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ABOUT THE WHEEL HOE

The wheel hoe dates back to the late 1800s. It was designed to be a low-cost tool for increasing productivity on small-scale farms where horse power (and subsequently mechanized cultivation) was limited. These market gardens and small farms typically used a single horse to plow the fields in the spring and then cultivate throughout the rest of the season with wheel hoes.

The wheel hoe is a lightweight, versatile, and maneuverable push-tool. Its ergonomic design gives the user more leverage than a traditional hand hoe, and it enables one to cover ground more quickly. The wheel hoe is ideal for the small-scale market gardener, urban gardener, growers cultivating in high tunnels or greenhouses, and, of course, the avid home gardener.

The wheel hoe offers many advantages:

- No fossil-fuel use.
- No fumes when cultivating in high tunnels or greenhouses.
- Allows the user to remain upright while cultivating, resulting in less bending and stretching.
- Numerous attachments and adjustments make cultivation of various crops possible.
- Appropriate for no-till and low-till systems.
- Long-lasting, with virtually no moving parts to break.

WHAT IS CULTIVATION?

Cultivation is simply the act of stirring the soil surface to eliminate both small weeds that have emerged and future weeds just under the soil surface. As Eliot Coleman notes in his book, *The New Organic Grower*, "Cultivation deals with weeds before they are a problem. Weeding deals with the problem after it has occurred."

TYPES OF CULTIVATION

The wheel hoe, fitted with the appropriate attachments, can be used to cultivate and weed in three major ways:

- **In-row cultivation:** Cultivation between crops growing in the same row.
- Inter-row cultivation: Cultivation between rows of crops in the same bed.
- **Footpath (pathway) cultivation:** Where the goal is to both kill weeds in the footpath and reduce soil compaction.

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Hilling beans with the Glaser U-Bar Double Wheel Hoe.



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CHOOSING YOUR WHEEL HOE

Johnny's offers three types of wheel hoes:

- Single Wheel Hoes are best for footpath and inter-row cultivation.
- **Double Wheel Hoes** are primarily for in-row cultivation, allowing the grower to cultivate on both sides of the crop with a single pass. Note: You must ensure that the crop spacing and height are compatible with the wheel hoe design; see below for more information.
- **Solus Electric Wheel Hoe** is used in the same way as a Single Wheel Hoe but powered by an electric motor; this added feature makes for fast, efficient cultivation.

WHEEL HOE MODELS

Terrateck Single Wheel Hoe (Part #7615)

Country of Origin: France

Uses: Inter-row and footpath cultivation

Weight: 16.5 lb / 7.5 kg

Description: The Terrateck Single Wheel Hoe is lightweight and versatile, with a multitude of attachment and adjustment options. It includes an option to offset the arms, allowing for bed cultivation while walking in the footpath. Attachments can be changed out quickly and easily in the field, without the use of

additional tools. You can also "stack" attachments, meaning you can use two attachments at once to simultaneously target weeds in multiple zones, with the use of a Secondary Tool Mount. A conversion kit allows you to convert this single wheel hoe into a double wheel hoe for in-row cultivation and light hilling. All attachments are sold separately.

Terrateck Double Wheel Hoe (Part #7620)

Country of Origin: France

Uses: In-row, inter-row, and footpath cultivation

Weight: 19.8 lb / 9 kg

Description: The double wheel hoe straddles row crops for cultivation on both sides of the plants in one pass. It can also be used for in-row cultivation with the use of attachments such as Finger Weeders. Like the Terrateck Single Wheel Hoe, the Terrateck Double Wheel Hoe is lightweight and has the option to offset the arms, allowing for bed cultivation while walking in



the footpath. There are more accessories available for this model than for the single wheel model, and all allow for quick attachment in the field. As with the single wheel hoe, you can combine two attachments to simultaneously target weeds in multiple zones. It is appropriate for use on crops up to 8" in height, with a minimum spacing of $7\frac{1}{4}$ ". All attachments are sold separately.

Glaser Wheel Hoe (Part # 9090 / 9378)

Country of Origin: Switzerland (chassis) and USA (ashwood handles)

Uses: In-row, inter-row, and footpath cultivation

Weight: 15.2 lb / 6.9 kg with the 8" hoe attachment; 16.4 lb / 7.4 kg with the 12" hoe attachment

Description: Designed after the Planet Jr. Wheel Hoe of the late 1800s, the Glaser Single Wheel Hoe is lightweight, strong, and highly maneuverable. It has the option to offset the arms, allowing for bed cultivation while walking in the footpath. Several

attachments are available. In-row cultivation can be accomplished by hilling soil onto one side of row crops at a time with the hiller attachment. With a conversion kit, it is possible to convert it to a double wheel hoe or to a precision seeder. Comes with either a 12" (Part #9378) or an 8" (Part #9090) center-mounted stirrup hoe.

Glaser Double Wheel Hoe (Part #9091)

Country of Origin: Switzerland (chassis) and USA (ashwood handles)

Uses: In-row, inter-row, and footpath cultivation

Weight: 18.6 lb / 8.4 kg, without attachments

Description: The Glaser Single Wheel Hoe converts to a double wheel hoe with the conversion kit (part # 9091). Using the double wheel hoe, you can straddle row crops for cultivation on both

sides of the plants in one pass. We recommend this wheel hoe for crops up to $4\frac{1}{2}$ " wide and $4\frac{3}{4}$ " in height. The adjustable distance between the hoe blades is $2-5\frac{3}{4}$ ".

Glaser U-Bar Double Wheel Hoe (Part #7604)

Country of Origin: Switzerland (chassis) and USA (ashwood handles)

Uses: In-row and inter-row cultivation

Weight: 22.9 lb / 10.4 kg

Description: Like the Glaser Single Wheel Hoe, the double wheel hoe has the option to offset the arms, allowing for bed cultivation while walking in the footpath. It has a high clearance compared to other double wheel hoe models, allowing you to

work in taller and wider crops than with the Terrateck double wheel hoe. The U-Bar Double Wheel Hoe is appropriate for use on crops up to 16" in height, with a minimum row spacing of 13½". Its leaf-lifters safely guide crop foliage through its chassis. Compared to the Terrateck Double Wheel Hoe, it has fewer attachment options. All attachments are sold separately.

Solus Electric Wheel Hoe (Part #7348)







Uses: In-row, inter-row, and footpath cultivation

Weight: 45 lb / 20.4 kg

Description: This motor-driven single wheel hoe makes for fast and easy work but has a higher price tag than traditional wheel hoes. Unlike with a traditional wheel hoe, which requires forward-and-back movement, with the Solus, you will only occasionally need to back up to clear larger weeds. The Solus is compatible with some Glaser attachments with the use of an adapter kit. Comes with a battery providing approximately 3 hours of continuous use in most soils; we recommend keeping a spare on hand to ensure extra power is there when you need it (<u>#7399</u>).

CHOOSING ATTACHMENTS

The most common attachments for cultivation are the standard cultivating blades such as the "oscillating" or stirrup hoe, as well as sweeps and discs for hilling. Johnny's offers these as well as a range of additional attachments designed for different crops and applications for all our wheel hoe models. See table below for the options available for each model and their corresponding part numbers.

- **Collinear Hoe Blades:** The Collinear Hoe is designed for shallow cultivation; Eliot Coleman refers to it as a "soil shaver" due to its smooth motion just below the soil surface. The sharp inner edge along the blade cuts and lifts thread-stage weeds to the soil surface. This attachment is effective for inter-row and footpath cultivation. Available for the Terrateck Single Wheel Hoe.
- **Stirrup Hoe:** This classic cultivation tool is also known as an "oscillating hoe." Featuring a sharpened edge along both inner and outer sides of its blade, the stirrup hoe efficiently cuts weeds on forward and reverse strokes. Strong construction allows the user to cultivate both thread-stage and more mature weeds. Ideal for inter-row and footpath cultivation. Available for Glaser Single and Double Wheel Hoes, as well as the Solus Electric Wheel Hoe.
- **Disc Harrows and Bio-Discs:** These miniature disc harrows are excellent for in-row weed management and hilling young seedlings like onions, beans, corn, and carrots. Disc Harrows (near right) are available for the Glaser U-Bar Wheel Hoe and Bio-Discs (far right) are available for the Terrateck Double Wheel Hoe.
- **Hilling Blades:** Also known as a "ridger" or a "furrower," this is a V-shaped plow used to create deep furrows for planting or ridges for hilling potatoes, leeks, onions, beans, and peas. Available for the Glaser Single Wheel Hoe. Using the Glaser Adapter Plate, Hilling Blades can also be mounted to the Solus Electric Wheel Hoe.

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- Goose Foot Hoes: The Goose Foot Arrow Hoe (near right) and Goose Foot Chevron Hoe (far right) are designed to closely cultivate mature crops that have developed a canopy — closer than possible when using a stirrup hoe. Available for the Glaser Single Wheel Hoe. Using the Glaser Adapter Plate, Goose Foot Hoes can also be mounted to the Solus Electric Wheel Hoe.
- **Spring Tine Harrows:** This attachment features flexible tines that uproot thread-stage weeds by scratching the soil surface. Most effective on loose, lightly crusted soils without long stem or straw residues. Spring Tine Harrows can be used simultaneously with other cultivation attachments for more complete weed management. Available in fine- or heavy-grade wire, for Terrateck Wheel Hoes only.
- Angled Sweeps, L-Blades, and Preci-Discs: Angled Sweeps, L-Blades, and Preci-Discs are used for precision cultivation on either side of young crops. Attached to a U-Bar Double Wheel Hoe, the Angled Sweeps (near right) are most commonly used on crops with an upright habit, and can be angled inward to cultivate around wider crops such as lettuce. Attached to a Terrateck Hoe, L-Blades are

designed to accomplish the same effect, and the Preci-Discs (far right) combine 45-degree blades with coulters to keep the wheel hoe straight and reduce the risk of soil crusts shifting into young seedlings.

- **Finger Weeders:** Target thread-stage weeds in-row by fracturing the soil from the root zone upward, freeing roots and germinating seeds from soil moisture. Flexible fingers work safely around row crops with adequate stem strength, such as carrots, corn, brassicas, and lettuce. Can be stacked with other attachments for added efficacy. Two models available, for medium-to-heavy soils and for soft or sandy soil, for the Terrateck Double Wheel Hoe only.
- **3-Tine Cultivator:** This Eliot Coleman design features curved tines with flattened tips to effectively break up crusted and compacted soils quickly. It is also very helpful for weed management, as well as for incorporating soil amendments such as compost and fertilizer. Available for the Glaser Single Wheel Hoe. It can also be mounted to the Solus Electric Wheel Hoe with the #7402 Glaser Adapter Plate.

TIPS FROM JOHNNY'S

- For best results, keep your attachment blades sharpened. We carry various sharpeners and hones at johnnyseeds.com/sharpeners.
- Walk at a steady pace while cultivating. Operating your wheel hoe using a push-pull, oscillating motion with your arms can help to better break up crusted and heavier soils.











ADDITIONAL FEATURES TO CONSIDER

- Some wheel hoes models are designed to accommodate combined or "stacked" attachments, offering the ability to cultivate a broad area with a single pass. For example, both Finger Weeders and Preci-Discs are mounted on the Terrateck Double Wheel Hoe in the photo at right.
- Most of the models we offer have the option to convert to off-set arms, allowing the user to cultivate crop beds while operating from the footpaths. By staying in the footpath, you can avoid stepping on and rerooting newly cultivated weeds as well as compacting the soil in the bed.
- Some wheel hoes such as the Terrateck models offer quick Y-bolt style clamps for mounting attachments, making it easy to swap them out in the field by hand, without additional tools.



 Some models offer attachments for creating furrows for planting potatoes or garlic, or for burying the edges of plastic mulch or row cover. Some can even be used as precision seeders. See table below for more details.

NEED MORE HELP?

We hope the information in this guide has helped you choose the best wheel hoe for your needs. Remember, if you need more information, we are only a phone call away!

See the page below for a table of wheel hoe attachment options for each model and their corresponding part numbers.



Tell us what you think!

We would love your feedback about this information! Please take 1 minute to <u>answer 3 short questions</u> to share your thoughts!

Wheel Hoe Attachments at a Glance				
Terrateck Single Wheel Hoe	Terrateck Double Wheel Hoe	Glaser Wheel Hoe	Glaser U-Bar Double Wheel Hoe	Solus Electric Wheel Hoe
Part # <u>7615</u>	Part # <u>7620</u>	Part # <u>9090/9378</u>	Part # <u>7604</u>	Part # <u>7348</u>
Attachments & Accessories				
7501 Collinear Hoe Blade - 12" wide 7502 Collinear Hoe Blade - 20" wide 7868 Tool Bar – 16" 7594 Tool Bar – 24" 7595 Tool Support Clamp (required to install attachments) 7600 Secondary Tool Mount (for using two attachments at once) 7598 Spring Tine Harrows – Fine Tooth 7599 Spring Tine Harrows – Heavy Tooth 7091 Offset Handle Assembly	 7501 Collinear Hoe Blade - 12" wide 7502 Collinear Hoe Blade - 20" wide 7868 Tool Bar – 16" 7594 Tool Bar – 24" 7595 Tool Support Clamp (required to install attachments) 7600 Secondary Tool Mount (for using two attachments at once) 7598 Spring Tine Harrows – Fine Tooth 7599 Spring Tine Harrows – Heavy Tooth 7590 Bio-Discs 7596 L-Blades 7597 Preci-Discs 7055 Finger Weeder Full Kit – Standard Soil 7682 Finger Weeder Full Kit – Sandy Soil 7091 Offset Handle Assembly 	*Comes with one 8" or 12" Center Mount Hoe 9087 Center Mount Oscillating Hoe - 5" 9096 Center Mount Oscillating Hoe - 8" 9161 Center Mount Oscillating Hoe - 12" 9024 Goose Foot Arrow Hoe - 8" 9073 3-Tine Cultivator 9072 Hiller 9091 Double-wheel Conversion Kit 9085 Right Offset Oscillating Hoe - 5" 9086 Left Offset Oscillating Hoe - 5" 9095 Right Offset Oscillating Hoe - 8" 9094 Left Offset Oscillating Hoe - 8" 9094 Left Offset Oscillating Hoe - 8"	7485 Angled Sweeps 7486 Hilling Blades 7487 Disc Harrows	7395 Toolbar Kit 7397 Stirrup Cultivating Hoop – 6" 7398 Stirrup Cultivating Hoop – 12" 7402 Glaser Adapter Plate 7399 Additional Battery – 24 Volt