19.5	14.4	24.7	16.3	12.0	23.4	15.4	11.3
52	31.4	20.8	15.4	26.2	17.3	12.9	24.8	16.4	12.2
53	33.0	22.0	16.5	27.5	18.4	13.7	26.0	17.4	13.0

HERBICIDE APPLICATION RATES (Clay Granules)									
Meter Setting	Approximate Rate in lb per Acre								
	30 in Rows			36 in Rows			38 in Rows		
	4 mph	6 mph	8 mph	4 mph	6 mph	6 mph	4 mph	6 mph	8 mph
54	34.9	23.4	17.6	29.1	19.5	14.7	27.6	18.5	13.9
55	36.8	24.8	19.0	30.7	20.7	15.9	29.1	19.6	15.0
56	38.0	25.9	20.2	31.7	21.6	16.8	30.0	20.5	15.9
57	40.0	27.4	21.5	33.4	22.8	17.9	31.6	21.6	17.0
58	41.7	28.7	22.5	34.7	24.0	18.7	32.9	22.7	17.7
59	43.0	29.7	23.5	35.8	24.8	19.6	33.9	23.4	18.6
60	44.6	31.0	24.7	37.1	25.9	20.6	35.2	24.5	19.5

OUC6074,0000CF2-19-27MAR23

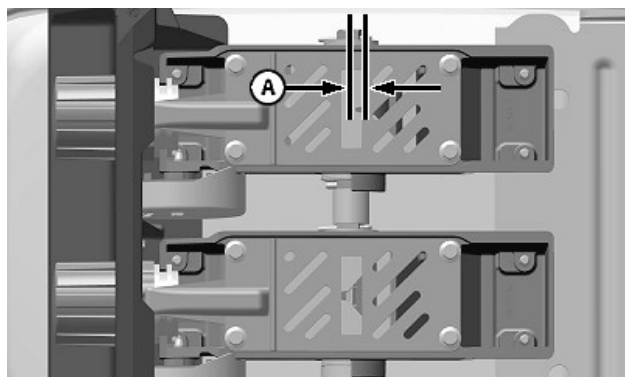
Calibrate the Granular Chemical Meter



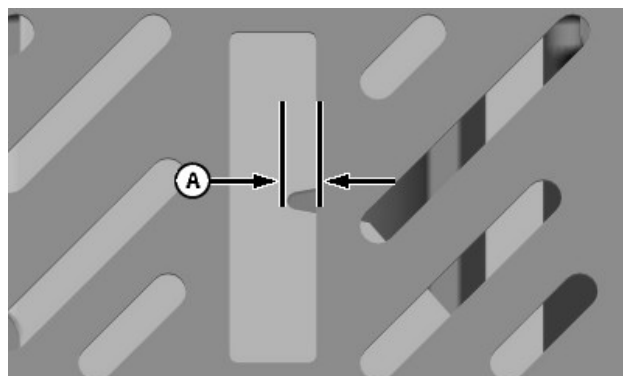
A38835—UN—19DEC95

CAUTION: Avoid contact with parts that have chemical residue. Wear the appropriate personal protective equipment as recommended by the chemical manufacturer.

1. Turn the knob to a setting of 10.
2. Remove the hopper and turn it upside down on a flat surface.



A100565—UN—14MAY18



A100566—UN—14MAY18

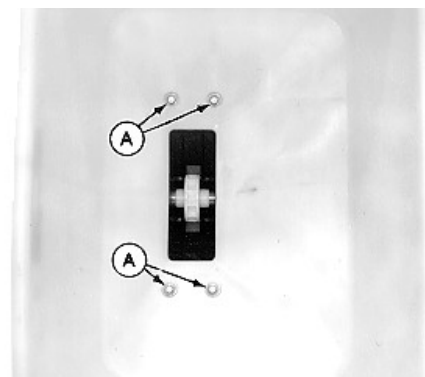
A—V-Notch Opening

3. Measure the V-notch opening (A).

If the opening is to specification, the meter is calibrated correctly. If the opening is not to specification, the meter must be calibrated.

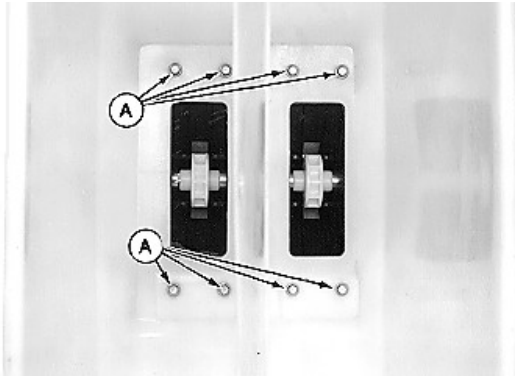
Specification

Calibrated Opening (A)—Width. 4 mm
(1/64 in)



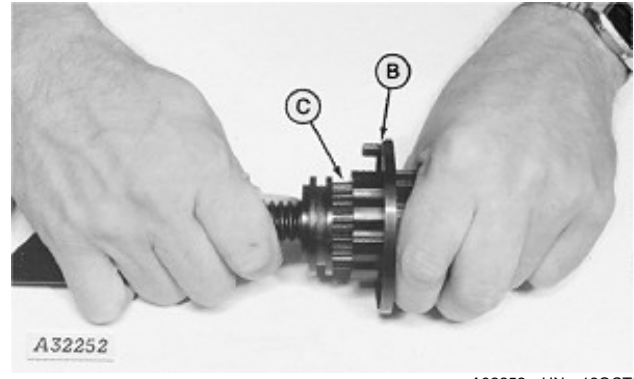
A41132—UN—21APR97

Single Meter



Dual Meter

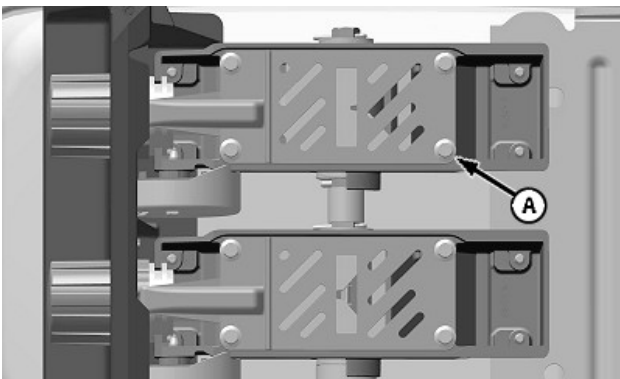
A41129—UN—17APR97



A32252—UN—12OCT88

A—Cap Screws, M6 x 20

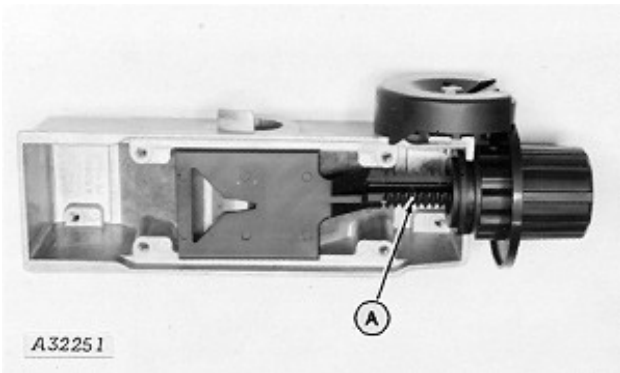
4. Remove the cap screws (A) from inside the hopper. Remove the meters from the bottom of the hopper.



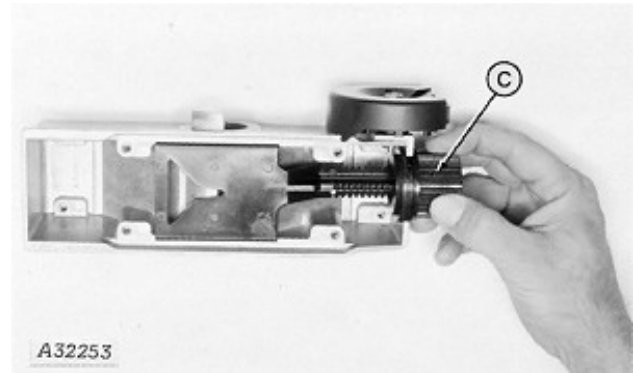
A100567—UN—14MAY18

A—Cap Screws, M6 x 16

5. Remove the cap screws (A) and the gate cover.



A32251—UN—12OCT88



A32253—UN—12OCT88

- A—Plastic Gate Assembly**
B—Knob
C—Nut

6. Remove the entire gate assembly (A) from the aluminum housing.
7. To remove the knob from the splined nut (C), move the knob (B) back and forth while pulling apart.

NOTE: Install the gate assembly and gate cover when measuring the opening.

8. Turn the nut (C) until the V-notch opening is to specification.

Specification

V-Notch Opening—Width. 4 mm
 (1/64 in)



A32254—UN—12OCT88

9. Align the number 0 on the knob and the number 1 on the dial so the meter setting is 10.

10. Seat the knob on the nut.
11. Install the gate cover.
12. Install the meter on the hopper.

AG,OUO6074,1305-19-14MAY18

Idler Options

Slide-type idlers are standard equipment.

Sprocket-type are available as optional equipment through Service Parts.

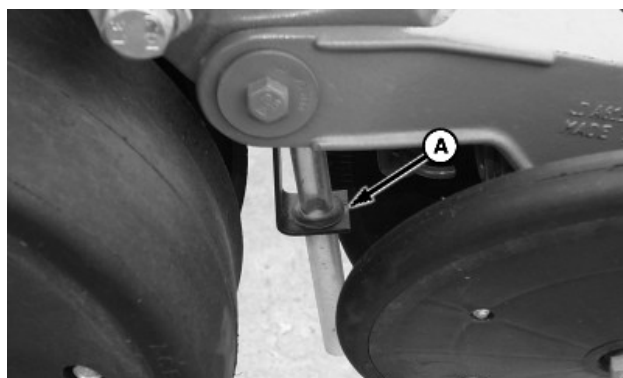
The Slide Type idler is recommended for use with unit-mounted coulters, row cleaners or in fields that have high levels of residue. They can also be used in conventional or mulch-till.

Sprocket-Type idler is recommended for conventional tilled fields where residue levels are low.

AG,OUO6074,1307-19-04AUG00

Insecticide Seed-Furrow Placement Bracket

IMPORTANT: Some insecticides are toxic if they come into direct contact with the seed. Consult the chemical supplier for the proper location to apply the chemical.



A48632—UN—29JAN02

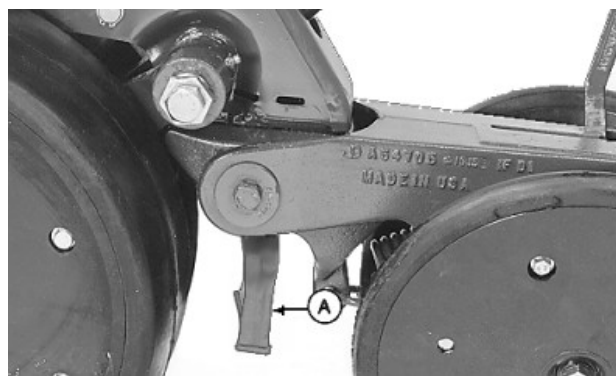
A—Bracket

Placement bracket (A) holds granular insecticide tube for placement of material in seed-furrow.

AG,OUO6074,1308-19-26JUN08

Insecticide Band Spreader (Front Mounted)

IMPORTANT: Some insecticides are toxic if they come into direct contact with the seed. Consult the chemical supplier for the proper location to apply the chemical.



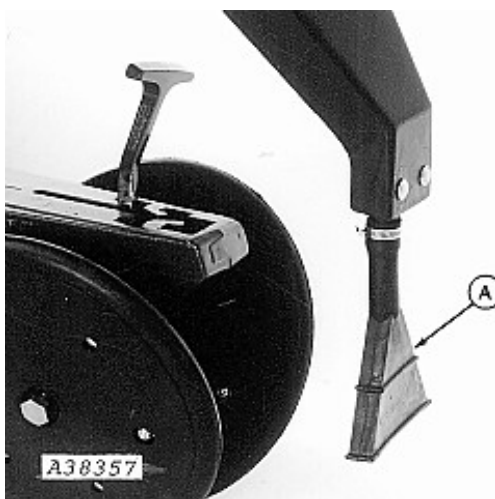
A44859—UN—21APR98

A—Insecticide Band Spreader

The insecticide band spreader (A) is designed to apply a band of granular insecticide approximately 18 cm (7 in) wide on top of ground when planting.

AG,OUO6074,1309-19-27MAR23

Insecticide Band Spreader (Rear Mounted)



A38357—UN—27NOV95

A—Insecticide Band Spreader

The rear mount insecticide band spreader (A) is designed to apply a band of granular insecticide approximately 18 cm (7 in.) wide behind closing wheels.

AG,OUO6074,1310-19-04AUG00

Herbicide Diffuser

NOTE: We recommend measuring the actual band width applied and using this width in application rate calculations.

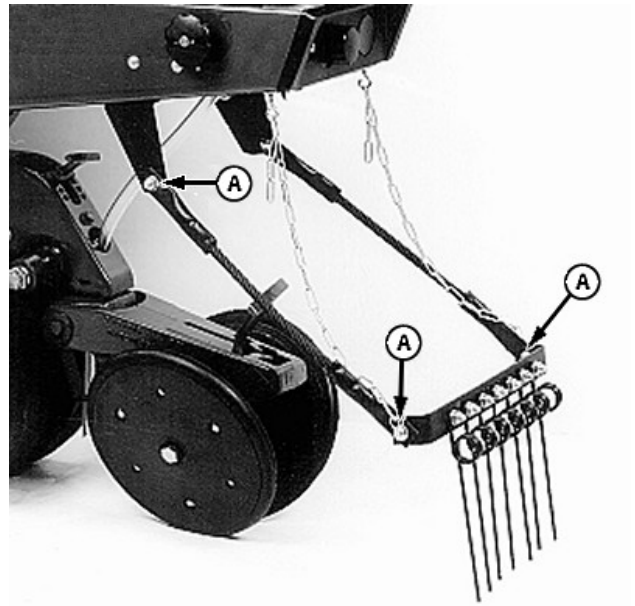


A38358—UN—27NOV95

The herbicide diffuser is designed to, under normal conditions, apply a band of granular herbicide approximately 36 cm (14 in) wide behind closing wheels.

AG,OUO6074,1311-19-27MAR23

NOTE: Adjust support chains to allow tines to both contact soil and raise with machine without sagging.



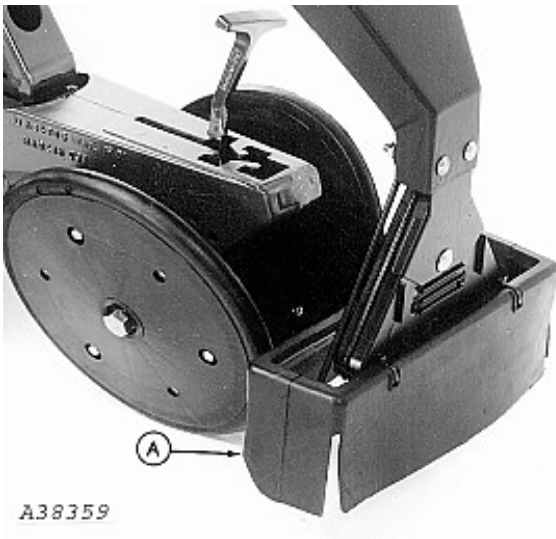
A78648—UN—19AUG13

A—Nuts

Loosen nuts (A) to raise or lower cable supports and adjust spring angle and down pressure. Tighten nuts.

OUO6074,00009DD-19-19AUG13

Windshield



A38359—UN—27NOV95

A—Windshield

The windshield (A) helps maintain distribution pattern of herbicide diffuser and/or rear mount insecticide spreader in windy conditions.

AG,OUO6074,1312-19-04AUG00

Tine-Tooth Incorporator

The tine-tooth incorporator attachment provides an efficient means of mixing insecticide and herbicide into the soil and leaves a smooth ground surface behind planting unit.

Lubricating the Seed Meter

Use of Talc Lubricant



A34471

A34471—UN—11OCT88

CAUTION: Avoid chemical injury to eyes, skin, and lungs when accessing and handling components coated with seed treatment. If using seed treatments, use caution when handling parts coated with seed treatment. Read and follow the safety instructions on the product label.

IMPORTANT: Avoid negative effects on seed placement and population from residue on components. Only use lubricants approved for use in seed meters. (Contact your John Deere dealer or other service provider.)

NOTE: Wax-based lubricant typically has lower levels of inert and seed treatment dust in the vacuum blower exhaust.

Talc lubricant is compatible with MaxEmerge 5 and MaxEmerge 5e seed meters. A meter lubricant (fluency agent) is required for optimum performance of the vacuum seed meter and central commodity system (CCS). To obtain a consistent seed release from the seed disk and improve spacing accuracy, properly lubricate the seed. Seed and seed treatment must be free of clumps.

Farmer-Applied Seed Treatment:

Farmer-applied seed treatments are NOT recommended.

IMPORTANT: Avoid seed meter failure from sticky seeds and meter components due to chemical reactions between farmer-applied seed treatments and commercially applied treatments. If farmer-applied treatments are used, follow recommendations of the chemical manufacturer. Avoid treatments with high oil content. Certain temperature and humidity levels also complicate material compatibility.

If farmer-applied treatment is used, apply seed treatment first, meter lubricant second, and allow seed treatment to dry before placing seed in hoppers and CCS tanks. If seed treatment accumulates in the meter

while using the following lubricant application rates, contact the treatment manufacturer for assistance.

Commercially Treated Seed:

Some treated seed is coated with commercially applied lubricant. To maintain meter performance, apply the recommended amount of lubricant in addition to the commercial application.

IMPORTANT: Avoid meter malfunction due to poor seed flow. Thoroughly incorporate the lubricant. Verify that all seeds are evenly coated.

NOTE: If the lubricant builds up in the bottom of the hopper, reduce the amount of lubricant.

When using 1.6, 2.0, 2.7, or 3.0 bushel hoppers (without CCS tanks) to deliver seed to seed meters, use the following table:

Application Rate in Row Unit Hoppers	
NOTE: Thoroughly incorporate the lubricant until all seeds are coated.	
Hopper Size	Amount of Lubricant
58 L (1.6 bu)	120 mL (1/2 cup)
70 L (2.0 bu)	177 mL (3/4 cup)
9.5 L (2.7 bu)	240 mL (1 cup)
106 L (3.0 bu)	
Per 80 000 Kernel Seed Unit	74 mL (5 tbsp) (2.5 oz)

When using CCS system to deliver seed to seed meters, use the following table:

Application Rate in CCS Tanks	
NOTE: Apply lubricant to seed as seed enters tank. All seeds must be coated to ensure movement through the CCS system and for proper meter performance. Mix seed and lubricant as necessary.	
CCS Tank Size	Amount of Lubricant
880 L (25 bu) Bulk Tank	1.9 L (8 cups)
1233 L (35 bu) Bulk Tank	2.6 L (11 cups)
1585 L (45 bu) Bulk Tank	3.3 L (14 cups)
1762 L (50 bu) Bulk Tank	3.8 L (16 cups)
1938 L (55 bu) Bulk Tank	4.3 L (18 cups)
2290 L (65 bu) Bulk Tank	4.7 L (20 cups)
Per 80 000 Kernel Seed Unit	74 mL (5 tbsp) (2.5 oz)

Adjust lubricant rates until all seeds are coated, while avoiding an accumulation of lubricant in the bottom of the hopper.

Double the lubricant recommendation when planting small seed, large seed, seeds with heavy treatment, or in humid planting conditions.

Triple the lubricant recommendation when a

combination of sticky seed treatments, large or small seed, and high humidity occurs.

IMPORTANT: Avoid meter malfunction from the formation of lubricant clumps. Clean excess seed treatment and lubricant out of hoppers between fills.

If vacuum system requires frequent cleanout, reduce the amount of lubricant. If a coating of seed treatment is found on seed disks, increase the amount of lubricant.

When using seed treatments, clean the seed meters and seed disks with warm, soapy water. Spray a graphite coating on the vacuum seal side of the seed disks as needed.

OUO6045,00006CD-19-22JAN25

Use of Wax-Based Lubricant



A34471

A34471—UN—11OCT88

CAUTION: Avoid chemical injury to eyes, skin, and lungs when accessing and handling components coated with seed treatment. If using seed treatments, use caution when handling parts coated with seed treatment. Read and follow the safety instructions on the product label.

IMPORTANT: Avoid negative effects on seed placement and population from residue on components. Only use lubricants approved for use in seed meters. (Contact your John Deere dealer or other service provider.)

NOTE: Wax-based lubricant typically has lower levels of inert and seed treatment dust in the vacuum blower exhaust.

Wax-based lubricant (fluency agent) is compatible with MaxEmerge 5, MaxEmerge 5e, and ExactEmerge seed meters. A meter lubricant (fluency agent) is required for optimum performance of the vacuum seed meter and central commodity system (CCS). To obtain a consistent seed release from the seed disk and improve spacing accuracy, properly lubricate the seed. Seed and seed treatment must be free of clumps.

Farmer-Applied Seed Treatment

Farmer-applied seed treatments are NOT recommended.

IMPORTANT: Avoid seed failure from sticky seeds and meter components due to chemical reactions between farmer-applied seed treatments and commercially applied treatments. If farmer-applied treatments are used, follow recommendations of the chemical manufacturer. Avoid treatments with high oil content. Certain temperature and humidity levels also complicate material compatibility.

If farmer-applied treatment is used, apply seed treatment first, meter lubricant second, and allow seed treatment to dry before placing seed in hoppers and CCS tanks. If seed treatment accumulates in the meter while using the following lubricant application rates, contact the treatment manufacturer for assistance.

Commercially Treated Seed

Some treated seed is coated with commercially applied lubricant. To maintain meter performance, apply the recommended amount of lubricant in addition to the commercial application.

IMPORTANT: Avoid meter malfunction due to poor seed flow. Thoroughly incorporate the lubricant. Verify that all seeds are evenly coated.

NOTE: If the lubricant builds up in the bottom of hopper, reduce the amount of lubricant.

When using 1.6, 2.0, 2.7, or 3.0 bushel hoppers (without CCS tanks) to deliver seed to seed meters, use the following table:

Application Rate in Row Unit Hoppers	
<i>NOTE: Thoroughly incorporate the lubricant until all seeds are coated.</i>	
Hopper Size	Amount of Lubricant
58 L (1.6 bu)	48 mL (1/5 cup)
70 L (2.0 bu)	60 mL (1/4 cup)
95 L (2.7 bu)	90 mL (3/8 cup)
106 L (3.0 bu)	
Per 80 000 Kernel Seed Unit	30 mL (1/8 cup)

When using CCS system to deliver seed to seed meters, use the following table:

Application Rate of Approved Fluency Agents in CCS Tanks

NOTE: Apply fluency agents to seed as seed enters tank. All seeds must be coated to ensure movement through the CCS system and for proper meter performance. Mix seed and fluency agent as necessary.

CCS Tank Size	Amount of Wax-Based Agent
880 L (25 bu) Bulk Tank	0.75 L (3-1/8 cups)
1233 L (35 bu) Bulk Tank	1.05 L (4-3/8 cups)
1585 L (45 bu) Bulk Tank	1.3 L (5-5/8 cups)
1762 L (50 bu) Bulk Tank	1.5 L (6-1/4 cups)
1938 L (55 bu) Bulk Tank	1.6 L (6-7/8 cups)
2290 L (65 bu) Bulk Tank	1.9 L (8-1/8 cups)
Per 80 000 Kernel Seed Unit	30 mL (2 tbsp) (1 oz)

Adjust lubricant rates until all seeds are coated, while avoiding an accumulation of lubricant in the bottom of the hopper.

Double the lubricant recommendation when planting small seed, large seed, seeds with heavy treatment, or in humid planting conditions.

Triple the lubricant recommendation when a combination of sticky seed treatments, large or small seed, and high humidity occurs.

IMPORTANT: Avoid meter malfunction from the formation of lubricant clumps. Clean excess seed treatment and lubricant out of hoppers between fills.

If vacuum system requires frequent cleanout, reduce the amount of lubricant. If a coating of seed treatment is found on seed disks, increase the amount of lubricant.

When using seed treatments, clean the seed meters and seed disks with warm, soapy water. Spray a graphite coating on the vacuum seal side of seed disks as needed.

coated with commercially applied lubricant. Apply the recommended amount of lubricant, in addition to the commercial application.

CAUTION: Avoid chemical injury to eyes, skin, and lungs when accessing and handling components coated with seed treatment. Wear the appropriate personal protective equipment. Read and follow the safety instructions on the product label.

IMPORTANT: Avoid premature meter wear. To reduce the wear of meter components and prolong the life of the seed meter, regularly use powdered graphite. Graphite filters down into the seed meter to ensure proper lubrication.

Avoid sticky seeds and meter components. Some types of graphite have an oil base that leaves a residue on the components. John Deere graphite provides dry lubrication.

NOTE: Every seed is visibly gray when properly coated.

At the beginning of each season, add 9 mL (0.6 tbsp) or (0.3 oz) of graphite to each empty row-unit hopper.

If the lubricant frequently accumulates in the hoppers, reduce the lubricant rate. If a coating of seed treatment forms on the meter components, increase the amount of lubricant.

Row Unit Hopper—Graphite Application Rate	
Hopper Size	Amount of Graphite
58 L (1.6 bu)	15 mL (1 tbsp)
106 L (3 bu)	30 mL (2 tbsp)
80 000 Kernel Seed Corn Unit	15 mL (1 tbsp) or (0.5 oz)
If the seed is treated, apply extra lubrication at the following rate.	
80 000 Kernel Seed Corn Unit	15 mL (1 tbsp) or (0.5 oz)

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Use of Powdered Graphite Lubricant

A34471



A34471—UN—11OCT88

Meter lubricants improve the finger pick-up meter and radial bean meter performance. Some treated seed is

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