

# **pendulum - action spreader**

Instruction Manual, Parts Catalog  
and Calibration Charts

PS 203

PS 303

PS 403S

PS 503S

PS 603S

PS 753

PS 953

PS 1153

PS 1353

PS 1553T

## ***abonadora pendular***

*Manual de Instrucciones, Catálogo de  
Piezas y Tablas de Calibración*

PS 203

PS 303

PS 403S

PS 503S

PS 603S

PS 753

PS 953

PS 1153

PS 1353

PS 1553T



## 1. Safety Instructions.



Before handling equipment, it is necessary to check if the operator responsible has been instructed on the correct way to operate the machine. For this, careful reading of the Instruction Manual is advised, thus guaranteeing that the machine will be operated in the best way possible, avoiding accidents and premature damage to the equipment.

- A.** Do not use the equipment for purposes for which it was not designed, avoiding the risk of accidents.
- B.** Wash the machine after use, in order to guarantee longer durability.
- C.** Never leave the fertilizer running. If you need to leave, lower the machine to the ground, turn off the engine, engage the parking break and remove the key from the contact point.
- D.** Always adapt the tractor's speed to the location's conditions. Avoid sudden maneuvers.
- E.** If necessary, use appropriate ballasts.
- F.** Do not transport people on the equipment, nor on the tractor, if there is no space to do so.
- G.** When working below the fertilizer suspended by a hydraulic lift, do not forget to place secure supports.
- H.** Check for the presence of children, animals or other people, warning them to keep their distance from the equipment when operating.
- I.** Always carry out regulation or lubrication when the machine is disconnected from the tractor's power outlet.
- J.** If there are any mechanical damages present, turn off the equipment and fix the damage before turning on the machine again.
- K.** Avoid the use of loose or baggy clothing, since they can get stuck in the equipment's movable parts and may cause accidents.
- L.** Check that the locking pins are in place and check the tightness of the screws.
- M.** The fertilizer's power outlet must be turned off when turning the tractor's engine either on or off.
- N.** Do not work with the machine without protection from the movable parts (drive shaft, gear box and protective disc cover).
- O.** If checking or changing the blades' settings, turn off the power outlet and the engine and wait for the disc to completely stop turning.
- P.** To prevent accidents and damages to the operator, there should be a certificate that confirms that he or she recognizes the safety standards and instructions for carrying out operations with the equipment, appropriately and safely.
- Q.** The use of personal protection equipment (PPEs) is mandatory.

## 1. Instrucciones de Seguridad.

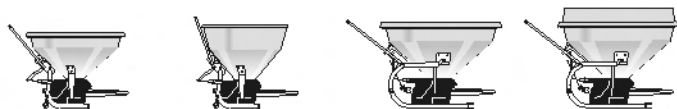


Antes de proceder con el manejo del equipo, verificar si el operador responsable está instruido en la operación correcta de la máquina. Por eso aconsejamos hacer una lectura atenta del manual de instrucciones para poder operar la máquina de la mejor forma posible, evitando accidentes y daños precoces en el equipo.

- A.** Evite de hacer uso del equipo para otros fines que no fue proyectado, evitándose así el peligro de accidentes.
- B.** Después de su uso, lavar la máquina para dar más garantía de durabilidad.
- C.** Evite de dejar encendido la abonadora. Si desea salir, baje la máquina al suelo, apague el motor, accione el freno de parada y retire la llave de contacto.
- D.** Adaptar siempre la velocidad del tractor a las condiciones locales. Evite de hacer maniobras peligrosas.
- E.** Si es necesario, usar lastres apropiados.
- F.** Evite de transportar personas encima del equipo, ni en tractor, si en caso no hay espacio para este fin.
- G.** Si desea trabajar debajo de la abonadora, levantarla con el gato hidráulico, no te olvides de poner apoyos de seguridad.
- H.** Tener cuidado con la presencia de niños, animales u otras personas, avisándolos para que se mantengan alejados del equipo.
- I.** Siempre haga la regulación o lubricación con la máquina apagada de la tomada de fuerza del tractor.
- J.** Si notas la presencia de cualquier daño mecánico, apague el equipo y pedir al mecánico para su reparo antes de encender de nuevo la máquina.
- K.** Evite de usar ropas muy sueltas u holgadas, porque estas pueden prenderse en las partes móviles del equipo y causar accidentes.
- L.** Cerciorase si los pines-traba están bien posicionados y verificar el aprieto de los tomillos.
- M.** Toma de corriente del fertilizante se debe apagar al encender el motor del tractor mismo encendido o apagado.
- N.** Evite de trabajar con la máquina sin protección de las partes móviles, (cardán, caja de transmisión y tapa protectora del disco).
- O.** En caso de verificación o cambio de regulación de las paletas, apagar la tomada de fuerza y el motor y aguardar que el disco deje de girar por completo.
- P.** Para prevenir accidentes y daños al operador debes cerciorarte de que el mismo, conoce las normas de seguridad y las instrucciones para realizar las operaciones con el equipo de forma adecuada y con seguridad.
- Q.** Es obligatorio el uso de los equipos de protección individual (EPI).

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## 2. Technical Data.



| Models                      | PS 203                 | PS 303 | PS 403S | PS 503S |
|-----------------------------|------------------------|--------|---------|---------|
| Capacity of hopper (liters) | 200                    | 300    | 400     | 500     |
| Empty weight (kg)           | 89                     | 100    | 109     | 115     |
| Height (cm)                 | 77                     | 92     | 98      | 110     |
| Width (cm)                  | 90                     | 103    | 145     | 145     |
| EFFECTIVE spreading width   | up to 14 meters        |        |         |         |
| PTO shaft rotation          | 540 RPM for all models |        |         |         |
| Outflow adjustment          | 10 - 2000 kg/ha        |        |         |         |
| Tires                       | -                      | -      | -       | -       |

Equipment subject to changes without notice.

Data informed on the table may vary, according to humidity level, weight, type of material and



### 3. General Information.

The **Pendulum - Action Fertilizer Spreader** was developed to spread pelleted fertilizer, calcium, powders and seeds with absolute precision.

For the fertilization of line-crops such as coffee, citrus and other fruit trees, just change the standard Pendulum (07665) for the special Pendulum (70445) and fertilizer will spread in two definite bands close to the plants or trees.

The distance between bands varies with the length of the Pendulum. (See table ⑤ page 9).

The mechanical part of all Spreaders is the same, with changes only for the hopper capacity, which varies from 600 to 3,300 lb, depending on the users need and the tractor available on the property.

The working width varies from 19.7 to 46 feet, depending on the weight and type of material being spread.

The Pendulum Spreader ships with a standard stirring device (parts 21142 & 21406), which guarantees an even spreading pattern, regardless of dry, powdered or granulated material is being used.

If the material used is humid or moist, such as calcium, gypsum and hygroscopic fertilizers, a special stirring device is needed (parts 15445 & 36180).

**For any questions or suggestions, please contact our Technical Support Department.**

### 2. Technical Data.



| PS 603S                | PS 753 | PS 953 | PS 1153 | PS 1353 | PS 1553T             |
|------------------------|--------|--------|---------|---------|----------------------|
| 600                    | 750    | 950    | 1150    | 1350    | 1550                 |
| 120                    | 151    | 160    | 170     | 185     | 360                  |
| 129                    | 98     | 110    | 120     | 127     | 179                  |
| 145                    | 180    | 180    | 180     | 180     | 180                  |
| up to 14 meters        |        |        |         |         |                      |
| 540 RPM for all models |        |        |         |         |                      |
| 10 - 2000 kg/ha        |        |        |         |         |                      |
| -                      | -      | -      | -       | -       | 600 x 16 or 900 x 16 |

**working conditions.**

## 4. Packing and Assembly.

The Spreader is partially disassembled for transport, therefore the following parts will have to be assembled on site:

- The Pendulum unit.
- The Hopper and its three support plates for the tubular frame.
- The disc regulating handle.

### The Pendulum

For assembly of the Pendulum you will need:

- Two fine-threaded screws with nuts and four washers.
- Aluminium flange (83262) to fix the Pendulum to the frame.

Assemble as follows:

1. Place flange **1** over and around Spreader.
2. Insert screws and washers **2** & **3**.
3. Tighten both screws using the correct torque (i.e. 160 Nm/16 kgfm).

**Correct torque maintenance is recommended in order to avoid damage to the Pendulum neck and coupling.**

### The Hopper

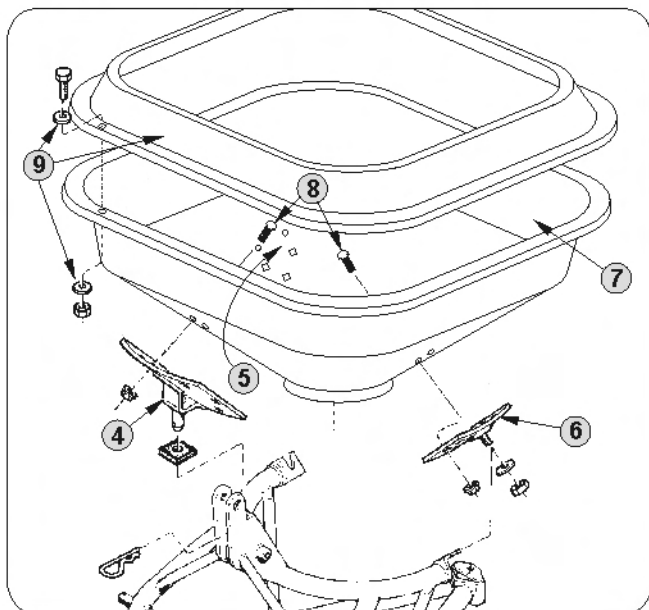
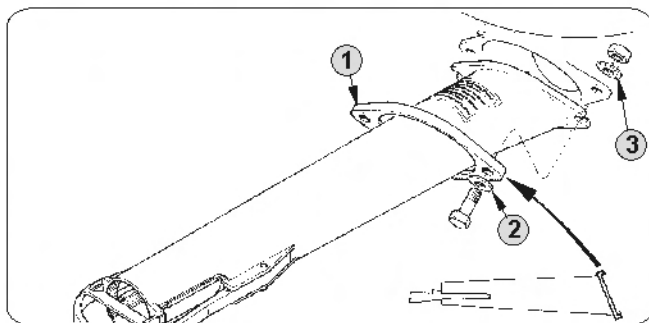
The Hopper **7** is fixed to the frame by three reinforced plates in such a way that the hopper may be removed easily for cleaning **4** & **6**. (See page 10).

- Fix the three mounting plates to the frame, using the 16 screws **8**, through the pre-drilled holes.
- The screws flat heads must be on the inside of the Hopper **5**.
- For the PS 603S model, attach the 53 gallons extension **9** to the Hopper.

### The Regulator Bar

To assemble the regulator bar you will need to:

- Fix the flow scale to the flat end of the handle.
- Slide the handle into the keyhole and lock it with the locking pin.



## 5. Connecting the Spreader to the Tractor.

Basically the Pendulum Spreader may be attached to any tractor equipped with a hydraulic lift.

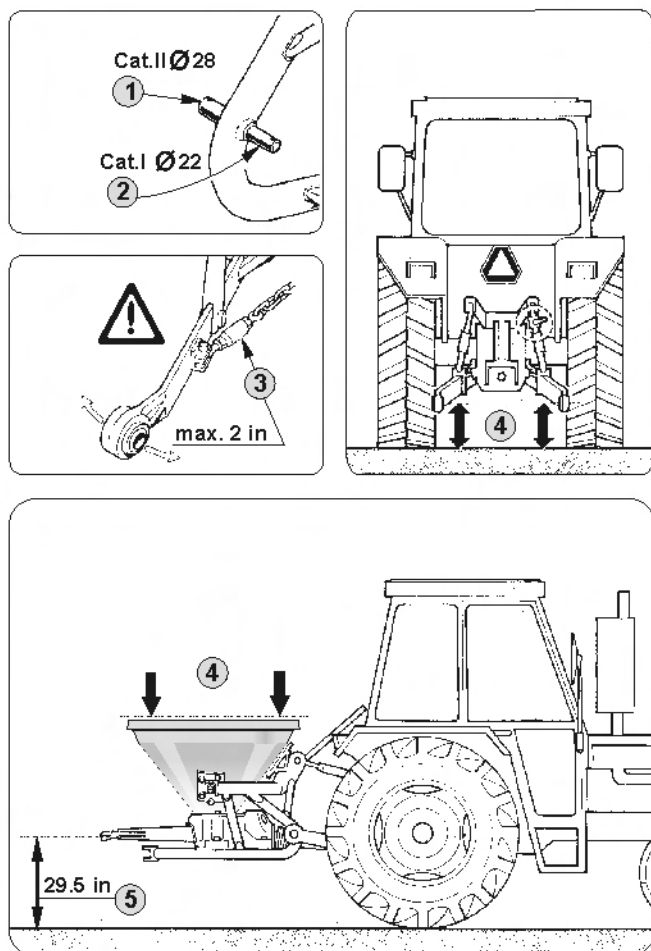
It is important that the topline on the Spreader, mounted to the three - point link on the tractor, has a maximum gap of 2 inches in order to avoid contact of the two sidelinks (3) with the tractor tires. It is recommend stabilizer bars or chains to be used.

As an added safety measure, it is recommended to protect the tractor PTO with a cover plate or bus.

The linkage pins of the Spreader were designed for both categories I & II (1) & (2).

From the front and from the side, it is important that the Spreader is in a horizontal position (4) and that the Pendulum is at 29.5 inches from the ground. (5)

**When used on a lightweight tractor, it is advisable to use front weights on the tractor.**



## 6. Connecting the PTO Shaft.

Lift the Spreader until the PTO shaft reaches the height of the shaft connection of the tractor (1).

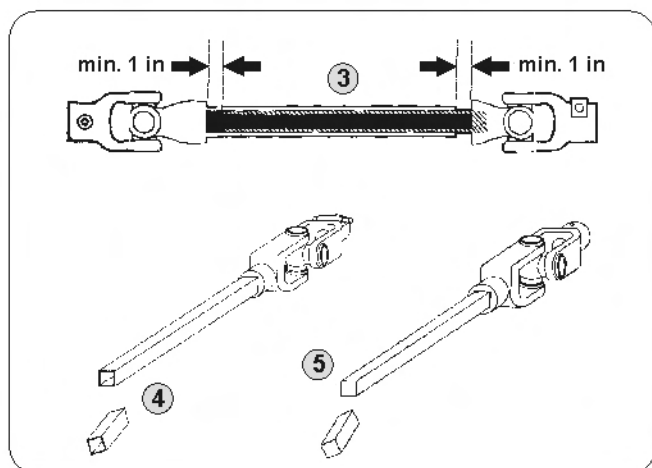
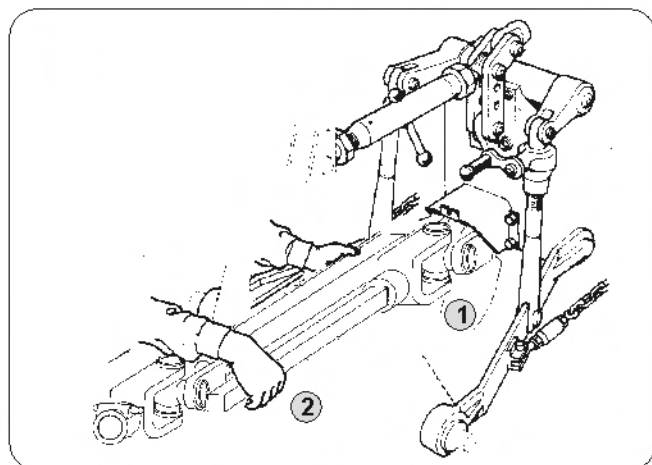
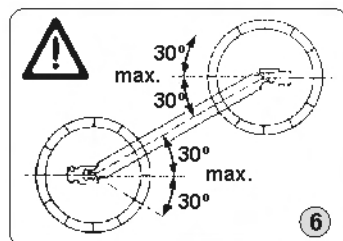
Connect half of the PTO shaft to the tractor and the other half to the Spreader, holding them side by side (2).

Make sure that both tubes overlap each other by at least 1 inch (3).

If the shaft is too long, first cut the guard tubes to the correct length, and then cut the profile tubes to the correct length (4 & 5).

Remove burrs, clean well and regrease the inner profile tube on its outside.

**NOTE: The angle of the moving PTO shaft must never exceed 30° (6).**



## 7. How to Regulate the Spreader.

With a working revolution of 540 rpm, the amount of material being spread depends on two factors: the opening of flow rate regulator, and the speed of the tractor.

Also for economic reasons it is very important that the right amount of product is being spread, in accordance to the type of culture and the soil's need. Prior to spreading, adjust the Spreader with accuracy. Following are detailed examples for the spreading of fertilizer at 130 lb/acre and how to distribute 0.11 lb per tree through bandspreading.

### Example 1: Spreading 130 lb/acre

A.  $130 \text{ lb/acre} = 132 \text{ lb}/4.000\text{m}^2$

B. If the tractor works at a speed of 3.72 mph = 3.72 miles in 60 minutes.

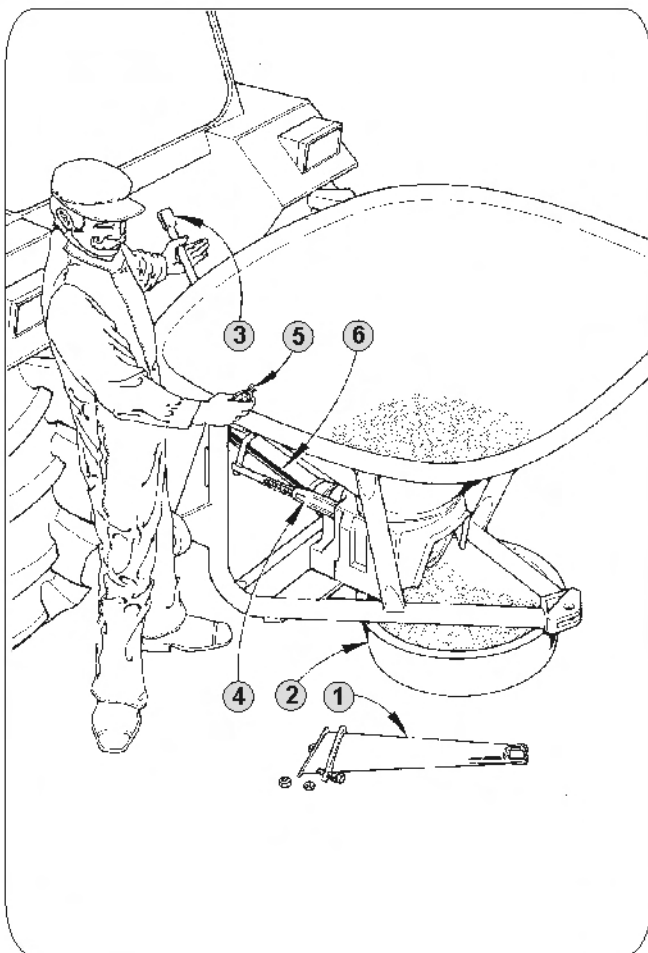
C. We measure the width of the spreading pattern, e.g. 26 feet.

D. Now we know that in one minute we can fertilize  $26 \text{ feet} \times 0.062 \text{ mi} = 0.005 \text{ mi} \times 0.062 \text{ mi} = 0.031 \text{ mi}^2$  and

$0.031 \text{ mi}^2 \times 0.033 \text{ lb} = 0.033 \text{ lb}$  (item A) should be released by the spreader, per minute (See also page 10).

With this result of 26,40 lb/min we can now regulate the Spreader as follows:

- Disconnect the Pendulum Spreader. ①
- Place a bucket underneath the opening ②
- Close the regulator disc. ③
- Set the nylon adjuster to about the correct setting ④
- Fill hopper with pellets and start and accelerate the PTO to 540 rpm. ⑤
- Open the regulator disc for one minute and weigh the amount of pellets collected. If the weight is under 26,40 lb, open the adjuster more. If the collected weight is in excess of 26,40 lb ⑥, close the adjuster until right amount is reached. Write down the right setting for future use.



## 8. How to Regulate for band Spreading.

### Example 2: Spreading 50 grams per tree:

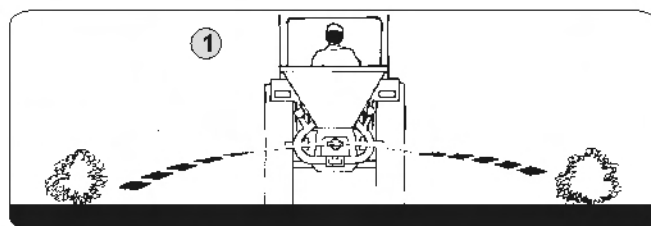
- A. Assuming the culture is planted at 1,5 m intervals with a 4 meters width between rows. ①  
 B. If the tractor moves at 6 kph - 6.000 m in 60 minutes = 100 meters per minute.  
 C. Every 100 meters we will service 66 tree on either side = 132 trees total.  
 D. With the objective of fertilizing each tree with 50 grams, we know that the flow rate will have to be  $132 \times 50 = 6.600$  kg.  
 We can now regulate the Spreader as in the previous example.

In order to spread in two bands, we will have to change the Standard Pendulum (07665) for the Special Pendulum - (70445). Depending on the length of the Pendulum (70445), the maximum distance between rows will vary (see table ⑤).

In addition to the standard stirring device fixed permanently to the Spreader, we can supply an extra stirring device ② to be used with moist or humid fertilizer. ④

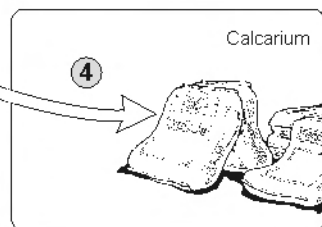
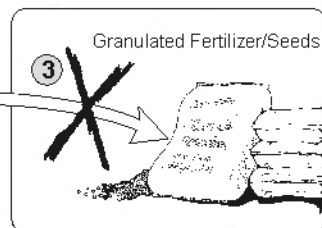
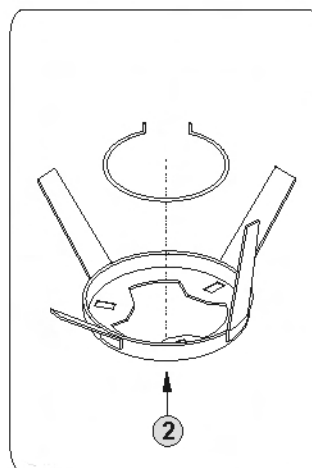
When mounting the stirring device, make sure there is no movement.

**CAUTION: Never use the extra stirring device ② with granulated fertilizer ③ or seeds, as this will damage them.**



⑤

|        |           |
|--------|-----------|
| 500 mm | 8,5 - 9 m |
| 350 mm | 7,5 - 8 m |
| 250 mm | 5 - 5,5 m |
| 195 mm | 4 - 4,5 m |
| 80 mm  | 3 - 4 m   |



## 9. How to Distribute Spreading Evenly.

When distributing fertilizers or seeds with a Spreader, a greater concentration of product will be found in the center and a lighter spread will occur in the edges of the pattern (1) & (2).

In order to obtain a more even spread, you must compensate across the edges of the pattern. The most effective way is to drive the tractor, on the return trip, as close as possible to the outer edge of the previous pattern (3) & (4).

### ATTENTION

#### Cleaning and Greasing

Humid fertilizers harden quickly and may prevent a smooth operation of the regulator disc. It is therefore recommended that the Spreader be cleaned out and washed after each use.

- Close the regulating disc and operate the Spreader slowly while washing the hopper on the inside.

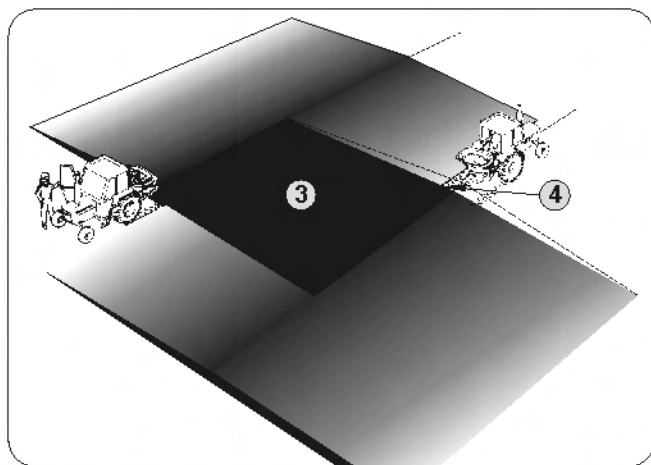
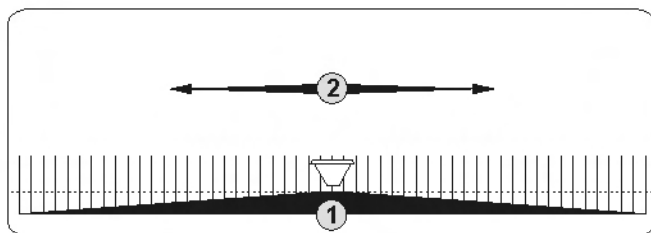
- Open the regulator disc and wash the disc and stirring device while operating slowly.

- Disengage the PTO shaft and remove the hopper from the frame.

- Spray the outside of the Spreader clean.

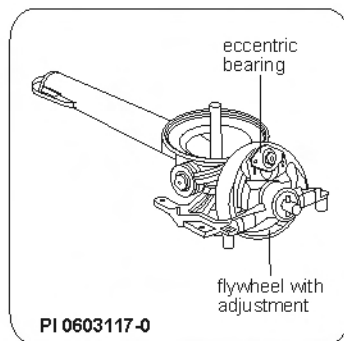
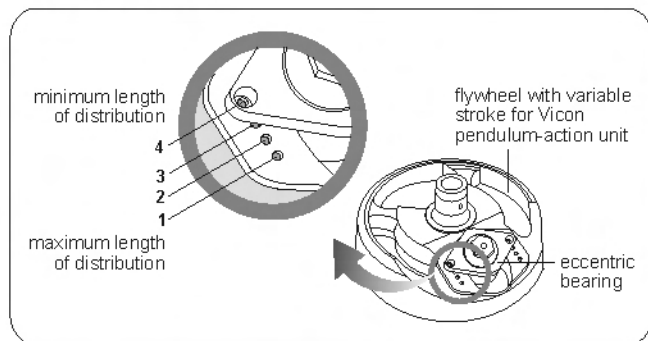
- Close the regulating disc and lubricate the disc (even waste oil may be used).

- Apply grease to all greasing nipples and make sure that the PTO shaft tubes are cleaned and greased after approximately each 10 hour operating period.



## 10. Pendulum-action unit with adjustment for distribution width.

The adjustment is carried out at the locking position of the eccentric bearing at the flywheel (see picture below). The flywheel has four locking positions for the eccentric bearing. With a pendulum of the same length, locking the eccentric bearing at position **1** corresponds to the maximum length of distribution, and locking it at position **4** corresponds to the minimum length. Please see pictures below.



To change the eccentric bearing from one position to another requires:

- 1 - Assemble the machine on the hydraulic leveling system (three points) at tractor.
- 2 - Manually rotate flywheel to position bearing downwards facing the soil.
- 3 - Change position loosening the two bolts that lock eccentric bearing to the flywheel.
- 4 - Take bearing into the required position until the desired distance is reached (positions 1, 2, 3 or 4).
- 5 - Insert bolts and tighten them.

For using the Variable Distribution system efficiently it is essential to cut the pendulum taking into consideration the maximum inter-row distance, where agricultural materials will be applied. For example, if the maximum inter-row distance is 3,5 meters, the pendulum should be cut with the eccentric bearing locked at hole 1 in the flywheel. This procedure is recommended to facilitate gradually reducing distribution width, when the eccentric bearing is locked at holes number 2, 3 or 4, for narrower distances, according to the need. Please see pictures above for reference.

In view of the variety of fertilizers available which feature different physical characteristics, such as granulation, specific weight, fluidity, and some properties of these fertilizers suffer the influence of several variables, such as relative humidity, it is difficult to state precise pendulum sizes and locking positions for eccentric bearing at the flywheel for reaching a predefined distance. It would be impracticable to test this great variety of fertilizer types in the most variable conditions and build tables.

By experience with the most commonly used fertilizers, it was possible to determine the basic behaviors for the distribution width changes depending on the eccentric bearing position.

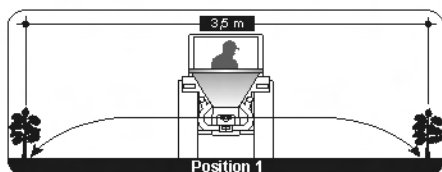
With the eccentric bearing locked at position 1, the pendulum is cut until it reaches the maximum inter-row distance, where agricultural materials will be distributed. According to field tests, when the eccentric bearing is locked at positions 2, 3 and 4 respectively at the flywheel, distribution width is gradually reduced in 10% from one position to another. (This result was dependent on each agricultural material type distributed, but all of them got approximately the same 10% result used as a reference only. So it is highly recommended that tests and evaluations are performed under real conditions for specific distributions).

Please see picture on opposite page.

With the eccentric bearing locked at position 1 at the flywheel and for a maximum inter-row distance of 3,50 meters, the pendulum was cut until it reached this distribution width. When the pendulum length was defined, the eccentric bearing was locked at the four positions, resulting in the following distribution lengths.

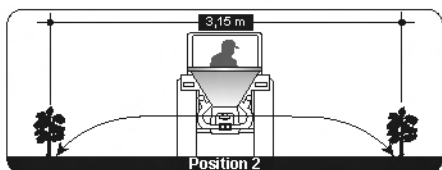


## 10. Pendulum-action unit with adjustment for distribution width.



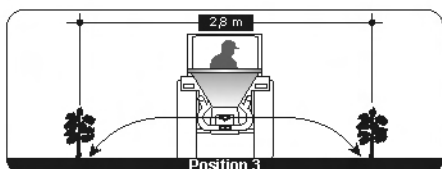
### Position 1

Distance of 3,50 meters = 100%.  
Desired maximum width for distribution.



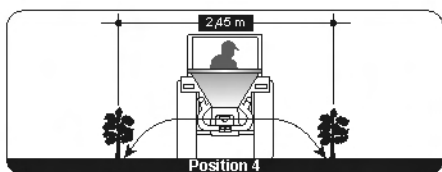
### Position 2

Distance of 3,15 meters = 90% from 3,50 meters.



### Position 3

Distance of 2,80 meters = 80% from 3,50 meters.



### Position 4

Distance of 2,45 meters = 70% from 3,50 meters.

## 11. Calibration Charts. How to Regulate the Spreader.

With the PTO shaft operating at 540 rpm the amount of fertilizer spread per acre depends on three factors:

- The setting of the adjuster arm, the tractor speed and the width of the spread pattern.
- The spread width varies according to the type of material being used.
- The following charts are meant as a guide but, considering the cost of fertiliser, it is imperative to check the accuracy of the setting as follows:

### Example

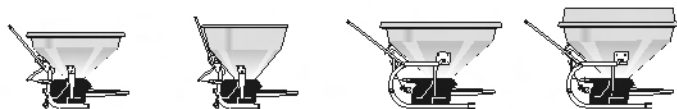
To spread L.A.N. at 178 lb per hectare at a speed of 19,80 lb/min. with a working width of 19.7 feet.

The table on page 23 shows an adjuster setting of 24.

To check this, remove the pendulum spreader spout. Put a bucket under the opening. With fertilizer in the hopper, run the spreader at 540 r.p.m. with the adjuster set at N° 24 and open the feed gate for one minute. The chart shows that 39,60 lb of material should have flowed into the bucket. If you have more than 39,60 lb close the adjuster a little; if less, open it. Adjust the arm until you have discharged exactly the correct weight in one minute and then write down the setting for future use.

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| Chasis y Tolva: PS 753, PS 953, PS 1153, PS 1353, PS 1553T .....              | 39      |
| Cables: PS 603S, PS 753/Carreta .....                                         | 40      |
| Carreta: PS 1353T, PS 1553T .....                                             | 41      |

## 2. Datos Técnicos.



| Modelos                        | PS 203            | PS 303 | PS 403S | PS 503S |
|--------------------------------|-------------------|--------|---------|---------|
| Capacidad de la tolva (litros) | 200               | 300    | 400     | 500     |
| Peso vacío (kg)                | 89                | 100    | 109     | 115     |
| Altura (cm)                    | 77                | 92     | 98      | 110     |
| Anchura (cm)                   | 90                | 103    | 145     | 145     |
| Anchura EFECTIVA de trabajo    | llega a 14 metros |        |         |         |
| Rotación                       | 540 RPM           |        |         |         |
| Rotación de la tasa de siembra | 10 - 2000 kg/ha   |        |         |         |
| Neumáticos                     | -                 | -      | -       | -       |

Los equipos están sujetos a alteraciones sin previo aviso.

Los datos informados en la tabla pueden variar de acuerdo con el grado de humedad, peso, tipo

### 3. Información General.

El **Abonadora Pendular** fue desarrollada para esparcir abono perlado (prilled), cal, polvos y semillas con absoluta precisión.

Para abonar culturas en línea tales como café, cítricos y otros frutales, todo lo que se necesita es cambiar el Tubo Pendular (07665) estándar por el Tubo Pendular (70445) especial, y el abono se esparce en dos fajas definidas, próximas a las plantas o árboles.

La distancia entre las fajas varía según la largura del Tubo Pendular (consulte la tabla ⑤ página 19).

La parte mecánica de todas las Abonadoras son iguales, con alteraciones sólo en cuanto a la capacidad de la tolva, que varía de 300 a 1.500 kilos, dependiendo de la necesidad del usuario y del tractor disponible en la propiedad.

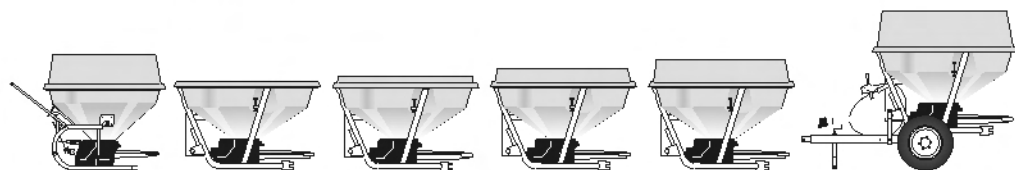
La anchura de trabajo varía de 6 a 14 metros, dependiendo del peso y tipo del material usado en el esparcimiento.

El Abonadora Pendular está equipado con un agitador estándar (piezas 21142 y 21406), que garantiza un patrón uniforme de esparcimiento, independiente del material en uso estar seco, en polvo o granulado.

Si el material está húmedo o endurecido, tal como la cal, yeso y fertilizantes higroscópico, se necesita un agitador especial (piezas 15445 y 36180).

**Si tiene dudas o preguntas, por favor contacte nuestro Departamento de Servicio Técnico.**

### 2. Datos Técnicos.



| PS 603S           | PS 753 | PS 953 | PS 1153 | PS 1353 | PS 1553T            |
|-------------------|--------|--------|---------|---------|---------------------|
| 600               | 750    | 950    | 1150    | 1350    | 1550                |
| 120               | 151    | 160    | 170     | 185     | 360                 |
| 129               | 98     | 110    | 120     | 127     | 179                 |
| 145               | 180    | 180    | 180     | 180     | 180                 |
| llega a 14 metros |        |        |         |         |                     |
| 540 RPM           |        |        |         |         |                     |
| 10 - 2000 kg/ha   |        |        |         |         |                     |
| -                 | -      | -      | -       | -       | 600 x 16 o 900 x 16 |

de material y condiciones de trabajo.

## 4. Embalaje y Montaje.

La Abonadora está parcialmente desmontada para el transporte, por consiguiente las siguientes piezas deben ser montadas en el local:

- La unidad del Tubo Pendular.
- La tolva y las tres chapas de soporte para la armazón tubular.
- La palanca del disco regulador.

### El Tubo Pendular

Para montar el Tubo, se necesitará:

- Dos tornillos de rosca fina con tuercas y cuatro arandelas,
- Flange de aluminio (83262) para fijar el Tubo al armazón.

Para montar:

1. Coloque el flange ① alrededor del Tubo de la Abonadora,
2. Insiera los tornillos y arandelas ② y ③.
3. Apriete las tuercas utilizando la fuerza de torsión correcta (por ejemplo, 160 Nm/16 kgfm).

**Se recomienda mantener la fuerza correcta para evitar daños al cuello del Tubo y al acoplamiento.**

### La Tolva

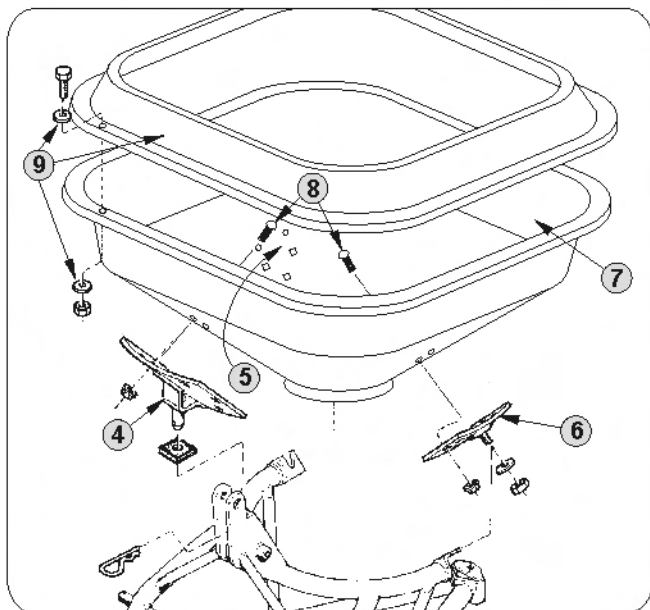
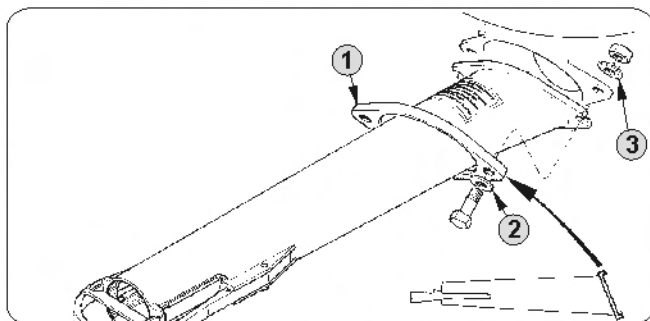
La Tolva ⑦ se fija a la armazón a través de tres chapas reforzadas de tal manera que se pueda quitar fácilmente para limpiarla ④ y ⑥. (Consulte la página 20).

- Fije las tres chapas de montaje a la armazón, usando 16 tornillos ⑧, a través de los orificios anteriormente perforados.
- Las cabezas lisas de los tornillos deben estar para el interior de la Tolva ⑤.
- Para el modelo PS 603S, monte la extensión de 200 lt. ⑨ encima de la Tolva.

### La Barra del Regulador

Para montar la barra del regulador, usted necesitará:

- Prender el medidor a la extremidad plana de la palanca,
- Encajar la palanca en la ranura y préndalo con un pasador.



## 5. Montaje de la Abonadora sobre el Tractor.

Básicamente, la Abonadora Pendular puede acoplarse a cualquier tractor que esté equipado con un elevador hidráulico.

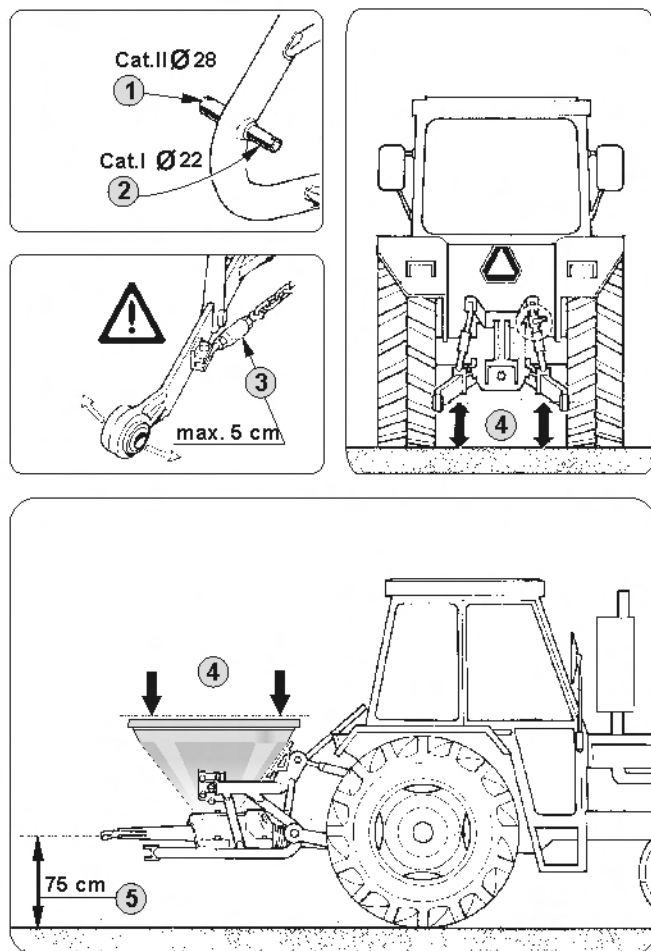
Es importante que el enganche superior en la Abonadora, montada en los dos de tres puntos del tractor, tenga un juego máximo de 5 cm para evitar el contacto de las dos conexiones laterales (3) con los neumáticos del tractor. Se recomienda el uso de barras estabilizadoras o cadenas.

Como medida adicional de seguridad, se recomienda proteger el eje toma fuerza del tractor con una capa de protección.

Las clavijas de enganche de la Abonadora fueron desarrolladas para las categorías I y II (1) y (2).

Al verlo de frente como de lado, es importante que la Abonadora esté en la posición horizontal (4) y el Tubo Pendular a 75 cm del suelo (5).

**Si fuera usado en un tractor liviano, es aconsejable utilizar lastres frontales en el tractor.**



## 6. Acoplamiento al eje Toma Fuerza.

Levante la Abonadora hasta que el árbol de transmisión alcance la altura del eje toma fuerza del tractor (1).

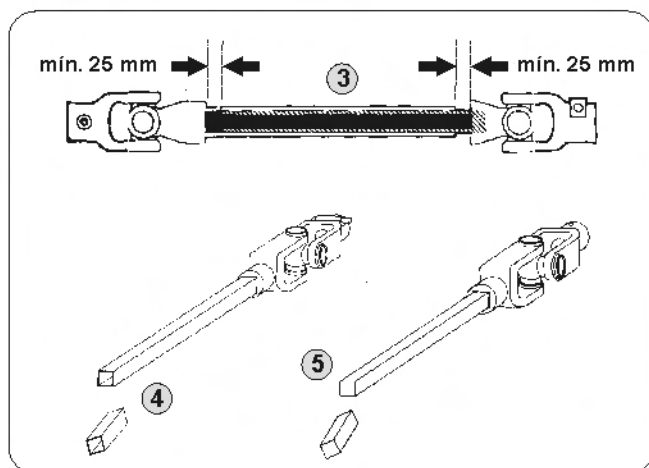
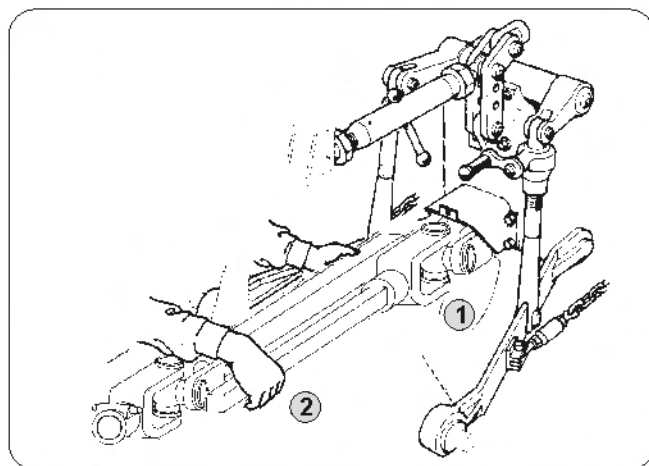
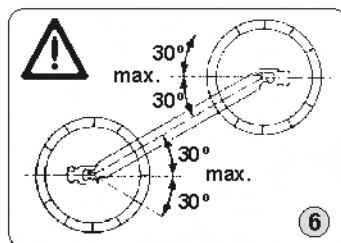
Conecte la mitad del árbol de transmisión al tractor y la otra mitad a la Abonadora, asegurándolo por los dos lados (2).

Verifique que ambos tubos tengan una diferencia de, por lo menos, 25 mm (1") (3).

Si el árbol de transmisión es muy largo, primero corte los tubos de protección y después los perfiles en la largura correcta (4) y (5).

Remueva las rebabas, limpie bien y engrase nuevamente el tubo interno en su parte externa.

**NOTA:** El ángulo del eje toma fuerza no debe exceder 30° (6).



## 7. Regulación de la Abonadora.

Con una revolución de operación de 540 rpm, la salida del material a esparcir depende de dos factores: la abertura del regulador del volumen de distribución y de la velocidad del tractor.

Aún, por medidas de economía, es muy importante esparcir la cantidad correcta de producto, según el tipo de cultura y de la necesidad del suelo. Antes de esparcir, se debe regular la Abonadora con precisión. A continuación, hay ejemplos detallados para el esparcimiento del abono a 60 kg/acre y la manera para distribuir 50g por árbol a través del esparcimiento por faja.

### Ejemplo 1: Esparcimiento 60 kg/acre

A.  $60 \text{ kg/acre} = 60.000 \text{ g} / 4.000\text{m}^2 = 15 \text{ g/m}^2$ ,

B. Si el tractor trabaja a una velocidad de  $6 \text{ kph} = 6.000 \text{ m en } 60 \text{ min.} = 100 \text{ m/min.}$ ,

C. Medimos la anchura del patrón de esparcimiento, por ejemplo, 8m,

D. Ahora se sabe que en un minuto es posible abonar  $8 \times 100 = 800 \text{ m}^2$ , y  $800 \times 15 \text{ g (item A)} = 12.000 \text{ g} = 12 \text{ kg}$  debe ser liberado por la Abonadora, por minuto (consulte también la página 20).

Con este resultado de 12 kg/min., es posible regular la Abonadora del siguiente modo:

- Desconecte el Tubo Pendular de la Abonadora. ①

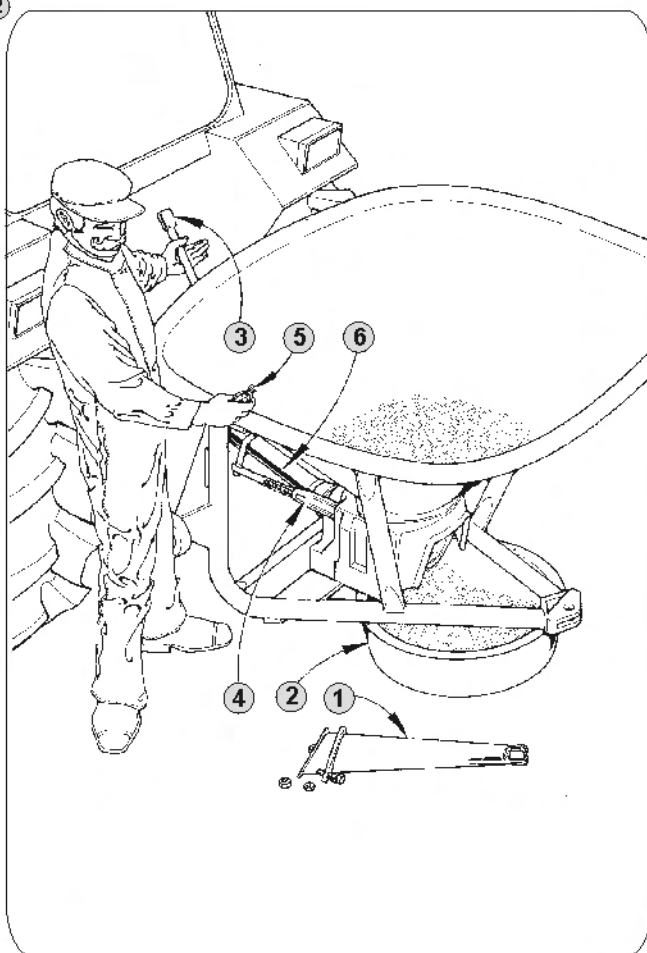
- Coloque un balde debajo de la abertura. ②

- Cierre el disco del regulador. ③

- Coloque el regulador de nylon en la posición correcta. ④

- Llene la tolva con abono perlado (prills), inicie y acelere el toma fuerza a 540 rpm. ⑤

- Abra el disco del regulador durante un minuto y pese la cantidad de abono colectado. Si el peso es inferior a los 12 kg, abra más el regulador. Si la cantidad es superior a los 12 kg, cierre el regulador hasta lograr la cantidad correcta. Observe las posiciones correctas para uso futuro.



## 8. Regulación para el Esparcimiento en Faja.

### Ejemplo 2: Esparcimiento de 50 g por árbol:

A. Considere que la cultura está plantada a intervalos de 1,5 m con anchura de 4m entre las líneas. ①

B. Si el tractor se mueve a 6 kph - 6.000 m en 60 min. = 100 m por minuto.

C. A cada 100 metros, trabaja 66 árboles por lado = total de 132 árboles.

D. Con el objetivo de abonar cada árbol con 50 g, se sabe que el volumen de distribución deberá ser  $132 \times 50 = 6.600$  kg.

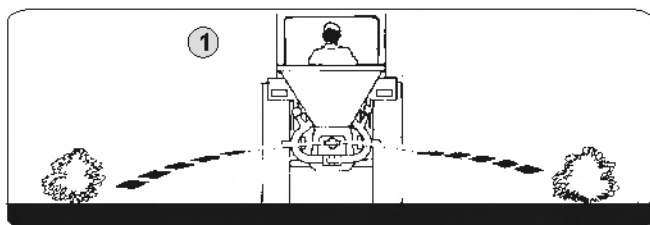
Ahora es posible regular la Abonadora como en el ejemplo anterior.

Para esparcir en dos fajas, sustituya el Tubo Pendular estándar (07665) por el Tubo especial (70445). Dependiendo de la largura del Tubo Pendular (70445), la distancia máxima entre las líneas irá variar (consulte la tabla ⑤).

Además del agitador estándar que viene con la Abonadora, proporcionamos un agitador extra ② para ser utilizado con abono húmedo o endurecido ④.

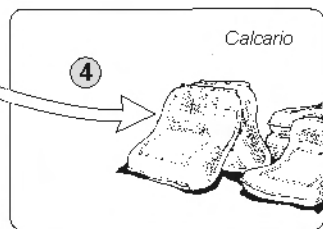
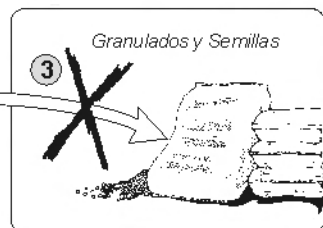
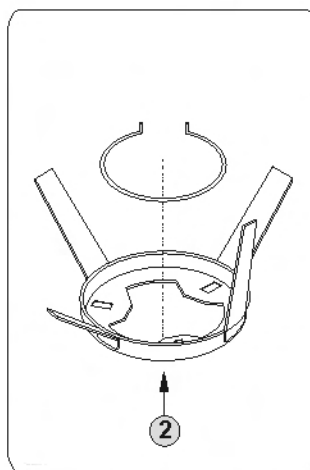
Al montar el agitador, verifique si no tiene juego.

**AVISO: Nunca use el agitador extra ② con abono granulado ③ o semillas para no causarles daños.**



⑤

|        |           |
|--------|-----------|
| 500 mm | 8,5 - 9 m |
| 350 mm | 7,5 - 8 m |
| 250 mm | 5 - 5,5 m |
| 195 mm | 4 - 4,5 m |
| 80 mm  | 3 - 4 m   |





## 9. Esparcimiento Uniforme.

Al distribuir los abonos o semillas con una Abonadora, habrá siempre una concentración mayor del producto en el centro y la menor en los bordes del patrón (1) y (2).

Para obtener un esparcimiento más uniforme, será necesario compensar los bordes del patrón. La manera más eficiente es, al retornar el tractor, arimarlo lo más próximo posible del borde externo del esparcido anterior (3) y (4).

### ATENCIÓN

#### Limpeza y Engrase

Los abonos húmedos endurecen rápidamente y pueden impedir una operación suave del disco del regulador. Por lo tanto, se recomienda la limpieza y el lavado de la Abonadora después de cada trabajo.

- Cierre el disco del regulador y haga funcionar la Abonadora lentamente mientras lava la parte interna de la tolva.

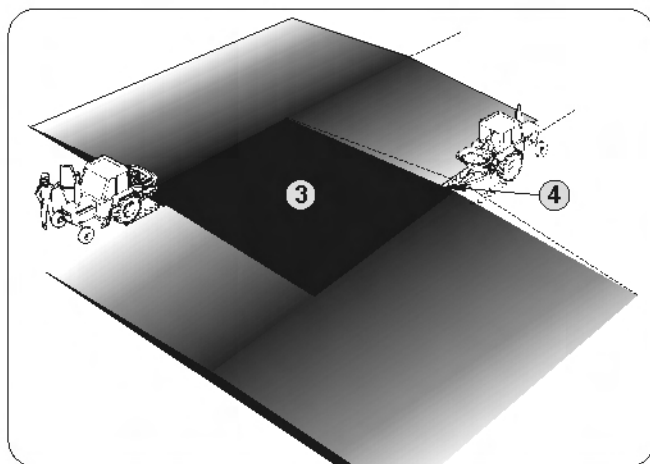
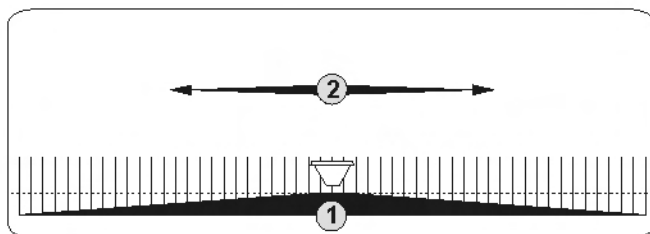
- Abra el disco del regulador y lave el disco y el agitador mientras funciona lentamente.

- Desenganche el eje toma fuerza y remueva la tolva de la armazón.

- Vaporice la parte externa de la Abonadora limpia.

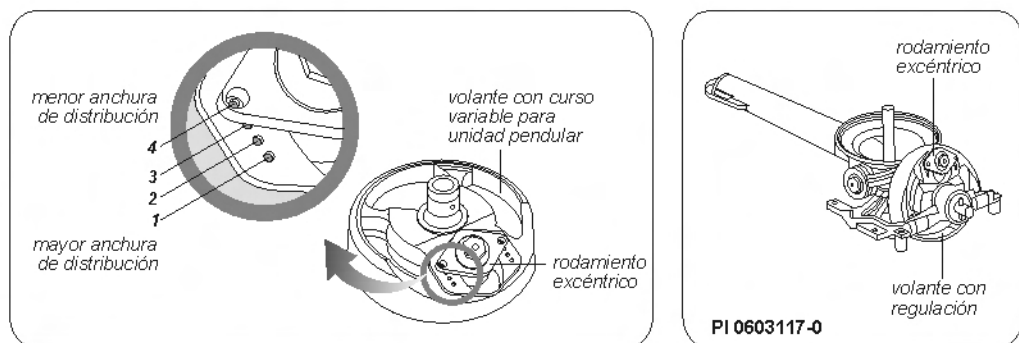
- Cierre el disco del regulador y engráselo (es posible usar aceite usado).

- Aplique grasa en todos los engrasadores y verifique si los tubos del árbol de transmisión están limpios y con grasa, a cada de 10 horas de trabajo.



## 10. Unidad pendular con ajuste de inclinación del ancho de distribución.

El ajuste es realizado en la posición de fijación del rodamiento excéntrico en el volante (figura abajo). El volante posee 4 (cuatro) posiciones de fijación del rodamiento excéntrico, mas todos con un mismo tamaño de longitud del péndulo, si el rodamiento excéntrico es fijado en la posición **1** la máquina estará haciendo uso de su mayor anchura de distribución. No obstante, si el mancal excéntrico es fijado en la posición **4**, la máquina hará uso de su menor anchura de distribución. Ver figura abajo:



- Para realizar el cambio de una posición a otra del rodamiento excéntrico, se debe proceder lo siguiente:
- 1 - Montar la máquina en el elevador hidráulico (tres puntos) del tractor.
  - 2 - Girar la manija manualmente de tal forma que el rodamiento se posicione para bajo en dirección al suelo.
  - 3 - Hacer el cambio de posición, soltando los dos tornillos que sujetan el rodamiento excéntrico al volante.
  - 4 - Llevar el rodamiento hasta la posición deseada que se quiere lograr la distancia requerida (posiciones 1, 2, 3 ó 4).
  - 5 - Poner los tornillos y apretarlos.

Para hacer un buen uso con eficiencia del sistema de distribución es muy importante que el corte del péndulo sea efectuado teniendo como objetivo la mayor distancia entre las hileras donde serán aplicados los insumos, por ejemplo, si la mayor distancia entre las hileras es de 3,5 metros, el corte del péndulo debe ser efectuado cuando el rodamiento excéntrico está fijado en el agujero de posición 1 (uno) del volante y el corte será hecho para que la anchura de distribución alcance los 3,5 metros. Esta colocación es recomendada para que con el corte del péndulo efectuado sea para la mayor distancia, se puede disminuir esta anchura tan solo fijando el rodamiento excéntrico en los agujeros de los números 2, 3 ó 4 (que disminuyen gradualmente la anchura de distribución) obteniéndose anchuras menores de distribución, si es necesario. Las figuras de arriba muestran estas situaciones.

Como existe una grande variedad de fertilizantes que presentan características físicas individuales (granulometría, densidad, consistencia y fluidez) y como algunas propiedades de estos fertilizantes son influenciadas por diversas variables, como por ejemplo: la humedad relativa, es difícil afirmar cuales serán las medidas del péndulo o la posición de sujeción del rodamiento excéntrico en el volante para obtener una distancia predeterminada, porque sería imposible de probar esa grande variedad de tipos de fertilizantes en las diversas condiciones para generar tablas, mismo en grande número no daría cobertura de forma alguna las diferentes situaciones encontradas en el campo.

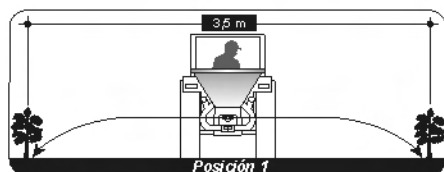
Para indicar un camino viable, a través de nuestras experiencias con los fertilizantes más usuales, se realizó una previsión tomando como base la alteración de la anchura de distribución con respecto a la posición del rodamiento excéntrico.

Fijando el rodamiento excéntrico en la posición del número 1, cortase el péndulo hasta que obtenga la mayor distancia entre las hileras en el cual se distribuirá el insumo. De acuerdo a las pruebas de campo mostraron, que cuando el rodamiento excéntrico es fijado en las posiciones de número 2, 3 y 4 respectivamente en el volante, la anchura de distribución disminuye gradualmente en 10% para cada posición (ese resultado depende de cada tipo de insumo distribuido, mas todos se acercan a éste mismo resultado de 10% que sirve como base, de esa forma nada es más preciso y lógico que las pruebas y evaluaciones realizadas en las condiciones reales de las distribuciones específicas).

En la página siguiente son ilustrados los ejemplos citados:

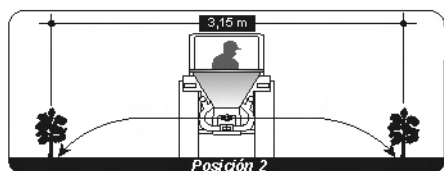
Con el rodamiento fijado en la posición 1 del volante, para un espaciamiento máximo de 3,5 metros entre las hileras fue cortado el péndulo hasta que obtener la anchura de distribución. Una vez que se haya determinado el largo del péndulo es mantenido, luego es fijado el rodamiento excéntrico en las cuatro posiciones obteniéndose las siguientes anchuras de distribución:

## 10. Unidad pendular con ajuste de inclinación del ancho de distribución.



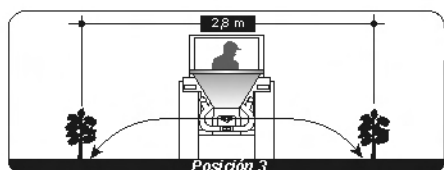
### Posición 1

Distancia de 3,50 metros igual al 100%.  
Máxima anchura de distribución establecida.



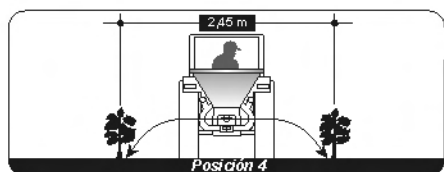
### Posición 2

Distancia de 3,15 m igual al 90% del total de 3,50 metros.



### Posición 3

Distancia de 2,80 m igual al 80% del total de 3,50 metros.



### Posición 4

Distancia de 2,45 m igual al 70% del total de 3,50 metros.

## 11. Tablas de Calibración. Regulación de la Abonadora.

Con el eje toma fuerza funcionando a 540 rpm, la cantidad de abono esparcido por hectárea depende de tres factores:

- La posición de la palanca del regulador, la velocidad del tractor y la anchura del patrón de esparcimiento.
- La anchura de esparcimiento varía según el tipo de material.
- Las siguientes tablas sirven como orientación pero, considerando el costo del abono, es imperativo verificar la precisión de la posición, como sigue:

### Ejemplo

Para esparcir L.A.N. en 200 kg por hectárea a una velocidad de 9 km/h con una anchura de trabajo de 6 m.

La tabla en la página 23 muestra que la posición del regulador es 24. Para verificar ese dato, remueva el tubo de la Abonadora pendular. Coloque un balde debajo de la abertura. Con el abono en la tolva, haga funcionar la Abonadora a 540 rpm con el regulador en el número 24 y abra la salida del alimentador (el disco del regulador) por un minuto. La tabla muestra que 18 kg de material ha caído al balde. Si hay más de 18 kg, cierre un poco el regulador; si es menos, ábralo. Ajuste el regulador hasta descargar exactamente el peso correcto en un minuto y después registre la posición para uso futuro.

## L.A.N. 26% Nitrogen

working width **19.7** FEET

| Adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |      |     |     |     |     |     |
|--------------------------------------------------|-------------------|------|------|-----|-----|-----|-----|-----|
|                                                  | 3,72              | 4,34 | 5    | 5,6 | 6   | 7   | 7,5 |     |
|                                                  | lb/acre           |      |      |     |     |     |     |     |
| 18                                               | 24                | 183  | 140  | 123 | 109 | 98  | 89  | 82  |
| 21                                               | 29                | 193  | 186  | 145 | 128 | 116 | 105 | 96  |
| 24                                               | 40                | 267  | 229  | 200 | 178 | 160 | 146 | 134 |
| 27                                               | 46                | 312  | 267  | 234 | 208 | 187 | 170 | 156 |
| 30                                               | 57                | 386  | 331  | 290 | 257 | 232 | 210 | 193 |
| 33                                               | 66                | 446  | 382  | 334 | 297 | 267 | 243 | 223 |
| 36                                               | 79                | 535  | 458  | 401 | 357 | 321 | 291 | 267 |
| 42                                               | 106               | 713  | 612  | 535 | 475 | 428 | 389 | 356 |
| 48                                               | 139               | 936  | 802  | 702 | 624 | 562 | 511 | 468 |
| 54                                               | 176               | 1188 | 1019 | 892 | 793 | 713 | 648 | 595 |

## L.A.N 26% Nitrógeno

anchura de trabajo **6** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |      |      |      |     |     |     |     |
|--------------------------------------------------------------|----------------------------|------|------|------|-----|-----|-----|-----|
|                                                              | 6                          | 7    | 8    | 9    | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |      |      |      |     |     |     |     |
| 18                                                           | 11                         | 183  | 157  | 138  | 122 | 110 | 100 | 92  |
| 21                                                           | 13                         | 217  | 186  | 163  | 144 | 130 | 118 | 108 |
| 24                                                           | 18                         | 300  | 257  | 225  | 200 | 180 | 164 | 150 |
| 27                                                           | 21                         | 350  | 300  | 263  | 233 | 210 | 191 | 175 |
| 30                                                           | 26                         | 433  | 371  | 325  | 288 | 260 | 236 | 217 |
| 33                                                           | 30                         | 500  | 429  | 375  | 333 | 300 | 273 | 250 |
| 36                                                           | 36                         | 600  | 514  | 450  | 400 | 360 | 327 | 300 |
| 42                                                           | 48                         | 800  | 686  | 600  | 533 | 480 | 436 | 400 |
| 48                                                           | 63                         | 1050 | 900  | 788  | 700 | 630 | 573 | 525 |
| 54                                                           | 80                         | 1333 | 1143 | 1000 | 889 | 800 | 727 | 667 |

## L.A.N. 26% Nitrogen

working width **29.5** FEET

| Adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|--------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                  | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                  | lb/acre           |      |     |     |     |     |     |     |
| 18                                               | 24                | 109  | 94  | 82  | 72  | 65  | 60  | 54  |
| 21                                               | 29                | 128  | 110 | 96  | 85  | 77  | 70  | 64  |
| 24                                               | 40                | 178  | 152 | 134 | 118 | 107 | 97  | 89  |
| 27                                               | 46                | 208  | 178 | 156 | 139 | 125 | 113 | 104 |
| 30                                               | 57                | 258  | 221 | 193 | 172 | 154 | 141 | 128 |
| 33                                               | 66                | 297  | 255 | 223 | 198 | 178 | 162 | 149 |
| 36                                               | 79                | 357  | 306 | 267 | 238 | 214 | 194 | 178 |
| 42                                               | 106               | 475  | 407 | 357 | 317 | 285 | 259 | 238 |
| 48                                               | 139               | 624  | 535 | 468 | 416 | 374 | 341 | 312 |
| 54                                               | 176               | 793  | 679 | 595 | 529 | 475 | 432 | 396 |

## L.A.N 26% Nitrógeno

anchura de trabajo **9** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 18                                                           | 11                         | 122 | 105 | 92  | 81  | 73  | 67  | 61  |
| 21                                                           | 13                         | 144 | 124 | 108 | 96  | 87  | 79  | 72  |
| 24                                                           | 18                         | 200 | 171 | 150 | 133 | 120 | 109 | 100 |
| 27                                                           | 21                         | 233 | 200 | 175 | 156 | 140 | 127 | 117 |
| 30                                                           | 26                         | 289 | 248 | 217 | 193 | 173 | 158 | 144 |
| 33                                                           | 30                         | 333 | 286 | 250 | 222 | 200 | 182 | 167 |
| 36                                                           | 36                         | 400 | 343 | 300 | 267 | 240 | 218 | 200 |
| 42                                                           | 48                         | 533 | 457 | 400 | 356 | 320 | 291 | 267 |
| 48                                                           | 63                         | 700 | 600 | 525 | 467 | 420 | 382 | 350 |
| 54                                                           | 80                         | 889 | 762 | 667 | 593 | 533 | 485 | 444 |

## L.A.N. 26% Nitrogen

working width **32.8** FEET

| Adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|--------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                  | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                  | lb/acre           |      |     |     |     |     |     |     |
| 18                                               | 24                | 98   | 84  | 74  | 65  | 59  | 53  | 49  |
| 21                                               | 29                | 116  | 99  | 87  | 78  | 69  | 62  | 58  |
| 24                                               | 40                | 160  | 137 | 120 | 107 | 96  | 83  | 80  |
| 27                                               | 46                | 187  | 160 | 141 | 125 | 112 | 103 | 94  |
| 30                                               | 57                | 232  | 199 | 174 | 155 | 139 | 127 | 116 |
| 33                                               | 66                | 267  | 229 | 201 | 178 | 160 | 146 | 134 |
| 36                                               | 79                | 321  | 276 | 241 | 214 | 193 | 175 | 160 |
| 42                                               | 106               | 428  | 366 | 321 | 285 | 257 | 233 | 214 |
| 48                                               | 139               | 562  | 481 | 422 | 374 | 337 | 307 | 281 |
| 54                                               | 176               | 713  | 612 | 535 | 475 | 428 | 388 | 357 |

## L.A.N 26% Nitrógeno

anchura de trabajo **10** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 18                                                           | 11                         | 110 | 94  | 83  | 73  | 66  | 60  | 55  |
| 21                                                           | 13                         | 130 | 111 | 98  | 87  | 78  | 70  | 65  |
| 24                                                           | 18                         | 180 | 154 | 135 | 120 | 108 | 97  | 90  |
| 27                                                           | 21                         | 210 | 180 | 158 | 140 | 126 | 115 | 105 |
| 30                                                           | 26                         | 260 | 223 | 195 | 173 | 156 | 142 | 130 |
| 33                                                           | 30                         | 300 | 257 | 225 | 200 | 180 | 164 | 150 |
| 36                                                           | 36                         | 360 | 309 | 270 | 240 | 216 | 196 | 180 |
| 42                                                           | 48                         | 480 | 411 | 360 | 320 | 288 | 262 | 240 |
| 48                                                           | 63                         | 630 | 540 | 473 | 420 | 378 | 344 | 315 |
| 54                                                           | 80                         | 800 | 686 | 600 | 533 | 480 | 436 | 400 |

## L.A.N. 26% Nitrogen

working width **39.4** FEET

| Adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|--------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                  | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                  | lb/acre           |      |     |     |     |     |     |     |
| 18                                               | 24                | 82   | 70  | 61  | 55  | 49  | 46  | 41  |
| 21                                               | 29                | 96   | 83  | 72  | 64  | 58  | 53  | 48  |
| 24                                               | 40                | 134  | 115 | 101 | 89  | 80  | 73  | 67  |
| 27                                               | 46                | 156  | 134 | 117 | 104 | 94  | 85  | 78  |
| 30                                               | 57                | 193  | 166 | 145 | 128 | 116 | 105 | 96  |
| 33                                               | 66                | 223  | 191 | 168 | 149 | 134 | 121 | 111 |
| 36                                               | 79                | 267  | 229 | 201 | 178 | 160 | 146 | 134 |
| 42                                               | 106               | 357  | 306 | 267 | 238 | 214 | 194 | 178 |
| 48                                               | 139               | 468  | 401 | 351 | 312 | 281 | 255 | 234 |
| 54                                               | 176               | 595  | 509 | 446 | 396 | 357 | 324 | 297 |

## L.A.N 26% Nitrógeno

anchura de trabajo **12** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 18                                                           | 11                         | 92  | 79  | 69  | 61  | 55  | 50  | 46  |
| 21                                                           | 13                         | 108 | 93  | 81  | 72  | 65  | 59  | 54  |
| 24                                                           | 18                         | 150 | 129 | 113 | 100 | 90  | 82  | 75  |
| 27                                                           | 21                         | 175 | 150 | 131 | 117 | 105 | 95  | 88  |
| 30                                                           | 26                         | 217 | 186 | 163 | 144 | 130 | 118 | 108 |
| 33                                                           | 30                         | 250 | 214 | 188 | 167 | 150 | 136 | 125 |
| 36                                                           | 36                         | 300 | 257 | 225 | 200 | 180 | 164 | 150 |
| 42                                                           | 48                         | 400 | 343 | 300 | 267 | 240 | 218 | 200 |
| 48                                                           | 63                         | 525 | 450 | 394 | 350 | 315 | 286 | 263 |
| 54                                                           | 80                         | 667 | 571 | 500 | 444 | 400 | 364 | 333 |

## L.A.N. 26% Nitrogen

working width **46** FEET

| Adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|--------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                  | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                  | lb/acre           |      |     |     |     |     |     |     |
| 18                                               | 24                | 70   | 60  | 53  | 46  | 42  | 38  | 35  |
| 21                                               | 29                | 83   | 71  | 62  | 56  | 50  | 45  | 41  |
| 24                                               | 40                | 115  | 98  | 86  | 77  | 69  | 62  | 57  |
| 27                                               | 46                | 134  | 115 | 101 | 89  | 80  | 73  | 67  |
| 30                                               | 57                | 166  | 142 | 124 | 110 | 99  | 90  | 83  |
| 33                                               | 66                | 191  | 164 | 143 | 128 | 115 | 104 | 95  |
| 36                                               | 79                | 229  | 196 | 172 | 152 | 137 | 125 | 115 |
| 42                                               | 106               | 306  | 262 | 229 | 195 | 184 | 167 | 152 |
| 48                                               | 139               | 401  | 344 | 301 | 267 | 241 | 218 | 201 |
| 54                                               | 176               | 509  | 437 | 382 | 340 | 306 | 278 | 255 |

## L.A.N 26% Nitrógeno

anchura de trabajo **14** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 18                                                           | 11                         | 79  | 67  | 59  | 52  | 47  | 43  | 39  |
| 21                                                           | 13                         | 93  | 80  | 70  | 62  | 56  | 51  | 46  |
| 24                                                           | 18                         | 129 | 110 | 96  | 86  | 77  | 70  | 64  |
| 27                                                           | 21                         | 150 | 129 | 113 | 100 | 90  | 82  | 75  |
| 30                                                           | 26                         | 186 | 159 | 139 | 124 | 111 | 101 | 93  |
| 33                                                           | 30                         | 214 | 184 | 161 | 143 | 129 | 117 | 107 |
| 36                                                           | 36                         | 257 | 220 | 193 | 171 | 154 | 140 | 129 |
| 42                                                           | 48                         | 343 | 294 | 257 | 219 | 206 | 187 | 171 |
| 48                                                           | 63                         | 450 | 386 | 338 | 300 | 270 | 245 | 225 |
| 54                                                           | 80                         | 571 | 490 | 429 | 381 | 343 | 312 | 286 |

## Potassium Nitrate Granules

working width **19.7** FEET

| Adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |      |      |     |     |     |     |
|--------------------------------------------------|-------------------|------|------|------|-----|-----|-----|-----|
|                                                  | 3,72              | 4,34 | 5    | 5,6  | 6   | 7   | 7,5 |     |
|                                                  | lb/acre           |      |      |      |     |     |     |     |
| 18                                               | 24                | 163  | 140  | 123  | 109 | 98  | 89  | 82  |
| 21                                               | 35                | 238  | 204  | 178  | 159 | 143 | 129 | 118 |
| 24                                               | 48                | 327  | 280  | 245  | 218 | 196 | 178 | 163 |
| 27                                               | 64                | 430  | 369  | 324  | 287 | 258 | 235 | 215 |
| 30                                               | 77                | 520  | 446  | 390  | 347 | 312 | 284 | 260 |
| 33                                               | 90                | 609  | 522  | 457  | 407 | 365 | 332 | 305 |
| 36                                               | 108               | 728  | 624  | 546  | 485 | 436 | 397 | 364 |
| 42                                               | 134               | 907  | 776  | 680  | 604 | 544 | 495 | 453 |
| 48                                               | 163               | 1099 | 942  | 825  | 733 | 660 | 600 | 550 |
| 54                                               | 202               | 1367 | 1172 | 1025 | 911 | 820 | 745 | 684 |

## Nitrato de Potasio Granulado

anchura de trabajo **6** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |      |      |      |      |     |     |     |
|--------------------------------------------------------------|----------------------------|------|------|------|------|-----|-----|-----|
|                                                              | 6                          | 7    | 8    | 9    | 10   | 11  | 12  |     |
|                                                              | kg por hectárea            |      |      |      |      |     |     |     |
| 18                                                           | 11                         | 183  | 157  | 138  | 122  | 110 | 100 | 92  |
| 21                                                           | 16                         | 267  | 229  | 200  | 178  | 160 | 145 | 133 |
| 24                                                           | 22                         | 367  | 314  | 275  | 244  | 220 | 200 | 183 |
| 27                                                           | 29                         | 483  | 414  | 363  | 322  | 290 | 264 | 242 |
| 30                                                           | 35                         | 583  | 500  | 438  | 389  | 350 | 318 | 292 |
| 33                                                           | 41                         | 683  | 586  | 513  | 456  | 410 | 373 | 342 |
| 36                                                           | 49                         | 817  | 700  | 613  | 544  | 490 | 445 | 408 |
| 42                                                           | 61                         | 1017 | 871  | 763  | 678  | 610 | 555 | 508 |
| 48                                                           | 74                         | 1233 | 1057 | 925  | 822  | 740 | 673 | 617 |
| 54                                                           | 92                         | 1533 | 1314 | 1150 | 1022 | 920 | 836 | 767 |

## Potassium Nitrate Granules

working width **29.5** FEET

| A adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|----------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                    | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                    | lb/acre           |      |     |     |     |     |     |     |
| 18                                                 | 24                | 109  | 94  | 82  | 72  | 65  | 60  | 54  |
| 21                                                 | 35                | 159  | 136 | 119 | 106 | 95  | 86  | 79  |
| 24                                                 | 48                | 217  | 187 | 163 | 145 | 131 | 119 | 109 |
| 27                                                 | 64                | 287  | 246 | 216 | 192 | 172 | 157 | 143 |
| 30                                                 | 77                | 347  | 297 | 260 | 231 | 208 | 189 | 173 |
| 33                                                 | 90                | 406  | 348 | 305 | 271 | 243 | 221 | 203 |
| 36                                                 | 108               | 485  | 416 | 364 | 324 | 291 | 265 | 242 |
| 42                                                 | 134               | 604  | 518 | 453 | 403 | 363 | 330 | 302 |
| 48                                                 | 163               | 733  | 628 | 550 | 489 | 439 | 399 | 366 |
| 54                                                 | 202               | 911  | 781 | 684 | 607 | 546 | 497 | 456 |

## Nitrato de Potasio Granulado

anchura de trabajo **9** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |      |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|------|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7    | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |      |     |     |     |     |     |     |
| 18                                                           | 11                         | 122  | 105 | 92  | 81  | 73  | 67  | 61  |
| 21                                                           | 16                         | 178  | 152 | 133 | 119 | 107 | 97  | 89  |
| 24                                                           | 22                         | 244  | 210 | 183 | 163 | 147 | 133 | 122 |
| 27                                                           | 29                         | 322  | 276 | 242 | 215 | 193 | 176 | 161 |
| 30                                                           | 35                         | 389  | 333 | 292 | 259 | 233 | 212 | 194 |
| 33                                                           | 41                         | 456  | 390 | 342 | 304 | 273 | 248 | 228 |
| 36                                                           | 49                         | 544  | 467 | 408 | 363 | 327 | 297 | 272 |
| 42                                                           | 61                         | 678  | 581 | 508 | 452 | 407 | 370 | 339 |
| 48                                                           | 74                         | 822  | 705 | 617 | 548 | 493 | 448 | 411 |
| 54                                                           | 92                         | 1022 | 876 | 767 | 681 | 613 | 558 | 511 |

## Potassium Nitrate Granules

working width **32.8** FEET

| Adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|--------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                  | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                  | lb/acre           |      |     |     |     |     |     |     |
| 18                                               | 24                | 98   | 84  | 74  | 65  | 59  | 53  | 49  |
| 21                                               | 35                | 143  | 122 | 107 | 95  | 86  | 77  | 71  |
| 24                                               | 48                | 196  | 168 | 147 | 132 | 117 | 107 | 98  |
| 27                                               | 64                | 258  | 222 | 194 | 172 | 155 | 141 | 129 |
| 30                                               | 77                | 312  | 267 | 234 | 208 | 187 | 170 | 156 |
| 33                                               | 90                | 365  | 313 | 275 | 243 | 219 | 200 | 183 |
| 36                                               | 108               | 437  | 374 | 328 | 291 | 262 | 238 | 218 |
| 42                                               | 134               | 544  | 466 | 408 | 363 | 326 | 297 | 272 |
| 48                                               | 163               | 680  | 565 | 495 | 440 | 396 | 360 | 330 |
| 54                                               | 202               | 820  | 703 | 615 | 546 | 492 | 448 | 410 |

## Nitrato de Potasio Granulado

anchura de trabajo **10** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 18                                                           | 11                         | 110 | 94  | 83  | 73  | 66  | 60  | 55  |
| 21                                                           | 16                         | 160 | 137 | 120 | 107 | 96  | 87  | 80  |
| 24                                                           | 22                         | 220 | 189 | 165 | 147 | 132 | 120 | 110 |
| 27                                                           | 29                         | 290 | 249 | 218 | 193 | 174 | 158 | 145 |
| 30                                                           | 35                         | 350 | 300 | 263 | 233 | 210 | 191 | 175 |
| 33                                                           | 41                         | 410 | 351 | 308 | 273 | 246 | 224 | 205 |
| 36                                                           | 49                         | 490 | 420 | 368 | 327 | 294 | 267 | 245 |
| 42                                                           | 61                         | 610 | 523 | 458 | 407 | 366 | 333 | 305 |
| 48                                                           | 74                         | 740 | 634 | 555 | 493 | 444 | 404 | 370 |
| 54                                                           | 92                         | 920 | 789 | 690 | 613 | 552 | 502 | 460 |

## Potassium Nitrate Granules

working width **39.4** FEET

| A adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|----------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                    | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                    | lb/acre           |      |     |     |     |     |     |     |
| 18                                                 | 24                | 82   | 70  | 62  | 54  | 49  | 44  | 41  |
| 21                                                 | 35                | 118  | 102 | 89  | 79  | 71  | 65  | 60  |
| 24                                                 | 48                | 163  | 140 | 123 | 109 | 98  | 89  | 82  |
| 27                                                 | 64                | 215  | 185 | 161 | 144 | 129 | 118 | 108 |
| 30                                                 | 77                | 260  | 223 | 195 | 173 | 156 | 142 | 130 |
| 33                                                 | 90                | 305  | 261 | 228 | 203 | 183 | 166 | 152 |
| 36                                                 | 108               | 364  | 312 | 273 | 243 | 218 | 199 | 182 |
| 42                                                 | 134               | 453  | 389 | 340 | 303 | 272 | 247 | 226 |
| 48                                                 | 163               | 550  | 472 | 413 | 366 | 330 | 300 | 275 |
| 54                                                 | 202               | 684  | 586 | 513 | 456 | 410 | 373 | 341 |

## Nitrato de Potasio Granulado

anchura de trabajo **12** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 18                                                           | 11                         | 92  | 79  | 69  | 61  | 55  | 49  | 46  |
| 21                                                           | 16                         | 133 | 114 | 100 | 89  | 80  | 73  | 67  |
| 24                                                           | 22                         | 183 | 157 | 138 | 122 | 110 | 100 | 92  |
| 27                                                           | 29                         | 242 | 207 | 181 | 161 | 145 | 132 | 121 |
| 30                                                           | 35                         | 292 | 250 | 219 | 194 | 175 | 159 | 146 |
| 33                                                           | 41                         | 342 | 293 | 256 | 228 | 205 | 186 | 171 |
| 36                                                           | 49                         | 408 | 350 | 306 | 272 | 245 | 223 | 204 |
| 42                                                           | 61                         | 508 | 436 | 381 | 339 | 305 | 277 | 254 |
| 48                                                           | 74                         | 617 | 529 | 463 | 411 | 370 | 336 | 308 |
| 54                                                           | 92                         | 767 | 657 | 575 | 511 | 460 | 418 | 383 |

## Potassium Nitrate Granules

working width **46** FEET

| Adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|--------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                  | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                  | lb/acre           |      |     |     |     |     |     |     |
| 18                                               | 24                | 70   | 60  | 53  | 47  | 42  | 38  | 35  |
| 21                                               | 35                | 102  | 87  | 77  | 67  | 62  | 55  | 51  |
| 24                                               | 48                | 140  | 120 | 105 | 94  | 84  | 77  | 70  |
| 27                                               | 64                | 185  | 159 | 138 | 123 | 111 | 101 | 93  |
| 30                                               | 77                | 223  | 191 | 168 | 149 | 134 | 121 | 111 |
| 33                                               | 90                | 261  | 224 | 196 | 174 | 157 | 143 | 130 |
| 36                                               | 108               | 312  | 267 | 234 | 208 | 187 | 170 | 156 |
| 42                                               | 134               | 389  | 333 | 292 | 259 | 233 | 212 | 194 |
| 48                                               | 163               | 472  | 404 | 353 | 314 | 283 | 257 | 235 |
| 54                                               | 202               | 586  | 502 | 440 | 390 | 351 | 320 | 293 |

## Nitrato de Potasio Granulado

anchura de trabajo **14** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 18                                                           | 11                         | 79  | 67  | 59  | 52  | 47  | 43  | 39  |
| 21                                                           | 16                         | 114 | 98  | 86  | 76  | 69  | 62  | 57  |
| 24                                                           | 22                         | 157 | 135 | 118 | 105 | 94  | 86  | 79  |
| 27                                                           | 29                         | 207 | 178 | 155 | 138 | 124 | 113 | 104 |
| 30                                                           | 35                         | 250 | 214 | 188 | 167 | 150 | 136 | 125 |
| 33                                                           | 41                         | 293 | 251 | 220 | 195 | 176 | 160 | 146 |
| 36                                                           | 49                         | 350 | 300 | 263 | 233 | 210 | 191 | 175 |
| 42                                                           | 61                         | 436 | 373 | 327 | 290 | 261 | 238 | 218 |
| 48                                                           | 74                         | 529 | 453 | 396 | 352 | 317 | 288 | 264 |
| 54                                                           | 92                         | 657 | 563 | 493 | 438 | 394 | 358 | 329 |

## NPK Coarse 12 - 10 - 18

working width **19.7** FEET

| Adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |      |     |     |     |     |     |
|--------------------------------------------------|-------------------|------|------|-----|-----|-----|-----|-----|
|                                                  | 3,72              | 4,34 | 5    | 5,6 | 6   | 7   | 7,5 |     |
|                                                  | lb/acre           |      |      |     |     |     |     |     |
| 18                                               | 24                | 163  | 140  | 123 | 109 | 98  | 89  | 84  |
| 21                                               | 28                | 193  | 166  | 145 | 128 | 116 | 105 | 96  |
| 24                                               | 39                | 267  | 229  | 201 | 179 | 159 | 146 | 134 |
| 27                                               | 46                | 312  | 267  | 234 | 208 | 187 | 170 | 156 |
| 30                                               | 57                | 386  | 331  | 290 | 258 | 232 | 210 | 193 |
| 33                                               | 66                | 446  | 382  | 334 | 297 | 267 | 243 | 223 |
| 36                                               | 79                | 535  | 458  | 401 | 357 | 321 | 292 | 267 |
| 42                                               | 106               | 713  | 612  | 535 | 475 | 428 | 389 | 357 |
| 48                                               | 139               | 936  | 802  | 703 | 624 | 562 | 511 | 488 |
| 54                                               | 176               | 1188 | 1019 | 892 | 793 | 713 | 648 | 595 |

## NPK Grueso 12 - 10 - 18

anchura de trabajo **6** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |      |      |      |     |     |     |     |
|--------------------------------------------------------------|----------------------------|------|------|------|-----|-----|-----|-----|
|                                                              | 6                          | 7    | 8    | 9    | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |      |      |      |     |     |     |     |
| 18                                                           | 11                         | 183  | 157  | 138  | 122 | 110 | 100 | 72  |
| 21                                                           | 13                         | 217  | 186  | 163  | 144 | 130 | 118 | 108 |
| 24                                                           | 18                         | 300  | 257  | 225  | 200 | 180 | 164 | 150 |
| 27                                                           | 21                         | 350  | 300  | 263  | 233 | 210 | 191 | 175 |
| 30                                                           | 26                         | 433  | 371  | 325  | 289 | 260 | 236 | 217 |
| 33                                                           | 30                         | 500  | 429  | 375  | 333 | 300 | 273 | 250 |
| 36                                                           | 36                         | 600  | 514  | 450  | 400 | 360 | 327 | 300 |
| 42                                                           | 48                         | 800  | 686  | 600  | 533 | 480 | 436 | 400 |
| 48                                                           | 63                         | 1050 | 900  | 788  | 700 | 630 | 573 | 525 |
| 54                                                           | 80                         | 1333 | 1143 | 1000 | 889 | 800 | 727 | 667 |

## NPK Coarse 12 - 10 - 18

working width **29.5** FEET

| Adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|--------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                  | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                  | lb/acre           |      |     |     |     |     |     |     |
| 18                                               | 24                | 109  | 94  | 82  | 72  | 65  | 60  | 54  |
| 21                                               | 28                | 128  | 111 | 96  | 86  | 77  | 70  | 64  |
| 24                                               | 39                | 178  | 152 | 134 | 119 | 106 | 97  | 89  |
| 27                                               | 46                | 208  | 178 | 156 | 139 | 125 | 113 | 104 |
| 30                                               | 57                | 258  | 221 | 193 | 173 | 154 | 141 | 128 |
| 33                                               | 66                | 297  | 255 | 223 | 198 | 178 | 162 | 149 |
| 36                                               | 79                | 357  | 306 | 267 | 238 | 214 | 194 | 178 |
| 42                                               | 106               | 475  | 407 | 357 | 318 | 285 | 259 | 238 |
| 48                                               | 139               | 624  | 535 | 468 | 416 | 374 | 340 | 312 |
| 54                                               | 176               | 793  | 679 | 595 | 529 | 475 | 432 | 396 |

## NPK Grueso 12 - 10 - 18

anchura de trabajo **9** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 18                                                           | 11                         | 122 | 105 | 92  | 81  | 73  | 67  | 61  |
| 21                                                           | 13                         | 144 | 124 | 108 | 96  | 87  | 79  | 72  |
| 24                                                           | 18                         | 200 | 171 | 150 | 133 | 120 | 109 | 100 |
| 27                                                           | 21                         | 233 | 200 | 175 | 156 | 140 | 127 | 117 |
| 30                                                           | 26                         | 289 | 248 | 217 | 193 | 173 | 158 | 144 |
| 33                                                           | 30                         | 333 | 286 | 250 | 222 | 200 | 182 | 167 |
| 36                                                           | 36                         | 400 | 343 | 300 | 267 | 240 | 218 | 200 |
| 42                                                           | 48                         | 533 | 457 | 400 | 356 | 320 | 291 | 267 |
| 48                                                           | 63                         | 700 | 600 | 525 | 467 | 420 | 382 | 350 |
| 54                                                           | 80                         | 889 | 762 | 667 | 593 | 533 | 485 | 444 |

## NPK Coarse 12 - 10 - 18

working width **32.8** FEET

| Adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|--------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                  | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                  | lb/acre           |      |     |     |     |     |     |     |
| 18                                               | 24                | 98   | 84  | 74  | 65  | 59  | 53  | 49  |
| 21                                               | 28                | 116  | 99  | 87  | 78  | 69  | 63  | 58  |
| 24                                               | 39                | 160  | 137 | 120 | 107 | 96  | 87  | 80  |
| 27                                               | 46                | 187  | 160 | 141 | 125 | 112 | 102 | 94  |
| 30                                               | 57                | 232  | 199 | 174 | 155 | 139 | 127 | 116 |
| 33                                               | 66                | 267  | 229 | 201 | 179 | 160 | 146 | 134 |
| 36                                               | 79                | 321  | 275 | 241 | 214 | 193 | 175 | 160 |
| 42                                               | 106               | 428  | 366 | 321 | 285 | 257 | 234 | 214 |
| 48                                               | 139               | 562  | 481 | 422 | 374 | 337 | 307 | 281 |
| 54                                               | 176               | 713  | 612 | 535 | 475 | 428 | 389 | 357 |

## NPK Grueso 12 - 10 - 18

anchura de trabajo **10** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 18                                                           | 11                         | 110 | 94  | 83  | 73  | 66  | 60  | 55  |
| 21                                                           | 13                         | 130 | 111 | 98  | 87  | 78  | 71  | 65  |
| 24                                                           | 18                         | 180 | 154 | 135 | 120 | 108 | 98  | 90  |
| 27                                                           | 21                         | 210 | 180 | 158 | 140 | 126 | 115 | 105 |
| 30                                                           | 26                         | 260 | 223 | 195 | 173 | 155 | 142 | 130 |
| 33                                                           | 30                         | 300 | 257 | 225 | 200 | 180 | 164 | 150 |
| 36                                                           | 36                         | 360 | 309 | 270 | 240 | 216 | 196 | 180 |
| 42                                                           | 48                         | 480 | 411 | 360 | 320 | 288 | 262 | 240 |
| 48                                                           | 63                         | 630 | 540 | 473 | 420 | 378 | 344 | 315 |
| 54                                                           | 80                         | 800 | 686 | 600 | 533 | 480 | 436 | 400 |

## NPK Coarse 12 - 10 - 18

working width **39.4** FEET

| Adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|--------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                  | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                  | lb/acre           |      |     |     |     |     |     |     |
| 18                                               | 24                | 82   | 70  | 61  | 55  | 49  | 45  | 41  |
| 21                                               | 28                | 96   | 83  | 72  | 64  | 58  | 53  | 48  |
| 24                                               | 39                | 134  | 115 | 101 | 89  | 80  | 73  | 67  |
| 27                                               | 46                | 156  | 134 | 117 | 104 | 94  | 85  | 78  |
| 30                                               | 57                | 193  | 166 | 145 | 128 | 116 | 105 | 96  |
| 33                                               | 66                | 223  | 191 | 168 | 148 | 133 | 121 | 111 |
| 36                                               | 79                | 267  | 229 | 201 | 178 | 160 | 146 | 134 |
| 42                                               | 106               | 357  | 306 | 267 | 238 | 214 | 194 | 178 |
| 48                                               | 139               | 468  | 401 | 351 | 312 | 281 | 255 | 234 |
| 54                                               | 176               | 595  | 509 | 446 | 396 | 357 | 324 | 297 |

## NPK Grueso 12 - 10 - 18

anchura de trabajo **12** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 18                                                           | 11                         | 92  | 79  | 69  | 61  | 55  | 50  | 46  |
| 21                                                           | 13                         | 108 | 93  | 81  | 72  | 65  | 59  | 54  |
| 24                                                           | 18                         | 150 | 129 | 113 | 100 | 90  | 82  | 75  |
| 27                                                           | 21                         | 175 | 150 | 131 | 117 | 105 | 95  | 88  |
| 30                                                           | 26                         | 217 | 186 | 163 | 144 | 130 | 118 | 108 |
| 33                                                           | 30                         | 250 | 214 | 188 | 166 | 150 | 136 | 125 |
| 36                                                           | 36                         | 300 | 257 | 225 | 200 | 180 | 164 | 150 |
| 42                                                           | 48                         | 400 | 343 | 300 | 267 | 240 | 218 | 200 |
| 48                                                           | 63                         | 525 | 450 | 394 | 350 | 315 | 286 | 263 |
| 54                                                           | 80                         | 667 | 571 | 500 | 444 | 400 | 364 | 333 |

## NPK Coarse 12 - 10 - 18

working width **46** FEET

| Adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|--------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                  | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                  | lb/acre           |      |     |     |     |     |     |     |
| 18                                               | 24                | 70   | 60  | 53  | 46  | 42  | 38  | 35  |
| 21                                               | 28                | 83   | 71  | 62  | 55  | 50  | 45  | 41  |
| 24                                               | 39                | 115  | 98  | 86  | 76  | 69  | 62  | 57  |
| 27                                               | 46                | 134  | 115 | 101 | 89  | 80  | 73  | 65  |
| 30                                               | 57                | 166  | 142 | 124 | 110 | 99  | 90  | 83  |
| 33                                               | 66                | 191  | 164 | 144 | 127 | 115 | 104 | 95  |
| 36                                               | 79                | 229  | 196 | 172 | 152 | 137 | 125 | 115 |
| 42                                               | 106               | 306  | 262 | 229 | 204 | 184 | 167 | 152 |
| 48                                               | 139               | 401  | 344 | 301 | 267 | 241 | 218 | 201 |
| 54                                               | 176               | 509  | 437 | 382 | 340 | 306 | 278 | 255 |

## NPK Grueso 12 - 10 - 18

anchura de trabajo **14** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 18                                                           | 11                         | 79  | 67  | 59  | 52  | 47  | 43  | 39  |
| 21                                                           | 13                         | 93  | 80  | 70  | 62  | 56  | 51  | 46  |
| 24                                                           | 18                         | 129 | 110 | 96  | 86  | 77  | 70  | 64  |
| 27                                                           | 21                         | 150 | 129 | 113 | 100 | 90  | 82  | 75  |
| 30                                                           | 26                         | 186 | 159 | 139 | 124 | 111 | 101 | 93  |
| 33                                                           | 30                         | 214 | 184 | 161 | 143 | 129 | 117 | 107 |
| 36                                                           | 36                         | 257 | 220 | 193 | 171 | 154 | 140 | 129 |
| 42                                                           | 48                         | 343 | 294 | 257 | 229 | 206 | 187 | 171 |
| 48                                                           | 63                         | 450 | 386 | 338 | 300 | 270 | 245 | 225 |
| 54                                                           | 80                         | 571 | 490 | 429 | 381 | 343 | 312 | 286 |



## NPK Fine 23 - 23 - 0

working width **19.7** FEET

| A adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |      |      |     |     |     |     |
|----------------------------------------------------|-------------------|------|------|------|-----|-----|-----|-----|
|                                                    | 3,72              | 4,34 | 5    | 5,6  | 6   | 7   | 7,5 |     |
|                                                    | lb/acre           |      |      |      |     |     |     |     |
| 24                                                 | 26                | 178  | 152  | 134  | 119 | 107 | 97  | 89  |
| 27                                                 | 35                | 238  | 204  | 178  | 159 | 142 | 129 | 119 |
| 30                                                 | 44                | 297  | 255  | 223  | 198 | 178 | 162 | 149 |
| 33                                                 | 55                | 372  | 318  | 279  | 248 | 223 | 202 | 185 |
| 36                                                 | 64                | 431  | 369  | 324  | 287 | 259 | 235 | 216 |
| 42                                                 | 86                | 580  | 497  | 435  | 386 | 348 | 316 | 290 |
| 48                                                 | 110               | 743  | 637  | 557  | 496 | 446 | 406 | 372 |
| 54                                                 | 134               | 906  | 777  | 680  | 605 | 544 | 495 | 453 |
| 60                                                 | 163               | 1099 | 942  | 825  | 733 | 660 | 600 | 550 |
| 66                                                 | 198               | 1337 | 1147 | 1003 | 892 | 802 | 729 | 689 |

## NPK Fino 23 - 23 - 0

anchura de trabajo **6** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |      |      |      |      |     |     |     |
|--------------------------------------------------------------|----------------------------|------|------|------|------|-----|-----|-----|
|                                                              | 6                          | 7    | 8    | 9    | 10   | 11  | 12  |     |
|                                                              | kg por hectárea            |      |      |      |      |     |     |     |
| 24                                                           | 12                         | 200  | 171  | 150  | 133  | 120 | 109 | 100 |
| 27                                                           | 16                         | 267  | 229  | 200  | 178  | 160 | 145 | 133 |
| 30                                                           | 20                         | 333  | 286  | 250  | 222  | 200 | 182 | 167 |
| 33                                                           | 25                         | 417  | 357  | 313  | 278  | 250 | 227 | 208 |
| 36                                                           | 29                         | 483  | 414  | 363  | 322  | 290 | 264 | 242 |
| 42                                                           | 39                         | 650  | 557  | 488  | 433  | 390 | 355 | 325 |
| 48                                                           | 50                         | 833  | 714  | 625  | 556  | 500 | 455 | 417 |
| 54                                                           | 61                         | 1014 | 871  | 763  | 678  | 610 | 555 | 508 |
| 60                                                           | 74                         | 1233 | 1057 | 925  | 822  | 740 | 673 | 617 |
| 66                                                           | 90                         | 1500 | 1286 | 1125 | 1000 | 900 | 818 | 750 |

## NPK Fine 23 - 23 - 0

working width **29.5** FEET

| A adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|----------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                    | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                    | lb/acre           |      |     |     |     |     |     |     |
| 24                                                 | 26                | 119  | 102 | 89  | 79  | 71  | 65  | 60  |
| 27                                                 | 35                | 159  | 136 | 119 | 106 | 95  | 86  | 79  |
| 30                                                 | 44                | 198  | 169 | 149 | 132 | 119 | 108 | 99  |
| 33                                                 | 55                | 248  | 212 | 185 | 165 | 149 | 135 | 124 |
| 36                                                 | 64                | 287  | 246 | 216 | 192 | 172 | 157 | 144 |
| 42                                                 | 86                | 386  | 331 | 290 | 258 | 232 | 210 | 193 |
| 48                                                 | 110               | 496  | 424 | 372 | 330 | 297 | 270 | 248 |
| 54                                                 | 134               | 605  | 518 | 453 | 403 | 362 | 330 | 302 |
| 60                                                 | 163               | 733  | 629 | 550 | 489 | 440 | 399 | 366 |
| 66                                                 | 198               | 892  | 764 | 669 | 595 | 535 | 486 | 446 |

## NPK Fino 23 - 23 - 0

anchura de trabajo **9** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |      |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|------|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7    | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |      |     |     |     |     |     |     |
| 24                                                           | 12                         | 133  | 114 | 100 | 89  | 80  | 73  | 67  |
| 27                                                           | 16                         | 178  | 152 | 133 | 119 | 107 | 97  | 89  |
| 30                                                           | 20                         | 222  | 190 | 167 | 148 | 133 | 121 | 111 |
| 33                                                           | 25                         | 278  | 238 | 208 | 185 | 167 | 152 | 139 |
| 36                                                           | 29                         | 322  | 276 | 242 | 215 | 193 | 176 | 161 |
| 42                                                           | 39                         | 433  | 371 | 325 | 289 | 260 | 236 | 217 |
| 48                                                           | 50                         | 556  | 476 | 417 | 370 | 333 | 303 | 278 |
| 54                                                           | 61                         | 678  | 581 | 508 | 452 | 407 | 370 | 339 |
| 60                                                           | 74                         | 822  | 705 | 617 | 548 | 493 | 448 | 411 |
| 66                                                           | 90                         | 1000 | 857 | 750 | 667 | 600 | 545 | 500 |

## NPK Fine 23 - 23 - 0

working width **32.8** FEET

| A adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|----------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                    | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                    | lb/acre           |      |     |     |     |     |     |     |
| 24                                                 | 26                | 107  | 92  | 80  | 71  | 64  | 58  | 53  |
| 27                                                 | 35                | 143  | 122 | 107 | 95  | 86  | 78  | 71  |
| 30                                                 | 44                | 178  | 152 | 134 | 119 | 107 | 97  | 89  |
| 33                                                 | 55                | 223  | 191 | 168 | 149 | 134 | 121 | 111 |
| 36                                                 | 64                | 266  | 222 | 194 | 172 | 155 | 141 | 129 |
| 42                                                 | 86                | 348  | 258 | 261 | 232 | 209 | 190 | 174 |
| 48                                                 | 110               | 446  | 382 | 334 | 297 | 267 | 243 | 223 |
| 54                                                 | 134               | 544  | 466 | 408 | 363 | 326 | 297 | 272 |
| 60                                                 | 163               | 660  | 565 | 495 | 440 | 396 | 360 | 330 |
| 66                                                 | 198               | 802  | 687 | 602 | 535 | 481 | 438 | 401 |

## NPK Fino 23 - 23 - 0

anchura de trabajo **10** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 24                                                           | 12                         | 120 | 103 | 90  | 80  | 72  | 65  | 60  |
| 27                                                           | 16                         | 160 | 137 | 120 | 107 | 96  | 87  | 80  |
| 30                                                           | 20                         | 200 | 171 | 150 | 133 | 120 | 109 | 100 |
| 33                                                           | 25                         | 250 | 214 | 188 | 167 | 150 | 136 | 125 |
| 36                                                           | 29                         | 289 | 249 | 218 | 193 | 174 | 158 | 145 |
| 42                                                           | 39                         | 390 | 334 | 293 | 260 | 234 | 213 | 195 |
| 48                                                           | 50                         | 500 | 429 | 375 | 333 | 300 | 273 | 250 |
| 54                                                           | 61                         | 610 | 523 | 458 | 407 | 366 | 333 | 305 |
| 60                                                           | 74                         | 740 | 634 | 555 | 493 | 444 | 404 | 370 |
| 66                                                           | 90                         | 900 | 771 | 675 | 600 | 540 | 491 | 450 |

## NPK Fine 23 - 23 - 0

working width **39.4** FEET

| Adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|--------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                  | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                  | lb/acre           |      |     |     |     |     |     |     |
| 24                                               | 26                | 89   | 77  | 87  | 60  | 53  | 49  | 45  |
| 27                                               | 35                | 119  | 102 | 89  | 79  | 71  | 65  | 60  |
| 30                                               | 44                | 149  | 127 | 111 | 99  | 89  | 81  | 74  |
| 33                                               | 55                | 185  | 160 | 139 | 124 | 111 | 102 | 93  |
| 36                                               | 64                | 216  | 185 | 161 | 144 | 129 | 118 | 108 |
| 42                                               | 86                | 290  | 249 | 218 | 193 | 174 | 158 | 145 |
| 48                                               | 110               | 372  | 318 | 279 | 248 | 223 | 202 | 185 |
| 54                                               | 134               | 453  | 389 | 340 | 302 | 272 | 247 | 226 |
| 60                                               | 163               | 550  | 472 | 413 | 366 | 330 | 300 | 275 |
| 66                                               | 198               | 669  | 573 | 502 | 446 | 401 | 365 | 334 |

## NPK Fino 23 - 23 - 0

anchura de trabajo **12** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 24                                                           | 12                         | 100 | 86  | 75  | 67  | 60  | 55  | 50  |
| 27                                                           | 16                         | 133 | 114 | 100 | 89  | 80  | 73  | 67  |
| 30                                                           | 20                         | 167 | 143 | 125 | 111 | 100 | 91  | 83  |
| 33                                                           | 25                         | 208 | 179 | 156 | 139 | 125 | 114 | 104 |
| 36                                                           | 29                         | 242 | 207 | 181 | 161 | 145 | 132 | 121 |
| 42                                                           | 39                         | 325 | 279 | 244 | 217 | 195 | 177 | 163 |
| 48                                                           | 50                         | 417 | 357 | 313 | 278 | 250 | 227 | 208 |
| 54                                                           | 61                         | 508 | 436 | 381 | 339 | 305 | 277 | 254 |
| 60                                                           | 74                         | 617 | 529 | 463 | 411 | 370 | 336 | 308 |
| 66                                                           | 90                         | 750 | 643 | 563 | 500 | 450 | 409 | 375 |

## NPK Fine 23 - 23 - 0

working width **46** FEET

| Adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|--------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                  | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                  | lb/acre           |      |     |     |     |     |     |     |
| 24                                               | 26                | 77   | 65  | 57  | 51  | 45  | 42  | 38  |
| 27                                               | 35                | 102  | 87  | 77  | 67  | 62  | 55  | 51  |
| 30                                               | 44                | 127  | 109 | 95  | 85  | 77  | 70  | 63  |
| 33                                               | 55                | 160  | 136 | 119 | 107 | 95  | 86  | 79  |
| 36                                               | 64                | 184  | 159 | 138 | 123 | 111 | 101 | 93  |
| 42                                               | 86                | 249  | 213 | 186 | 166 | 149 | 136 | 124 |
| 48                                               | 110               | 318  | 273 | 239 | 212 | 191 | 174 | 160 |
| 54                                               | 134               | 389  | 333 | 292 | 259 | 233 | 212 | 194 |
| 60                                               | 163               | 472  | 404 | 353 | 314 | 283 | 257 | 235 |
| 66                                               | 198               | 573  | 491 | 430 | 382 | 344 | 313 | 286 |

## NPK Fino 23 - 23 - 0

anchura de trabajo **14** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 24                                                           | 12                         | 86  | 73  | 64  | 57  | 51  | 47  | 43  |
| 27                                                           | 16                         | 114 | 98  | 86  | 76  | 69  | 62  | 57  |
| 30                                                           | 20                         | 143 | 122 | 107 | 95  | 86  | 78  | 71  |
| 33                                                           | 25                         | 179 | 153 | 134 | 119 | 107 | 97  | 89  |
| 36                                                           | 29                         | 207 | 178 | 155 | 138 | 124 | 113 | 104 |
| 42                                                           | 39                         | 279 | 239 | 209 | 186 | 167 | 152 | 139 |
| 48                                                           | 50                         | 357 | 306 | 268 | 238 | 214 | 195 | 179 |
| 54                                                           | 61                         | 436 | 373 | 327 | 290 | 261 | 238 | 218 |
| 60                                                           | 74                         | 529 | 453 | 396 | 352 | 317 | 288 | 264 |
| 66                                                           | 90                         | 643 | 551 | 482 | 429 | 386 | 351 | 321 |

## Superphosphate 19%

working width **19.7** FEET

| Adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |      |      |      |      |      |     |
|--------------------------------------------------|-------------------|------|------|------|------|------|------|-----|
|                                                  | 3,72              | 4,34 | 5    | 5,6  | 6    | 7    | 7,5  |     |
|                                                  | lb/acre           |      |      |      |      |      |      |     |
| 21                                               | 33                | 223  | 191  | 168  | 149  | 134  | 121  | 111 |
| 24                                               | 46                | 312  | 267  | 234  | 208  | 187  | 170  | 156 |
| 27                                               | 57                | 386  | 331  | 290  | 258  | 232  | 210  | 193 |
| 30                                               | 70                | 475  | 407  | 357  | 318  | 285  | 259  | 238 |
| 33                                               | 83                | 564  | 484  | 424  | 376  | 339  | 308  | 283 |
| 36                                               | 101               | 684  | 588  | 513  | 456  | 410  | 373  | 341 |
| 42                                               | 139               | 936  | 802  | 703  | 624  | 562  | 511  | 468 |
| 48                                               | 180               | 1219 | 1044 | 914  | 812  | 731  | 664  | 609 |
| 54                                               | 233               | 1575 | 1350 | 1181 | 1050 | 945  | 860  | 787 |
| 60                                               | 293               | 1977 | 1694 | 1483 | 1318 | 1186 | 1078 | 988 |

## Superfosfato 19%

anchura de trabajo **6** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |      |      |      |      |      |      |      |
|--------------------------------------------------------------|----------------------------|------|------|------|------|------|------|------|
|                                                              | 6                          | 7    | 8    | 9    | 10   | 11   | 12   |      |
|                                                              | kg por hectárea            |      |      |      |      |      |      |      |
| 21                                                           | 15                         | 250  | 214  | 188  | 167  | 150  | 136  | 125  |
| 24                                                           | 21                         | 350  | 300  | 263  | 233  | 210  | 191  | 175  |
| 27                                                           | 26                         | 433  | 371  | 325  | 289  | 260  | 236  | 217  |
| 30                                                           | 32                         | 533  | 457  | 400  | 356  | 320  | 291  | 267  |
| 33                                                           | 38                         | 633  | 543  | 475  | 422  | 380  | 345  | 317  |
| 36                                                           | 46                         | 767  | 657  | 575  | 511  | 460  | 418  | 383  |
| 42                                                           | 63                         | 1050 | 900  | 788  | 700  | 630  | 573  | 525  |
| 48                                                           | 82                         | 1367 | 1171 | 1025 | 911  | 820  | 745  | 683  |
| 54                                                           | 106                        | 1767 | 1514 | 1325 | 1178 | 1060 | 964  | 883  |
| 60                                                           | 133                        | 2217 | 1900 | 1663 | 1478 | 1330 | 1209 | 1108 |

**Superphosphate 19%**working width **29.5** FEET

| A adjuster setting<br>Quantity spread<br>lb/min | Tractor Speed mph |      |      |     |     |     |     |     |
|-------------------------------------------------|-------------------|------|------|-----|-----|-----|-----|-----|
|                                                 | 3,72              | 4,34 | 5    | 5,6 | 6   | 7   | 7,5 |     |
|                                                 | lb/acre           |      |      |     |     |     |     |     |
| 21                                              | 33                | 149  | 128  | 111 | 99  | 89  | 81  | 74  |
| 24                                              | 46                | 208  | 178  | 156 | 139 | 125 | 113 | 104 |
| 27                                              | 57                | 258  | 221  | 193 | 173 | 154 | 141 | 128 |
| 30                                              | 70                | 317  | 272  | 238 | 211 | 190 | 173 | 159 |
| 33                                              | 83                | 376  | 323  | 283 | 251 | 226 | 205 | 188 |
| 36                                              | 101               | 456  | 391  | 341 | 304 | 274 | 249 | 228 |
| 42                                              | 139               | 624  | 535  | 468 | 416 | 374 | 341 | 312 |
| 48                                              | 180               | 812  | 696  | 609 | 541 | 488 | 443 | 407 |
| 54                                              | 233               | 1050 | 901  | 787 | 700 | 630 | 572 | 525 |
| 60                                              | 293               | 1318 | 1130 | 988 | 878 | 791 | 719 | 659 |

**Superfosfato 19%**anchura de trabajo **9** METROS

| Posición del regulador<br>Cantidad esparcida<br>kg/min | Velocidad del Tractor km/h |      |      |      |     |     |     |     |
|--------------------------------------------------------|----------------------------|------|------|------|-----|-----|-----|-----|
|                                                        | 6                          | 7    | 8    | 9    | 10  | 11  | 12  |     |
|                                                        | kg por hectárea            |      |      |      |     |     |     |     |
| 21                                                     | 15                         | 167  | 143  | 125  | 111 | 100 | 91  | 83  |
| 24                                                     | 21                         | 233  | 200  | 175  | 156 | 140 | 127 | 117 |
| 27                                                     | 26                         | 289  | 248  | 217  | 193 | 173 | 158 | 144 |
| 30                                                     | 32                         | 356  | 305  | 267  | 237 | 213 | 194 | 178 |
| 33                                                     | 38                         | 422  | 362  | 317  | 281 | 253 | 230 | 211 |
| 36                                                     | 46                         | 511  | 438  | 383  | 341 | 307 | 279 | 255 |
| 42                                                     | 63                         | 700  | 600  | 525  | 467 | 420 | 382 | 350 |
| 48                                                     | 82                         | 911  | 781  | 683  | 607 | 547 | 497 | 456 |
| 54                                                     | 106                        | 1178 | 1010 | 883  | 785 | 707 | 642 | 589 |
| 60                                                     | 133                        | 1478 | 1267 | 1108 | 985 | 887 | 806 | 739 |

**Superphosphate 19%**working width **32.8** FEET

| A adjuster setting<br>Quantity spread<br>lb/min | Tractor Speed mph |      |      |     |     |     |     |     |
|-------------------------------------------------|-------------------|------|------|-----|-----|-----|-----|-----|
|                                                 | 3,72              | 4,34 | 5    | 5,6 | 6   | 7   | 7,5 |     |
|                                                 | lb/acre           |      |      |     |     |     |     |     |
| 21                                              | 33                | 134  | 115  | 101 | 89  | 80  | 73  | 67  |
| 24                                              | 46                | 187  | 160  | 141 | 125 | 111 | 103 | 94  |
| 27                                              | 57                | 232  | 199  | 174 | 154 | 139 | 127 | 116 |
| 30                                              | 70                | 285  | 244  | 214 | 190 | 171 | 156 | 143 |
| 33                                              | 83                | 339  | 291  | 254 | 226 | 203 | 185 | 169 |
| 36                                              | 101               | 410  | 351  | 308 | 274 | 246 | 224 | 205 |
| 42                                              | 139               | 562  | 481  | 422 | 374 | 337 | 307 | 281 |
| 48                                              | 180               | 731  | 627  | 548 | 488 | 439 | 399 | 366 |
| 54                                              | 233               | 945  | 810  | 709 | 630 | 567 | 515 | 473 |
| 60                                              | 293               | 1186 | 1016 | 890 | 791 | 711 | 648 | 593 |

**Superfosfato 19%**anchura de trabajo **10** METROS

| Posición del regulador<br>Cantidad esparcida<br>kg/min | Velocidad del Tractor km/h |      |      |     |     |     |     |     |
|--------------------------------------------------------|----------------------------|------|------|-----|-----|-----|-----|-----|
|                                                        | 6                          | 7    | 8    | 9   | 10  | 11  | 12  |     |
|                                                        | kg por hectárea            |      |      |     |     |     |     |     |
| 21                                                     | 15                         | 150  | 129  | 113 | 100 | 90  | 82  | 75  |
| 24                                                     | 21                         | 210  | 180  | 158 | 140 | 126 | 115 | 105 |
| 27                                                     | 26                         | 260  | 223  | 195 | 173 | 156 | 142 | 130 |
| 30                                                     | 32                         | 320  | 274  | 240 | 213 | 192 | 175 | 160 |
| 33                                                     | 38                         | 380  | 326  | 285 | 253 | 228 | 207 | 190 |
| 36                                                     | 46                         | 460  | 394  | 345 | 307 | 276 | 251 | 230 |
| 42                                                     | 63                         | 630  | 540  | 473 | 420 | 378 | 344 | 315 |
| 48                                                     | 82                         | 820  | 703  | 615 | 547 | 492 | 447 | 410 |
| 54                                                     | 106                        | 1060 | 909  | 795 | 707 | 636 | 578 | 530 |
| 60                                                     | 133                        | 1330 | 1140 | 998 | 887 | 798 | 725 | 665 |

**Superphosphate 19%**working width **39.4** FEET

| A adjuster setting<br>Quantity spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|-------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                 | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                 | lb/acre           |      |     |     |     |     |     |     |
| 21                                              | 33                | 111  | 95  | 84  | 74  | 67  | 61  | 56  |
| 24                                              | 46                | 156  | 133 | 117 | 104 | 94  | 85  | 78  |
| 27                                              | 57                | 193  | 166 | 145 | 128 | 116 | 105 | 96  |
| 30                                              | 70                | 238  | 204 | 178 | 159 | 143 | 129 | 119 |
| 33                                              | 83                | 283  | 242 | 212 | 188 | 169 | 154 | 141 |
| 36                                              | 101               | 341  | 293 | 257 | 228 | 205 | 186 | 171 |
| 42                                              | 139               | 488  | 401 | 351 | 312 | 281 | 255 | 234 |
| 48                                              | 180               | 609  | 522 | 457 | 407 | 366 | 333 | 305 |
| 54                                              | 233               | 787  | 675 | 591 | 525 | 473 | 430 | 394 |
| 60                                              | 293               | 988  | 847 | 741 | 659 | 593 | 539 | 494 |

**Superfosfato 19%**anchura de trabajo **12** METROS

| Posición del regulador<br>Cantidad esparcida<br>kg/min | Velocidad del Tractor km/h |      |     |     |     |     |     |     |
|--------------------------------------------------------|----------------------------|------|-----|-----|-----|-----|-----|-----|
|                                                        | 6                          | 7    | 8   | 9   | 10  | 11  | 12  |     |
|                                                        | kg por hectárea            |      |     |     |     |     |     |     |
| 21                                                     | 15                         | 125  | 107 | 94  | 83  | 75  | 68  | 63  |
| 24                                                     | 21                         | 175  | 150 | 131 | 117 | 105 | 95  | 88  |
| 27                                                     | 26                         | 217  | 186 | 163 | 144 | 130 | 118 | 108 |
| 30                                                     | 32                         | 267  | 229 | 200 | 178 | 160 | 145 | 133 |
| 33                                                     | 38                         | 317  | 271 | 238 | 211 | 190 | 173 | 158 |
| 36                                                     | 46                         | 383  | 329 | 288 | 256 | 230 | 209 | 192 |
| 42                                                     | 63                         | 525  | 450 | 394 | 350 | 315 | 286 | 263 |
| 48                                                     | 82                         | 683  | 586 | 513 | 456 | 410 | 373 | 342 |
| 54                                                     | 106                        | 883  | 757 | 663 | 589 | 530 | 482 | 442 |
| 60                                                     | 133                        | 1108 | 950 | 831 | 739 | 665 | 605 | 554 |

## Superphosphate 19%

working width **46** FEET

| A adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|----------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                    | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                    | lb/acre           |      |     |     |     |     |     |     |
| 21                                                 | 33                | 95   | 82  | 71  | 64  | 57  | 52  | 48  |
| 24                                                 | 46                | 134  | 115 | 101 | 89  | 80  | 73  | 67  |
| 27                                                 | 57                | 166  | 142 | 124 | 110 | 99  | 90  | 83  |
| 30                                                 | 70                | 204  | 175 | 152 | 136 | 122 | 111 | 102 |
| 33                                                 | 83                | 242  | 208 | 182 | 161 | 145 | 132 | 121 |
| 36                                                 | 101               | 293  | 251 | 219 | 196 | 174 | 160 | 146 |
| 42                                                 | 139               | 401  | 344 | 301 | 267 | 241 | 218 | 201 |
| 48                                                 | 180               | 522  | 448 | 391 | 348 | 313 | 284 | 261 |
| 54                                                 | 233               | 675  | 579 | 506 | 450 | 405 | 368 | 338 |
| 60                                                 | 293               | 847  | 726 | 636 | 564 | 508 | 462 | 424 |

## Superfosfato 19%

anchura de trabajo **14** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 21                                                           | 15                         | 107 | 92  | 80  | 71  | 64  | 58  | 54  |
| 24                                                           | 21                         | 150 | 129 | 113 | 100 | 90  | 82  | 75  |
| 27                                                           | 26                         | 186 | 159 | 139 | 124 | 111 | 101 | 93  |
| 30                                                           | 32                         | 229 | 196 | 171 | 152 | 137 | 125 | 114 |
| 33                                                           | 38                         | 271 | 233 | 204 | 181 | 163 | 148 | 136 |
| 36                                                           | 46                         | 329 | 282 | 246 | 219 | 197 | 179 | 164 |
| 42                                                           | 63                         | 450 | 386 | 338 | 300 | 270 | 245 | 225 |
| 48                                                           | 82                         | 586 | 502 | 439 | 390 | 351 | 319 | 293 |
| 54                                                           | 106                        | 757 | 649 | 568 | 505 | 454 | 413 | 379 |
| 60                                                           | 133                        | 950 | 814 | 713 | 633 | 570 | 518 | 475 |

## K.C.L. 60

working width **19.7** FEET

| A adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|----------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                    | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                    | lb/acre           |      |     |     |     |     |     |     |
| 21                                                 | 18                | 119  | 102 | 89  | 79  | 71  | 65  | 60  |
| 24                                                 | 24                | 163  | 140 | 123 | 109 | 98  | 89  | 82  |
| 27                                                 | 33                | 223  | 191 | 168 | 149 | 134 | 121 | 111 |
| 30                                                 | 42                | 283  | 242 | 212 | 188 | 169 | 154 | 141 |
| 33                                                 | 48                | 327  | 280 | 245 | 218 | 196 | 178 | 163 |
| 36                                                 | 55                | 372  | 318 | 279 | 248 | 223 | 202 | 185 |
| 42                                                 | 79                | 535  | 458 | 401 | 357 | 321 | 292 | 267 |
| 48                                                 | 101               | 684  | 586 | 513 | 456 | 410 | 373 | 341 |
| 54                                                 | 125               | 847  | 726 | 636 | 564 | 508 | 462 | 423 |
| 60                                                 | 158               | 1070 | 917 | 802 | 713 | 642 | 584 | 535 |

## K.C.L. 60

anchura de trabajo **6** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |      |      |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|------|------|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7    | 8    | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |      |      |     |     |     |     |     |
| 21                                                           | 8                          | 133  | 114  | 100 | 89  | 80  | 73  | 67  |
| 24                                                           | 11                         | 183  | 157  | 138 | 122 | 110 | 100 | 92  |
| 27                                                           | 15                         | 250  | 214  | 188 | 167 | 150 | 136 | 125 |
| 30                                                           | 19                         | 317  | 271  | 238 | 211 | 190 | 173 | 158 |
| 33                                                           | 22                         | 367  | 314  | 275 | 244 | 220 | 200 | 183 |
| 36                                                           | 25                         | 417  | 357  | 313 | 278 | 250 | 227 | 208 |
| 42                                                           | 36                         | 600  | 514  | 450 | 400 | 360 | 327 | 300 |
| 48                                                           | 46                         | 767  | 657  | 575 | 511 | 460 | 418 | 383 |
| 54                                                           | 57                         | 950  | 814  | 713 | 633 | 570 | 518 | 475 |
| 60                                                           | 72                         | 1200 | 1029 | 900 | 800 | 720 | 655 | 600 |

## K.C.L. 60

working width **29.5** FEET

| A adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|----------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                    | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                    | lb/acre           |      |     |     |     |     |     |     |
| 21                                                 | 18                | 79   | 68  | 60  | 53  | 47  | 43  | 39  |
| 24                                                 | 24                | 109  | 94  | 82  | 72  | 65  | 60  | 54  |
| 27                                                 | 33                | 149  | 128 | 111 | 99  | 89  | 81  | 74  |
| 30                                                 | 42                | 188  | 161 | 141 | 126 | 113 | 103 | 95  |
| 33                                                 | 48                | 218  | 187 | 163 | 146 | 131 | 119 | 109 |
| 36                                                 | 55                | 248  | 212 | 186 | 165 | 149 | 136 | 124 |
| 42                                                 | 79                | 357  | 306 | 268 | 238 | 214 | 194 | 178 |
| 48                                                 | 101               | 456  | 391 | 342 | 305 | 274 | 249 | 228 |
| 54                                                 | 125               | 565  | 484 | 424 | 376 | 339 | 308 | 283 |
| 60                                                 | 158               | 714  | 612 | 535 | 475 | 428 | 389 | 357 |

## K.C.L. 60

anchura de trabajo **9** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 21                                                           | 8                          | 89  | 76  | 67  | 59  | 53  | 48  | 44  |
| 24                                                           | 11                         | 122 | 105 | 92  | 81  | 73  | 67  | 61  |
| 27                                                           | 15                         | 167 | 143 | 125 | 111 | 100 | 91  | 83  |
| 30                                                           | 19                         | 211 | 181 | 158 | 141 | 127 | 115 | 106 |
| 33                                                           | 22                         | 244 | 210 | 183 | 163 | 147 | 133 | 122 |
| 36                                                           | 25                         | 278 | 238 | 208 | 185 | 167 | 152 | 139 |
| 42                                                           | 36                         | 400 | 343 | 300 | 267 | 240 | 218 | 200 |
| 48                                                           | 46                         | 511 | 438 | 383 | 341 | 307 | 279 | 256 |
| 54                                                           | 57                         | 633 | 543 | 475 | 422 | 380 | 345 | 317 |
| 60                                                           | 72                         | 800 | 686 | 600 | 533 | 480 | 436 | 400 |

K.C.L. 60

working width **32.8** FEET

| A adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|----------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                    | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                    | lb/acre           |      |     |     |     |     |     |     |
| 24                                                 | 24                | 98   | 84  | 74  | 65  | 59  | 54  | 49  |
| 27                                                 | 33                | 134  | 115 | 101 | 89  | 80  | 73  | 67  |
| 30                                                 | 42                | 169  | 145 | 128 | 113 | 102 | 93  | 85  |
| 33                                                 | 48                | 196  | 169 | 147 | 131 | 118 | 107 | 98  |
| 36                                                 | 55                | 223  | 191 | 168 | 149 | 134 | 121 | 111 |
| 42                                                 | 79                | 321  | 276 | 241 | 214 | 193 | 175 | 161 |
| 48                                                 | 101               | 410  | 351 | 308 | 274 | 246 | 224 | 205 |
| 54                                                 | 125               | 508  | 436 | 382 | 339 | 305 | 277 | 254 |
| 60                                                 | 158               | 642  | 550 | 482 | 430 | 385 | 351 | 321 |
| 66                                                 | 198               | 803  | 688 | 602 | 535 | 482 | 438 | 401 |

K.C.L. 60

anchura de trabajo **10** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 24                                                           | 11                         | 110 | 94  | 83  | 73  | 66  | 60  | 55  |
| 27                                                           | 15                         | 150 | 129 | 113 | 100 | 90  | 82  | 75  |
| 30                                                           | 19                         | 190 | 163 | 143 | 127 | 114 | 104 | 95  |
| 33                                                           | 22                         | 220 | 189 | 165 | 147 | 132 | 120 | 110 |
| 36                                                           | 25                         | 250 | 214 | 188 | 167 | 150 | 136 | 125 |
| 42                                                           | 36                         | 360 | 309 | 270 | 240 | 216 | 196 | 180 |
| 48                                                           | 46                         | 460 | 394 | 345 | 307 | 276 | 251 | 230 |
| 54                                                           | 57                         | 570 | 489 | 428 | 380 | 342 | 311 | 285 |
| 60                                                           | 72                         | 720 | 617 | 540 | 480 | 432 | 393 | 360 |
| 66                                                           | 90                         | 900 | 771 | 675 | 600 | 540 | 491 | 450 |

K.C.L. 60

working width **39.4** FEET

| A adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|----------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                    | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                    | lb/acre           |      |     |     |     |     |     |     |
| 24                                                 | 24                | 82   | 70  | 62  | 54  | 49  | 45  | 41  |
| 27                                                 | 33                | 111  | 95  | 84  | 74  | 67  | 61  | 56  |
| 30                                                 | 42                | 141  | 121 | 106 | 95  | 84  | 77  | 70  |
| 33                                                 | 48                | 163  | 140 | 123 | 109 | 98  | 89  | 82  |
| 36                                                 | 55                | 185  | 160 | 139 | 124 | 111 | 102 | 93  |
| 42                                                 | 79                | 267  | 229 | 200 | 179 | 160 | 146 | 134 |
| 48                                                 | 101               | 341  | 293 | 257 | 228 | 205 | 186 | 171 |
| 54                                                 | 125               | 424  | 363 | 317 | 283 | 254 | 231 | 212 |
| 60                                                 | 158               | 535  | 458 | 401 | 357 | 321 | 292 | 267 |
| 66                                                 | 198               | 689  | 573 | 502 | 446 | 401 | 365 | 334 |

K.C.L. 60

anchura de trabajo **12** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 24                                                           | 11                         | 92  | 79  | 69  | 61  | 55  | 50  | 46  |
| 27                                                           | 15                         | 125 | 107 | 94  | 83  | 75  | 68  | 63  |
| 30                                                           | 19                         | 158 | 136 | 119 | 106 | 95  | 86  | 79  |
| 33                                                           | 22                         | 183 | 157 | 138 | 122 | 110 | 100 | 92  |
| 36                                                           | 25                         | 208 | 179 | 156 | 139 | 125 | 114 | 104 |
| 42                                                           | 36                         | 300 | 257 | 225 | 200 | 180 | 164 | 150 |
| 48                                                           | 46                         | 383 | 329 | 288 | 256 | 230 | 209 | 192 |
| 54                                                           | 57                         | 475 | 407 | 356 | 317 | 285 | 259 | 238 |
| 60                                                           | 72                         | 600 | 514 | 450 | 400 | 360 | 327 | 300 |
| 66                                                           | 90                         | 750 | 643 | 563 | 500 | 450 | 409 | 375 |

Agricultural Lime with stirring device

working width **19.7** FEET

| A adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |      |      |      |      |     |     |
|----------------------------------------------------|-------------------|------|------|------|------|------|-----|-----|
|                                                    | 3,72              | 4,34 | 5    | 5,6  | 6    | 7    | 7,5 |     |
|                                                    | lb/acre           |      |      |      |      |      |     |     |
| 34                                                 | 46                | 312  | 267  | 234  | 208  | 187  | 170 | 156 |
| 39                                                 | 68                | 461  | 395  | 346  | 307  | 276  | 251 | 230 |
| 46                                                 | 94                | 639  | 547  | 480  | 426  | 383  | 349 | 319 |
| 53                                                 | 158               | 1070 | 917  | 802  | 713  | 642  | 584 | 535 |
| 62                                                 | 262               | 1768 | 1516 | 1327 | 1179 | 1061 | 965 | 884 |

Cal Agrícola con agitador

anchura de trabajo **6** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |      |      |      |      |      |      |     |
|--------------------------------------------------------------|----------------------------|------|------|------|------|------|------|-----|
|                                                              | 6                          | 7    | 8    | 9    | 10   | 11   | 12   |     |
|                                                              | kg por hectárea            |      |      |      |      |      |      |     |
| 34                                                           | 21                         | 350  | 300  | 263  | 233  | 210  | 191  | 175 |
| 39                                                           | 31                         | 517  | 443  | 388  | 344  | 310  | 282  | 258 |
| 46                                                           | 43                         | 717  | 614  | 538  | 478  | 430  | 391  | 358 |
| 53                                                           | 72                         | 1200 | 1029 | 900  | 800  | 720  | 655  | 600 |
| 62                                                           | 119                        | 1983 | 1700 | 1488 | 1322 | 1190 | 1082 | 992 |

**Rye Grass Seed with stirring device**working width **19.7** FEET

| A adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |    |     |    |    |     |    |
|----------------------------------------------------|-------------------|------|----|-----|----|----|-----|----|
|                                                    | 3,72              | 4,34 | 5  | 5,6 | 6  | 7  | 7,5 |    |
|                                                    | lb/acre           |      |    |     |    |    |     |    |
| 18                                                 | 3                 | 24   | 21 | 18  | 16 | 14 | 13  | 12 |
| 19                                                 | 4                 | 27   | 23 | 21  | 18 | 16 | 14  | 13 |
| 20                                                 | 4                 | 29   | 26 | 22  | 20 | 18 | 16  | 15 |
| 22                                                 | 5                 | 37   | 32 | 28  | 25 | 22 | 20  | 19 |

**Semilla de Rye Grass con agitador**anchura de trabajo **6** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |    |    |    |    |    |    |    |
|--------------------------------------------------------------|----------------------------|----|----|----|----|----|----|----|
|                                                              | 6                          | 7  | 8  | 9  | 10 | 11 | 12 |    |
|                                                              | kg por hectárea            |    |    |    |    |    |    |    |
| 18                                                           | 1.6                        | 27 | 23 | 20 | 18 | 16 | 15 | 13 |
| 19                                                           | 1.8                        | 30 | 26 | 23 | 20 | 18 | 16 | 16 |
| 20                                                           | 2.0                        | 33 | 29 | 25 | 22 | 20 | 18 | 17 |
| 22                                                           | 2.5                        | 42 | 36 | 31 | 28 | 25 | 23 | 21 |

**Wheat Seed**working width **32.8** FEET

| A adjuster setting<br>Quantity<br>spread<br>lb/min | Tractor Speed mph |      |     |     |     |     |     |     |
|----------------------------------------------------|-------------------|------|-----|-----|-----|-----|-----|-----|
|                                                    | 3,72              | 4,34 | 5   | 5,6 | 6   | 7   | 7,5 |     |
|                                                    | lb/acre           |      |     |     |     |     |     |     |
| 27                                                 | 35                | 129  | 111 | 97  | 86  | 78  | 70  | 65  |
| 30                                                 | 48                | 178  | 152 | 134 | 119 | 107 | 97  | 89  |
| 36                                                 | 62                | 227  | 194 | 170 | 152 | 136 | 124 | 113 |
| 39                                                 | 70                | 259  | 222 | 194 | 173 | 156 | 142 | 129 |

**Semilla de Trigo**anchura de trabajo **10** METROS

| Posición del<br>regulador<br>Cantidad<br>esparcida<br>kg/min | Velocidad del Tractor km/h |     |     |     |     |     |     |     |
|--------------------------------------------------------------|----------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                                              | 6                          | 7   | 8   | 9   | 10  | 11  | 12  |     |
|                                                              | kg por hectárea            |     |     |     |     |     |     |     |
| 27                                                           | 16                         | 145 | 125 | 109 | 97  | 87  | 79  | 73  |
| 30                                                           | 22                         | 200 | 171 | 150 | 133 | 120 | 109 | 100 |
| 36                                                           | 28                         | 254 | 218 | 191 | 170 | 153 | 139 | 127 |
| 39                                                           | 32                         | 291 | 249 | 218 | 194 | 175 | 159 | 145 |

Working width refers to the distance from center to center of each run. This will usually be half the total spreading width to allow for a correct overlap and even spread pattern (See page 10).

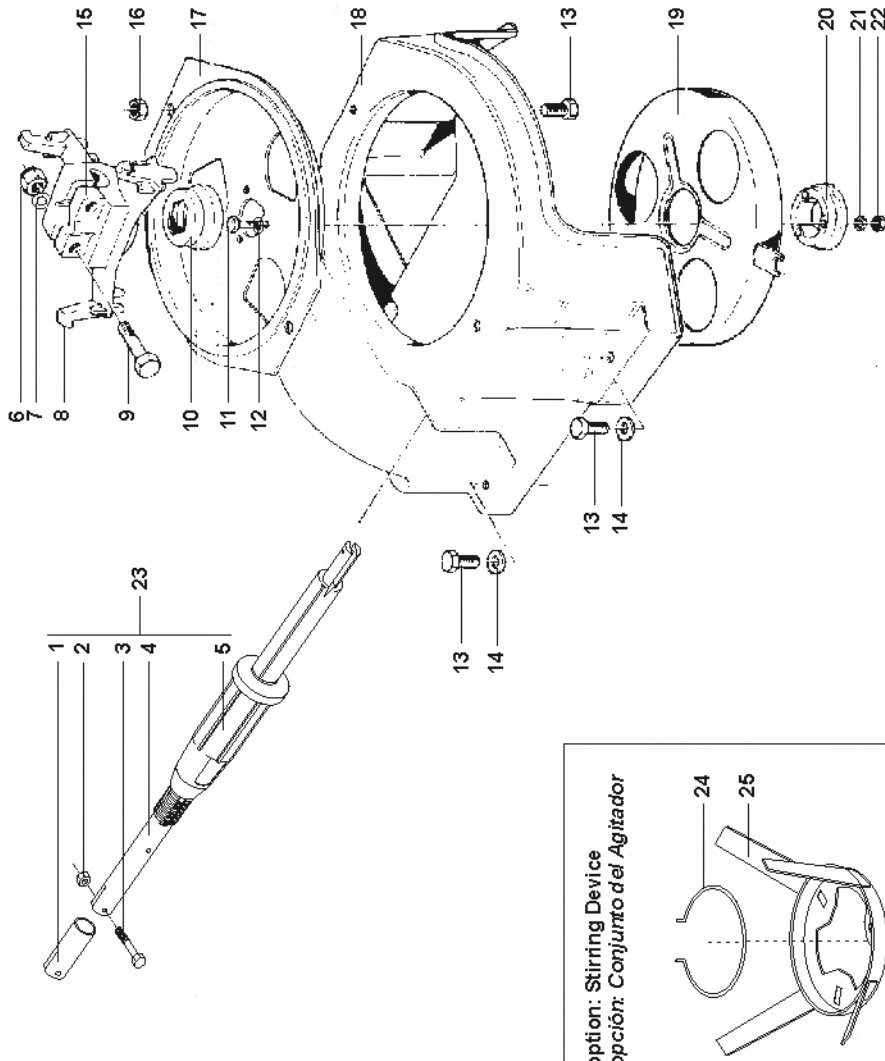
**Note:** The productions mentioned above can present variations according to the product humidity grade, specific height and work conditions. Specifications and design are subject to change without notice.

La anchura de trabajo se refiere a la distancia de centro a centro de cada pasada. Eso normalmente será la mitad del total de la anchura del esparcimiento permitiendo superponerse de forma correcta y obtener el patrón regular de esparcimiento (consulte la página 20).

**Nota:** Las producciones citadas en las tablas en este manual son medias obtenidas en condiciones de prueba, variando de acuerdo con el grado de humedad del producto, peso específico y condiciones de trabajo. Vicon Máquinas Agrícolas Ltda se reserva el derecho de alterar sus productos sin previo aviso.

## SPREADER UNIT

## UNIDAD DE LA ABONADORA

SERIES 22400  
SERIE 22400

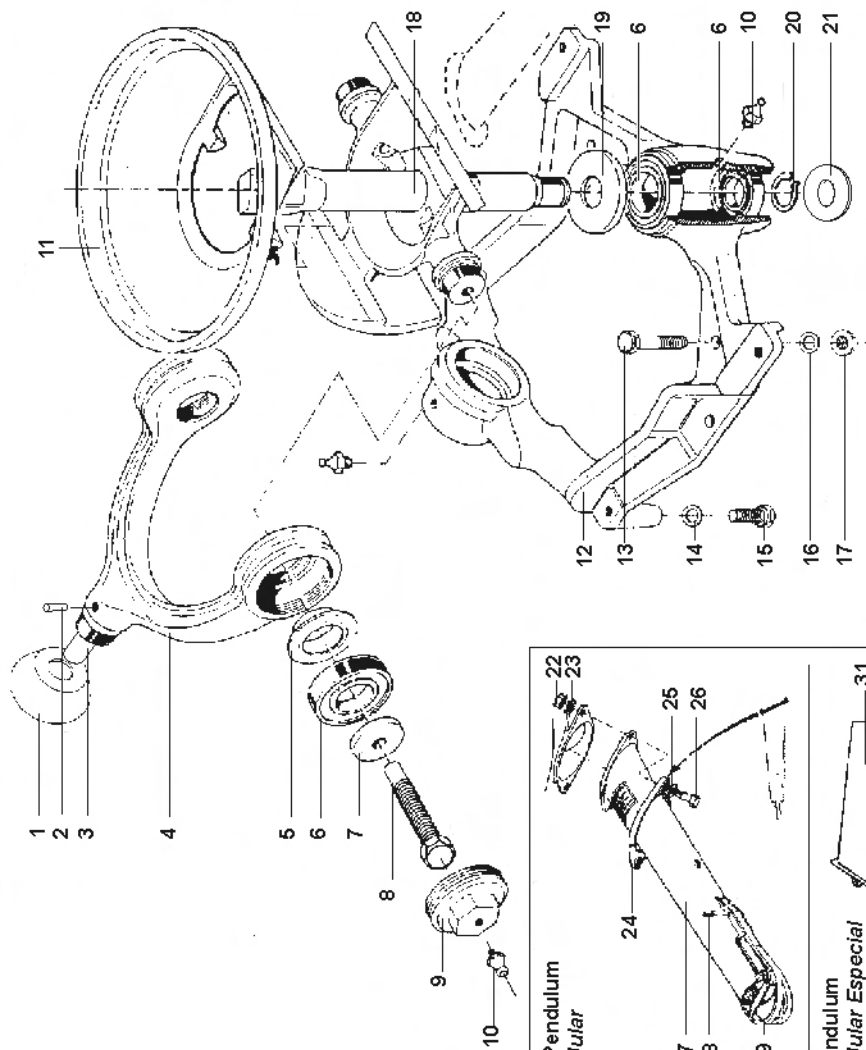
| N° | Reference<br>Referencia | Quantity<br>per machine<br>Cantidad<br>por máquina |
|----|-------------------------|----------------------------------------------------|
| 1  | 52429                   | 1                                                  |
| 2  | 305.75.600              | 2                                                  |
| 3  | 302.71.625              | 1                                                  |
| 4  | 70437                   | 1                                                  |
| 5  | 70524                   | 1                                                  |
| 6  | 305.61.300              | 2                                                  |
| 7  | 314.53.301              | 2                                                  |
| 8  | 21406                   | 1                                                  |
| 9  | 302.70.360              | 2                                                  |
| 10 | 70589                   | 1                                                  |
| 11 | 302.70.525              | 3                                                  |
| 12 | 314.53.501              | 3                                                  |
| 13 | 302.98.120              | 6                                                  |
| 14 | 314.97.100              | 4                                                  |
| 15 | 21142                   | 1                                                  |
| 16 | 305.96.100              | 2                                                  |
| 17 | 70542                   | 1                                                  |
| 18 | 70927                   | 1                                                  |
| 19 | 15087                   | 1                                                  |
| 20 | 20041                   | 1                                                  |
| 21 | 314.53.500              | 3                                                  |
| 22 | 305.61.500              | 3                                                  |
| 23 | ug000804                | 1                                                  |

| Stirring Device Assy<br>Conjunto del Agitador | Quantity<br>per machine<br>Cantidad<br>por máquina |
|-----------------------------------------------|----------------------------------------------------|
| 24                                            | 36180                                              |
| 25                                            | 15445                                              |

## SPREADER UNIT

SERIES 22400  
SERIE 22400

## UNIDAD DE LA ABONADORA



| N° | Reference<br>Referencia | Quantity<br>per machine<br>Cantidad<br>por máquina |
|----|-------------------------|----------------------------------------------------|
| 1  | 70629                   | 1                                                  |
| 2  | 308.03.540              | 1                                                  |
| 3  | 48839                   | 1                                                  |
| 4  | 86439                   | 1                                                  |
| 5  | 71178                   | 2                                                  |
| 6  | 401.01.206              | 4                                                  |
| 7  | 40851                   | 2                                                  |
| 8  | 302.88.290              | 2                                                  |
| 9  | 70548                   | 2                                                  |
| 10 | 417.61.200              | 4                                                  |
| 11 | 70632                   | 1                                                  |
| 12 | 21856                   | 1                                                  |
| 13 | 302.71.245              | 4                                                  |
| 14 | 314.97.100              | 2                                                  |
| 15 | 302.98.120              | 2                                                  |
| 16 | 314.53.300              | 4                                                  |
| 17 | 305.83.200              | 4                                                  |
| 18 | 86422                   | 1                                                  |
| 19 | 70633                   | 1                                                  |
| 20 | 310.01.300              | 1                                                  |
| 21 | 70188                   | 1                                                  |

Standard Pendulum  
Tubo Pendular

| Standard Pendulum<br>Tubo Pendular | Quantity<br>per machine<br>Cantidad<br>por máquina |   |
|------------------------------------|----------------------------------------------------|---|
| 22                                 | 305.53.800                                         | 2 |
| 23                                 | 314.53.300                                         | 2 |
| 24                                 | 83282                                              | 1 |
| 25                                 | 314.61.250                                         | 2 |
| 26                                 | 302.90.855                                         | 2 |
| 27                                 | mp118202                                           | 1 |
| 28                                 | 312.04.320                                         | 2 |
| 29                                 | 70413                                              | 1 |
| 30                                 | 07665                                              | 1 |

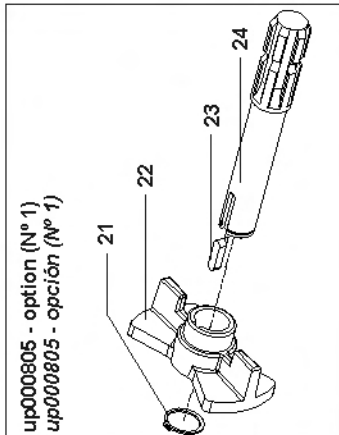
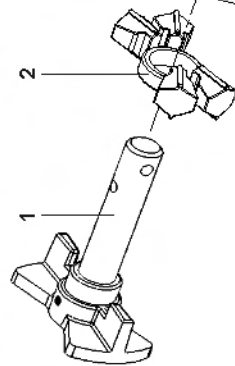
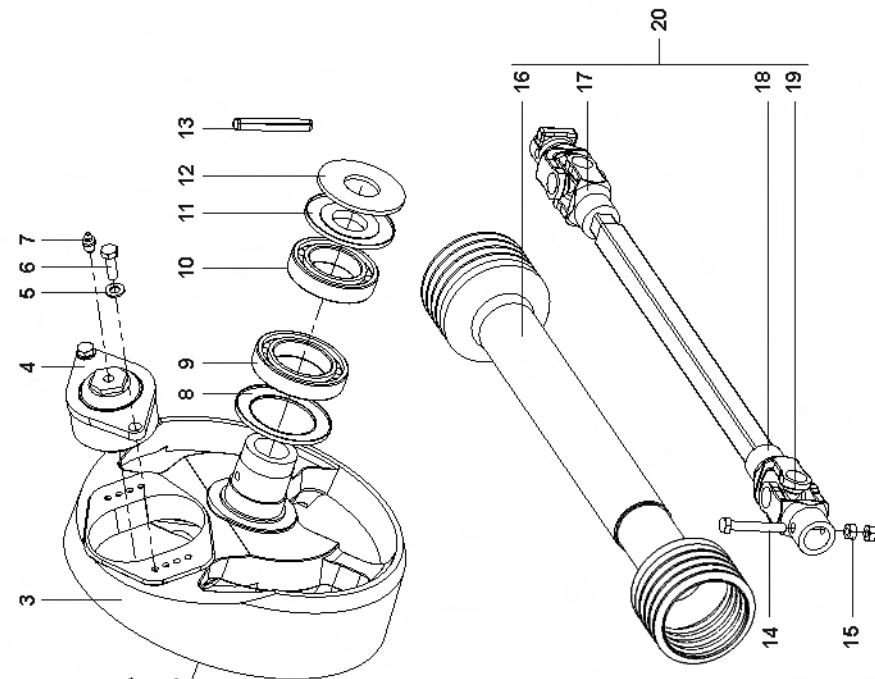
Special Pendulum  
Tubo Pendular Especial

| Special Pendulum<br>Tubo Pendular Especial | Quantity<br>per machine<br>Cantidad<br>por máquina |   |
|--------------------------------------------|----------------------------------------------------|---|
| 31                                         | 70445                                              | 1 |



**SPREADER UNIT  
UNIDAD DE LA ABONADORA**

**SERIES 22400  
SERIE 22400**



| Nº | Reference<br>Referencia | Quantity<br>per machine<br>Cantidad<br>por máquina |
|----|-------------------------|----------------------------------------------------|
| 1  | up000802                | 1                                                  |
| 2  | up900802                | 1                                                  |
| 3  | up400810                | 1                                                  |
| 4  | up000803                | 1                                                  |
| 5  | mp131502                | 2                                                  |
| 6  | mp131005                | 2                                                  |
| 7  | mp131850                | 1                                                  |
| 8  | up900810                | 1                                                  |
| 9  | mp133007                | 1                                                  |
| 10 | mp133006                | 1                                                  |
| 11 | up900811                | 1                                                  |
| 12 | up200806                | 1                                                  |
| 13 | mp132003                | 1                                                  |

**PTO Shaft  
Cardán**

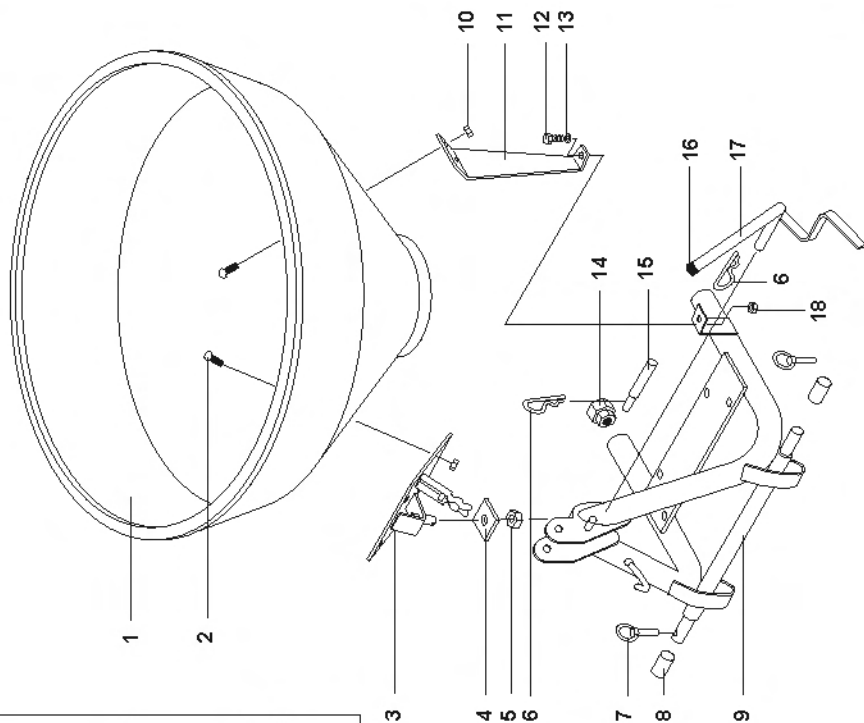
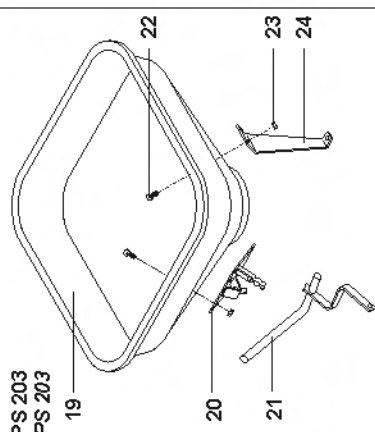
|    |          |   |
|----|----------|---|
| 14 | mp131203 | 1 |
| 15 | mp131301 | 2 |
| 16 | mp133368 | 1 |
| 17 | mp133350 | 1 |
| 18 | mp133358 | 1 |
| 19 | mp133362 | 1 |
| 20 | mp133305 | 1 |

**option (Nº 1)  
opción (Nº 1)**

|    |          |   |
|----|----------|---|
| 21 | mp132100 | 1 |
| 22 | up400808 | 1 |
| 23 | mp131765 | 1 |
| 24 | up200807 | 1 |

**CHASSIS AND HOPPER: PS 203, PS 303**  
**CHASIS Y TOLVA: PS 203, PS 303**

**SERIES 22400**  
**SERIE 22400**



| N° | Reference<br>Referencia | Quantity<br>per machine<br>Cantidad<br>por máquina |
|----|-------------------------|----------------------------------------------------|
| 1  | 70308                   | 1                                                  |
| 2  | 80952                   | 10                                                 |
| 3  | 15253                   | 1                                                  |
| 4  | 70330                   | 1                                                  |
| 5  | mp131105                | 1                                                  |
| 6  | 91569                   | 2                                                  |
| 7  | 94887                   | 2                                                  |
| 8  | 70301                   | 2                                                  |
| 9  | 80202                   | 1                                                  |
| 10 | 305.85.100              | 10                                                 |
| 11 | 15254                   | 2                                                  |
| 12 | 302.98.120              | 2                                                  |
| 13 | 314.97.100              | 2                                                  |
| 14 | 70300                   | 2                                                  |
| 15 | 43838                   | 1                                                  |
| 16 | 83138                   | 1                                                  |
| 17 | 15242                   | 1                                                  |
| 18 | 305.96.100              | 2                                                  |

PS 203

PS 203

19 ps11208

20 ps211208

21 ps015006

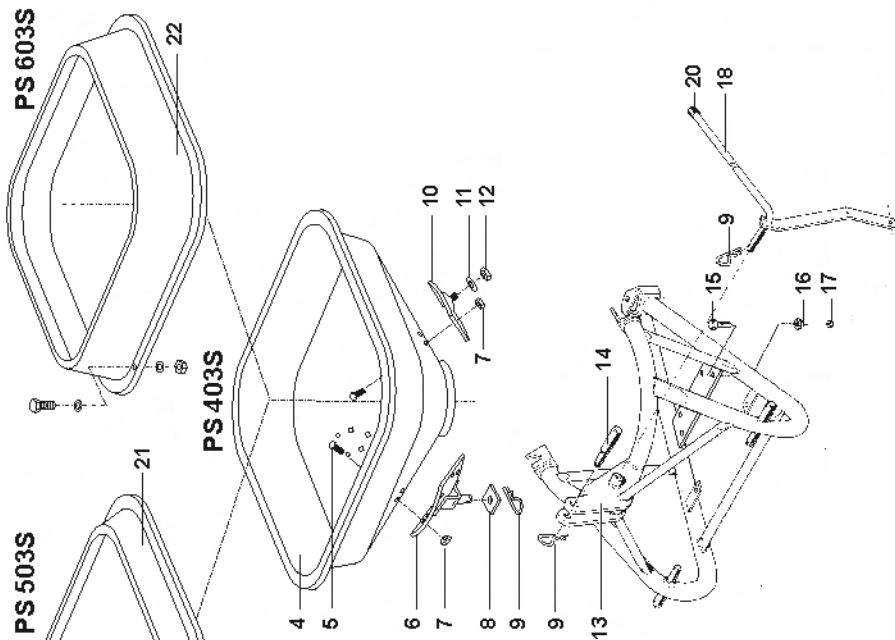
22 80952

23 305.85.100

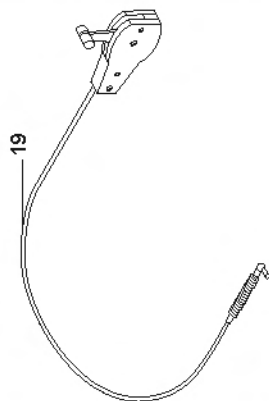
24 ps215010

2

**CHASSIS AND HOPPER: PS 403S, PS 503S, PS 603S**  
**CHASSIS Y TOLVA : PS 403S, PS 503S, PS 603S**



**Complete Cable - Driven**  
**Comandos: PS 403S, PS 503S, PS 603S**  
**Mando por Cables**  
**Completa: PS 403S, PS 503S, PS 603S**



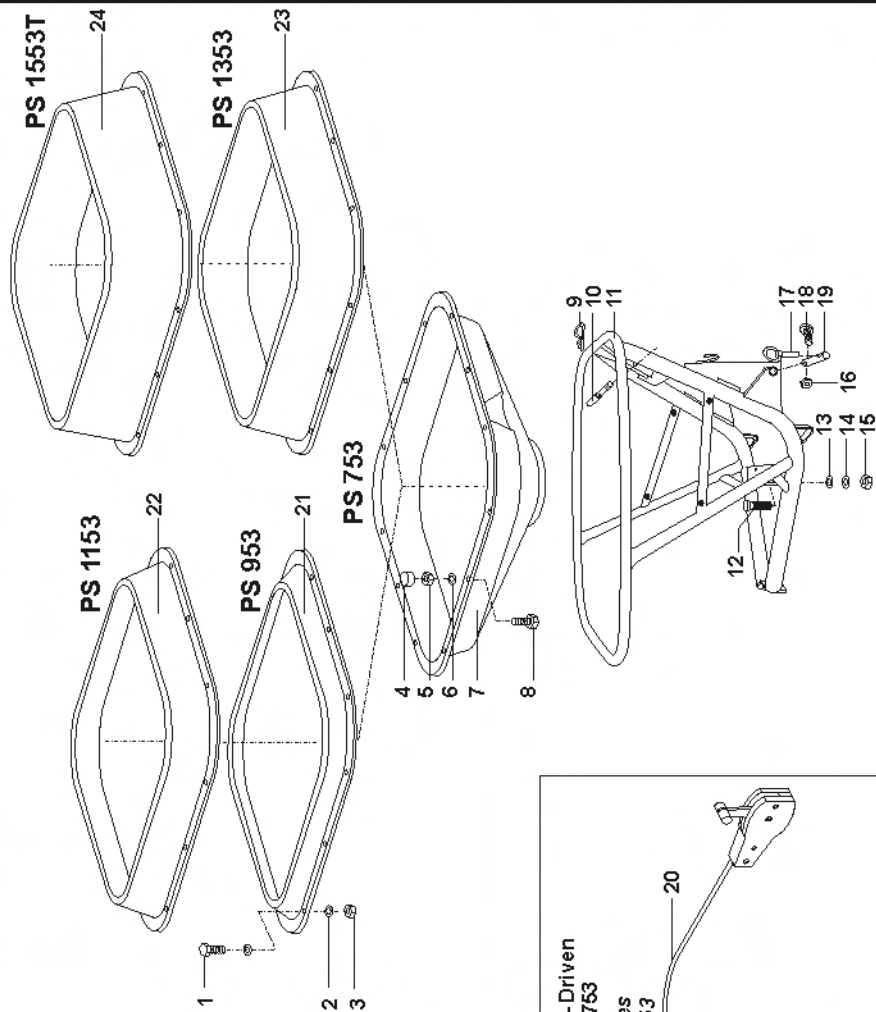
| N° | Reference  | Quantity per machine |
|----|------------|----------------------|
| N° | Referencia | Cantidad por máquina |
| 1  | 302.71.825 | 6                    |
| 2  | 314.61.800 | 12                   |
| 3  | 305.61.800 | 6                    |
| 4  | 70304      | 1                    |
| 5  | 80952      | 14                   |
| 6  | 15250      | 1                    |
| 7  | 305.85.100 | 14                   |
| 8  | 70330      | 1                    |
| 9  | 91569      | 3                    |
| 10 | 15252      | 2                    |
| 11 | 314.61.250 | 2                    |
| 12 | 305.61.200 | 2                    |
| 13 | 80201      | 1                    |
| 14 | 43838      | 1                    |
| 15 | 302.71.245 | 4                    |
| 16 | 314.53.300 | 4                    |
| 17 | 305.88.200 | 4                    |
| 18 | 15241      | 1                    |
| 19 | ps014500   | 1                    |
| 20 | 83138      | 1                    |

**Options to increase capacity of hopper**

**Opción para aumentar la capacidad de la tolva**

|    |       |   |
|----|-------|---|
| 21 | 70317 | 1 |
| 22 | 70318 | 1 |

**CHASSIS AND HOPPER: PS 753, PS 953, PS 1153, PS 1353, PS 1553 T**  
**SERIES 22400**  
**CHASIS Y TOLVA: PS 753, PS 953, PS 1153, PS 1353, PS 1553 T**  
**SERIE 22400**



| N° | Reference  | Quantity per machine |
|----|------------|----------------------|
| N° | Referencia | Cantidad por máquina |
| 1  | 84180      | 4                    |
| 2  | 85408      | 8                    |
| 3  | 86608      | 4                    |
| 4  | 70625      | 8                    |
| 5  | 86610      | 8                    |
| 6  | 85410      | 8                    |
| 7  | 70312      | 1                    |
| 8  | 84301      | 8                    |
| 9  | 91569      | 1                    |
| 10 | 30002      | 1                    |
| 11 | 80203      | 1                    |
| 12 | 302.71.245 | 4                    |
| 13 | 314.81.250 | 4                    |
| 14 | 314.53.300 | 4                    |
| 15 | 305.83.200 | 4                    |
| 16 | 305.96.100 | 4                    |
| 17 | 94887      | 2                    |
| 18 | 302.70.155 | 2                    |
| 19 | 30602      | 2                    |
| 20 | ps014500   | 1                    |

Options to increase capacity of hopper

Opción para aumentar la capacidad de la tolva

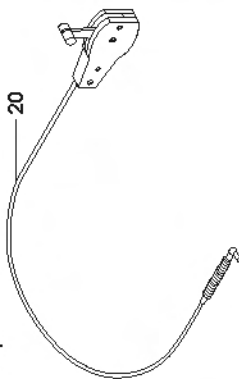
|    |       |   |
|----|-------|---|
| 21 | 70314 | 1 |
| 22 | 70310 | 1 |
| 23 | 70313 | 1 |
| 24 | 70311 | 1 |

Complete Cable - Driven

Commands: PS 753

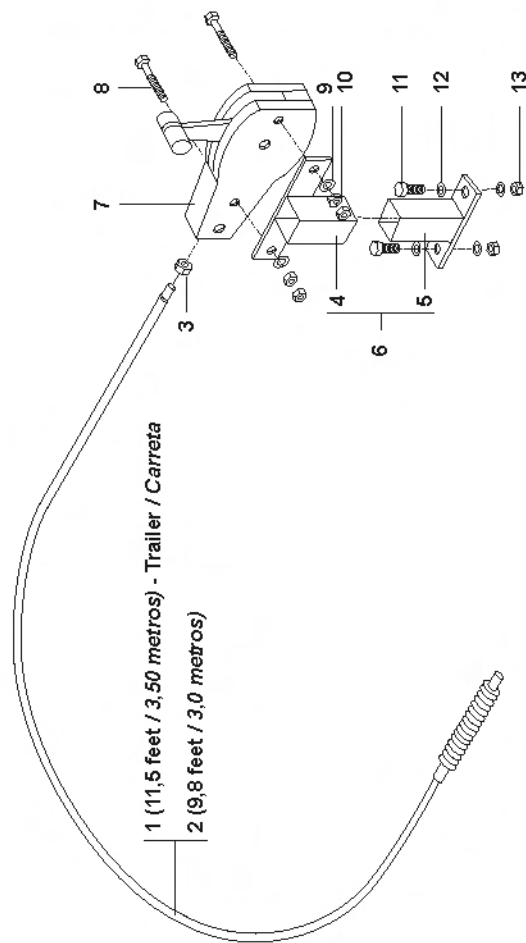
Mando por Cables

Completa: PS 753



**CABLE: PS 603S, PS 753/Trailer**  
**CABLES: PS 603S, PS 753/Carreta**

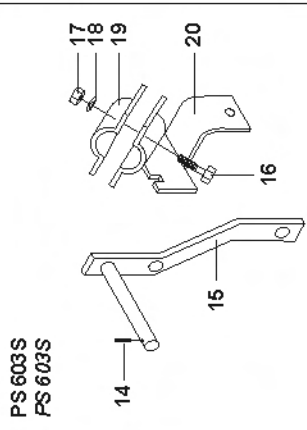
**SERIES 22400**  
**SERIE 22400**



| N° | Reference  | Quantity per machine |
|----|------------|----------------------|
| N° | Referencia | Cantidad por máquina |
| 1  | mp041502   | 1                    |
| 2  | mp041501   | 1                    |
| 3  | mpi131303  | 2                    |
| 4  | ug214507   | 1                    |
| 5  | ug214509   | 1                    |
| 6  | ug014505   | 1                    |
| 7  | ps014501   | 1                    |
| 8  | mpi131042  | 2                    |
| 9  | mpi131508  | 2                    |
| 10 | mpi131107  | 4                    |
| 11 | mpi131006  | 2                    |
| 12 | mpi131502  | 4                    |
| 13 | mpi131103  | 2                    |

| PS 603S |            |   |
|---------|------------|---|
| 14      | 88026      | 1 |
| 15      | 20203      | 1 |
| 16      | 302.71.825 | 2 |
| 17      | 305.61.800 | 2 |
| 18      | 314.61.800 | 2 |
| 19      | 20206      | 1 |
| 20      | 20200      | 1 |

| PS 753 / Trailer |           |   |
|------------------|-----------|---|
| PS 753 / Carreta |           |   |
| 21               | mpi131509 | 2 |
| 22               | ps214515  | 1 |
| 23               | mpi131301 | 1 |
| 24               | mpi131511 | 2 |
| 25               | ps714501  | 1 |
| 26               | mpi132013 | 1 |
| 27               | mpi131421 | 2 |
| 28               | ps214518  | 1 |
| 29               | mpi131702 | 2 |

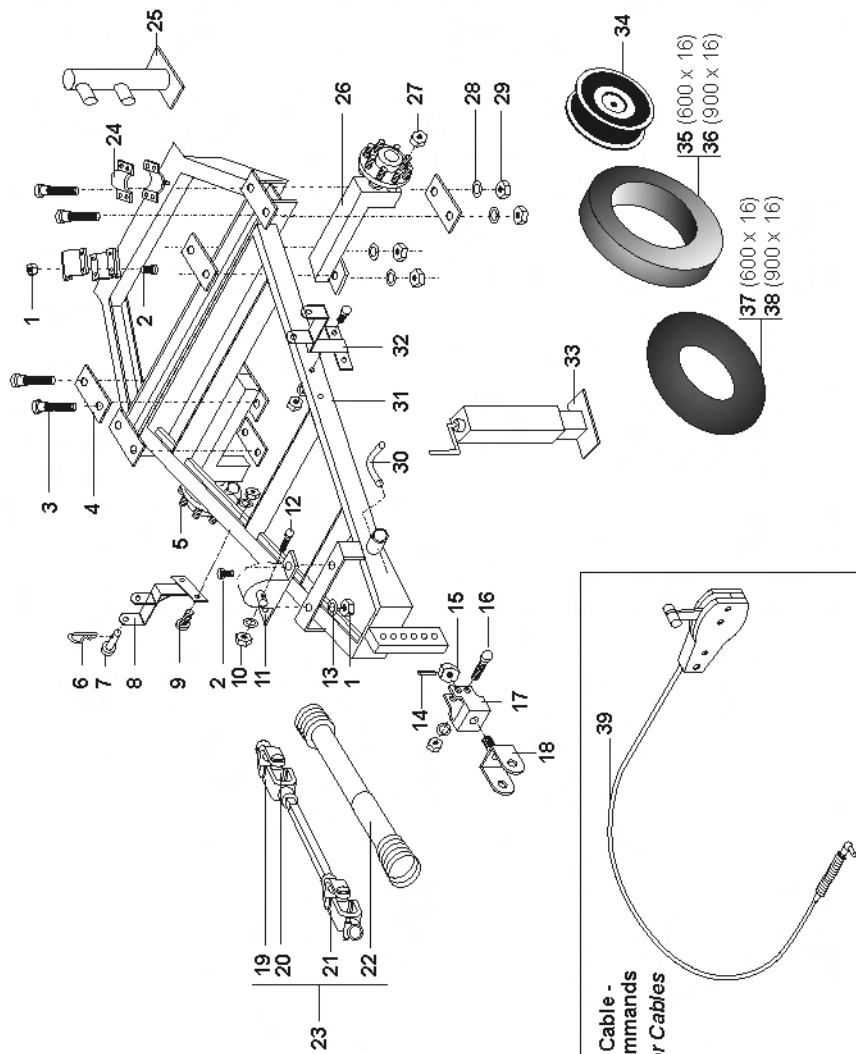


PS 753 / Trailer  
 PS 753 / Carreta

PS 603S  
 PS 603S

TRAILER: PS 1353T, PS 1553T  
 CARRETA: PS 1353T, PS 1553T

SERIES 22400  
 SERIE 22400



Complete Cable -  
 Mando por Cables  
 Completa

| N° | Reference<br>Referencia | Quantity<br>per machine<br>Cantidad<br>por máquina |
|----|-------------------------|----------------------------------------------------|
| 1  | 305.88.200              | 10                                                 |
| 2  | 302.71.245              | 10                                                 |
| 3  | 302.70.145              | 8                                                  |
| 4  | 80209                   | 4                                                  |
| 5  | 60014                   | 2                                                  |
| 6  | 91569                   | 4                                                  |
| 7  | 80214                   | 2                                                  |
| 8  | 80207                   | 1                                                  |
| 9  | 302.70.143              | 4                                                  |
| 10 | 305.96.100              | 4                                                  |
| 11 | 80215                   | 1                                                  |
| 12 | 308.03.155              | 2                                                  |
| 13 | 314.61.250              | 2                                                  |
| 14 | 308.03.550              | 1                                                  |
| 15 | 305.96.192              | 1                                                  |
| 16 | 302.70.144              | 2                                                  |
| 17 | 80210                   | 1                                                  |
| 18 | 80211                   | 1                                                  |
| 19 | 2303-144                | 1                                                  |
| 20 | 310-cz-101              | 2                                                  |
| 21 | 2303-143                | 1                                                  |
| 22 | 95561                   | 1                                                  |
| 23 | 2303-145                | 1                                                  |
| 24 | 80213                   | 2                                                  |
| 25 | 80212                   | 1                                                  |
| 26 | 60013                   | 2                                                  |
| 27 | 305.96.191              | 12                                                 |
| 28 | 314.53.195              | 14                                                 |
| 29 | 305.96.190              | 14                                                 |
| 30 | cz215041                | 2                                                  |
| 31 | 80205                   | 1                                                  |
| 32 | 80206                   | 1                                                  |
| 33 | 80208                   | 1                                                  |
| 34 | 60015                   | 2                                                  |
| 35 | 60016                   | 2                                                  |
| 36 | 60017                   | 2                                                  |
| 37 | 60018                   | 2                                                  |
| 38 | 60019                   | 2                                                  |
| 39 | ps014502                | 1                                                  |

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site: [www.vicon.com.br](http://www.vicon.com.br)

 **vicon máquinas**