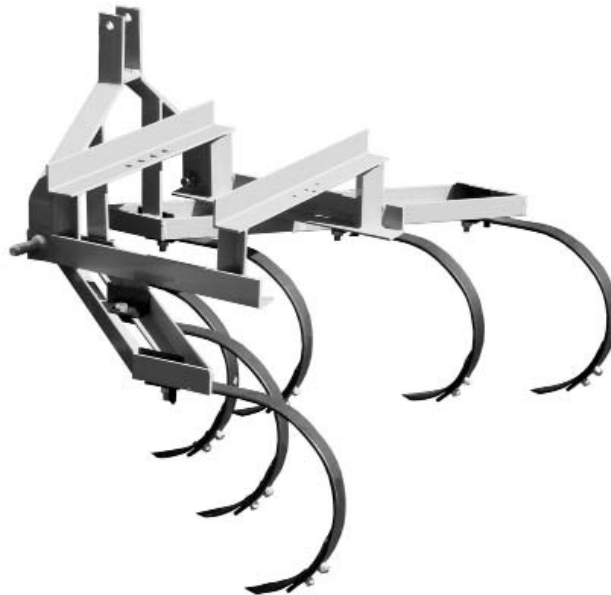


One Row Cultivators

**Hardware Kit
80900220**

THANK YOU FOR PURCHASING THIS PRODUCT

Congratulations on your purchase. Behlen Country has been in the business of providing quality equipment to landowners for more than 75 years. Our 3-Point Equipment will provide many years of service when maintained by the operator and used in accordance with the capabilities of the product. For questions about this product, or for parts inquiries, please contact our Customer Service Center listed below.



**Behlen[®]
COUNTRY**

CUSTOMER SERVICE CENTER

PO Box 569
Columbus, NE 68602-0569

Ph: 800-447-2751
Fax: (402) 563-7447
www.behlencountry.com

SAFETY

READ AND FOLLOW THE INSTRUCTIONS IN THIS MANUAL, ESPECIALLY IN THE SAFETY SECTION. FAILURE TO DO SO COULD RESULT IN SERIOUS INJURY OR DEATH.



THIS SAFETY ALERT SYMBOL MEANS ATTENTION! BE ON THE ALERT! YOUR SAFETY IS INVOLVED!

TAKE NOTE! THIS SAFETY ALERT SYMBOL IS FOUND THROUGHOUT THIS MANUAL. THIS SYMBOL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS CONCERNING YOUR PERSONAL SAFETY AND THE SAFETY OF OTHERS.

CRITICAL TERMS:

The critical terms **CAUTION**, **WARNING**, and **DANGER** are used with the safety messages in this manual and with each safety decal. They are defined as follows:



CAUTION



CAUTION: Indicates a potentially hazardous situation that, if not avoided, **CAN** result in minor or moderate injury. It also may be used to alert against unsafe practices.



WARNING



WARNING: Indicates a potentially hazardous situation that, if not avoided, **MAY** result in serious injury or death, and includes hazards that are exposed when guards are removed. It may also be used to alert against unsafe practices.



DANGER



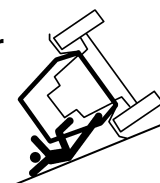
DANGER: Indicates an immediate hazardous situation that, if not avoided, **WILL** result in serious injury or death. This Critical Term is to be limited to the most extreme situations, typically for machine components that, for functional purposes, cannot be guarded.

EQUIPMENT SAFETY GUIDELINES

• Safety of the operator and bystanders is one of the main concerns in designing and developing a Rotary Cut Mower. However, every year accidents occur which could have been avoided by a few moments of thought and a

more careful approach to handling equipment. You, the operator, can avoid many accidents by observing the following precautions and insist those working with or for you adhere to them.

- In order to provide a better view, certain illustrations in this manual may show an assembly with a safety guard removed. However, equipment should never be operated in this condition. Keep all guards in place. If guard removal becomes necessary for repairs, reinstall the guard prior to use.
- Heed all safety decals and replace any that are not legible or missing. The locations of such safety decals are indicated in this manual.
- Never operate this equipment while using alcoholic beverages or drugs that can hinder alertness or coordination. Consult your doctor about operating this machine while taking prescription medications.
- Under no circumstances should children under the age of 18 be allowed to work with or around this equipment. Do not allow anyone to operate or assemble this equipment until they have read this manual and have developed a thorough understanding of the safety precautions and operation. Review safety instructions with all users often.
- This equipment is dangerous to anyone unfamiliar with its operation. The owner/operator is responsible for reading and following all of the instructions in the manual. The operator should be a responsible, properly qualified and physically able person familiar with farm machinery and competent in this equipment's operation.
- Never exceed the limits of a piece of machinery. If its ability to do a job, in a safe manner, is in question - **DON'T TRY IT.**
- Use a tractor equipped with a Roll Over Protective System (ROPS) and seat belts. Only properly trained people should operate this machine. Always stop the PTO, set break, shut off the tractor engine, remove the tractor key, and allow implement to come to a complete stop before dismounting tractor. **Never leave equipment unattended with tractor running.**



BEFORE YOU START!!

Read the safety messages on the implement and as shown in the manual. Observe the rules of safety and common sense!

IMPORTANT SAFETY INFORMATION

Working with unfamiliar equipment can lead to careless injuries. Read this manual and the manual for your tractor before assembly or operating, to acquaint yourself with both machines. It is the Owner/Operator's responsibility, if this machine is used by any person other than yourself, or is loaned or rented, to make certain prior to operating:

1. The operator's manual is read and understood.
2. Safety issues are understood and followed, and proper usage is understood.

The use of this equipment is subject to certain hazards which cannot be protected against by mechanical means or product design. All operators of this equipment must read and understand this entire manual, paying particular attention to safety and operating instructions, prior to use. If there is something in this manual you do not understand, ask your dealer or manufacturer, to explain it to you. Improper use can occur on machines that are loaned out or rented to someone who has not read the owner's manual and is not familiar with a One Row Cultivator.

Safety Information



All things with moving parts are potentially hazardous. There is no substitute for a cautious, safety-minded operator who recognizes potential hazards and follows reasonable safety practices. The manufacturer has designed this implement to be used with all its safety equipment properly attached, to minimize the chance of accidents. Study this manual to make sure you have all the safety equipment attached.

When maneuvering close to buildings or passing through narrow areas, be sure to allow sufficient clearance for the implement and tractor. NEVER operate tractor and implement under trees with low hanging limbs. Operators can be knocked off tractor and run over by implement.



This One Row Cultivator is only designed for speeds less than 5 mph. Reduce speed on rough surfaces.



When the use of hand tools is required

to perform any part of assembly, installation, adjustment, maintenance, repairing, removal or moving the blade, be sure the tools used are designed and recommended by the tool manufacturer for that specific task.



Personal protection equipment including

hard hats, safety glasses, safety shoes, and gloves are recommended during assembly, installation, operation, adjustments, maintenance, repairing, removal, or moving the One Row Cultivator, DO NOT ALLOW long hair, loose fitting clothing or jewelry to be around moving parts.



Always use two people to handle heavy,

unwieldy components during assembly, installation, removal, or moving the One Row Cultivator.



Never place any part of your body where it would be in danger, if movement should occur during assembly, installation, operation, maintenance, repairing, removal or moving the One Row Cultivator.



Never place yourself between the tractor and

One Row Cultivator while implement is in operation. When removing, or adjusting equipment, be sure your body is never under the implement.



A heavy load can cause instability of the tractor.

Use extreme care during travel. Slow down on turns and watch out for bumps. The tractor may need front counterweights to counter-balance the weight of the One Row Cultivator.



Never use alcoholic beverages or drugs which

can hinder alertness or coordination while operating this equipment. Consult your doctor about operating this machine while taking prescription and some over-the-counter medications.



DO NOT ALLOW RIDERS on the One Row Cultivator or tractor at any time. There is **NO** safe place for any riders. **NEVER ALLOW CHILDREN TO OPERATE OR BE AROUND BLADE.**



Before you operate the One Row Cultivator, check over all pins, bolts and connections to be sure all are securely in place. Replace any damaged or worn parts immediately.



Consult local utility companies to make certain there are no buried gas lines, electrical cables, etc., in the work area before beginning operation.



Do **NOT** allow anyone who is not familiar with the safety rules and operation instructions to use this One Row Cultivator.



Never replace any bolt with any length other than what is specified in this manual. A longer, or protruding fastener is more likely to grab loose clothing or gloves which can result in serious injury or death.



Watch for hidden hazards on the terrain during operation.



Turn curves or go up or down hills only at a low speed and at a gradual steering angle. Make certain that at least 20% of the tractor's weight is on the front wheels to maintain safe steering. Slow down on rough or uneven surfaces, and loose gravel.



Check that all hardware is properly installed. Always tighten all bolts to proper torque. Make sure attachment is properly secured, adjusted and in good operating condition.



Where replacement parts are necessary for periodic maintenance and servicing, genuine factory replacement parts must be used to restore your equipment to original specifications. The manufacturer will not be responsible for the use of unapproved parts and/or accessories and the damages that can result in their use.



Keep alert and watch the front as well as the rear when working with equipment. **DO NOT** operate close to ditches or creeks. Be careful to avoid catching implement on stumps or other immovable objects.



Make adjustments to implement only when it is attached to a tractor and blocked up. Always



keep all persons and children away from area when performing adjustments, service or maintenance. Worn edges can seriously affect the One Row Cultivator's operation. Check for wear before each use and replace as necessary.



Know your controls and how to stop your tractor, engine, and implement quickly in an emergency.



Do not operate the One Row Cultivator without checking that all movable parts are in good working order. Always use care when operating implement.

Safety is a primary concern in the design, manufacture, sale and use of the One Row Cultivator. At Behlen Country, we want to confirm to you, our customers, our concern for safety.

Our current production machines include, as standard equipment, safety signs. Older machines can be retrofitted to add these new safety signs. If you have an older machine which does not have current standard safety equipment, please contact your dealer about bringing your machine up to the current level of safety.

Instructions

INSTRUCTIONS

Tractor Requirements and Preparation

The One Row Cultivator can be used on both Category 1 and 2 tractors. The actual horsepower requirements will depend on the type of soil, operating depth, soil moisture, and operating speed.

Check the tractor's 3-Point hydraulic lift system. It should operate up and down smoothly and have enough power to lift the One Row Cultivator. Refer to your tractor's Operator's Manual or your dealer for any adjustments necessary to put the 3-Point hydraulic lift system in good working order. (I & T shop manuals will list most specifications and adjustment instructions - available from most farm equipment dealers).

Check the tires and rims to make sure they

are in good condition. Inflate tires to proper recommended air pressure. It is recommended that a ROPS (Rollover Protection System) be installed on all tractors. Contact your local dealer for a ROPS for your tractor model.

Tractor should be equipped with stabilizer bars, adjustable sway chains, or sway blocks to keep the One Row Cultivator from swinging side to side.



Be sure your tractor is in good working condition. Read all the safety procedures and make sure all tractor operators are familiar with the safety rules of operation.

Assembly & Mounting

The One Row Cultivator is shipped assembled. The holes in the frame angle will allow the shanks to be located with different spacing. Make sure that all shanks are symmetrically spaced.

Make sure the lower draw pins (pull pins) are installed correctly for your tractor. Insert the draw pins into the ball sockets in the lower lift arms of the tractor 3-Point hitch. Lock into place with lynch pins. Attach the mast of the 3-Point main frame by installing the tractor top link, with the top link pin.

Adjust the top link assembly to obtain the correct angle of the implement. Check the tractor 3-Point lift arms and adjust to level the implement from side to side.



Never allow anyone to ride or sit on implement or tractor while in operation. Keep bystanders at a safe distance.

Preparation Procedure

- Thoroughly read and understand your Operator's Manuals.
- Before beginning operation, contact your local Utility Company to make certain there are no gas lines, electrical cables, etc., in the work area.
- Check for ditches, stumps, holes, or other obstacles that could cause the tractor to roll.
- Be sure tractor tires and rims are in good condition. Inflate tires to proper air pressure.
- All persons should be at least twenty-five feet (25') away during operation. Clear the area of helpers, bystanders, and especially children.
- Do NOT allow anyone to stand between the hitch and implement.
- It is recommended that only tractors with wide front axles use the One Row Cultivator. Tricycle front wheel arrangements are inherently unstable and can cause rollover accidents.
- Check the tractor master shield over the PTO stub shaft. Make sure it is in good condition and fastened securely to the tractor.
- Make sure all safety stickers are installed and in good condition. Replace if damaged.
- Do NOT allow riders. There is no safe place for anyone to ride or sit on tractor or implement.
- Check that all equipment is properly installed and securely attached to the tractor.

Operation

If you have any questions regarding the proper operation of this One Row Cultivator, contact your dealer or the manufacturer.

The design and tested safety of this machine depends on it being operated within the limitations as explained in this manual. Be familiar with and follow all safety rules in this manual for the implement as well as your tractor.

Safe operation of this machine is the responsibility of the owner/operator. The operator should be familiar with the One Row Cultivator and tractor and all safety practices before starting operation. Read the entire owners manual.

Never let anyone stand between the rear of the tractor and the implement while the tractor is backing up to connect to the implement.

Always stand to the side until the tractor has come to a complete stop and the brakes are set or the tractor is in "park".

Allow additional clearance for the implement to swing when turning. Check for stumps, ditches, holes or other obstacles that could tip tractor or damage the Cultivator.

For proper operation, level the Cultivator by

adjusting the tractor top link. This will assure that the cultivator will run level.

The tractor's 3-Point hydraulic lift system should be set to transfer most of the Cultivator's weight and draft to the tractor to maximize traction. (There may not be a 3-Point draft control on some smaller or older tractors. Refer to tractor's Owner's Manual.)

Set hydraulic lift control arm stop for the operating depth.

The deeper you operate the cultivator, the more horsepower and traction will be needed. In very hard soil or in dry conditions (or with a small tractor), it may not be possible to operate the Cultivator at the desired depth. In these cases, it may be necessary to make several passes. (Increase the depth with each pass until the desired depth is reached.)

The best shattering action will be realized at a speed of 2 to 4 mph. It is not recommended to exceed 5 mph as it will only increase fuel consumption, horsepower required, and wear on the tractor and implement.

Note: Do **NOT** make turns with the Cultivator in the ground. Damage to the cultivator will occur. Always raise implement and lower after the turn is made.

Do not attempt to operate the Cultivator when soil is wet. Wet soil will not shatter or break up and will compact the soil.

It is suggested that when you make several passes across the field that you operate the Cultivator diagonal to the direction of the first pass.

The points of the One Row Cultivator are reversible. When the first point wears back, remove bolts, reverse the point and reinstall the bolts.

Do **NOT** let the point wear back so far that wear occurs on the lower shank body.

It is essential that everyone involved in the operation, transportation, maintenance, and storage of this equipment be aware, concerned, prudent and properly trained in safety.

Trouble-shooting Guide

If you have any questions regarding the proper operation of this implement contact your dealer or the manufacturer.

PROBLEM:

TRACTOR WILL NOT PULL IMPLEMENT

Possible Solutions:

- Insufficient horsepower; Use larger, heavier tractor.
- Soil too wet; Allow soil to dry
- Soil too hard and dry; Wait for rain.
- Points too dull; Replace points.
- Insufficient traction; See tire slippage problem below.
- Attempting to operate too deep; Reduce depth setting and make several passes, gradually increase depth.

PROBLEM:

EXCESSIVE TRACTOR TIRE SLIPPAGE

Possible Solutions:

- Tractor too small; use larger, heavier tractor.
- Insufficient traction; Use dual rear tires or add ballast, increase draft control, operate at a shallower depth.
- Operating too deep; Reduce depth setting and make several passes, gradually increasing depth.

PROBLEM: EXCESSIVE POINT WEAR

Possible Solutions:

- Soil too dry; Wait for rain.
- Abrasive soil; Consider having points hard surfaced by local welder.
- Operating too fast; Slow down.



UNDERGROUND UTILITIES

Contact appropriate agencies to determine if

hazardous items are buried under the work area **BEFORE OPERATING!** Be certain underground utilities have been called to locate underground electric, gas, telephone and other lines. Check your telephone book for calling instructions. Be sure the operator is properly informed. **WHEN IN DOUBT, DO NOT CULTIVATE!**



The shank tines are sharp. Exercise extreme caution when working around or near the blade. Failure to stay clear of the blade can result in serious injury.

Maintenance

Before servicing the implement, engage the parking break or place the transmission in "PARK", shut off tractor and remove key.

1. Make certain the safety and instruction decals are attached to the implement. If they are lost, damaged, or painted over, please call Behlen Country at 800-447-2751.
2. Telescoping parts must be kept clean and lubricated.
3. Clean unit of dirt and debris to minimize rusting and wear.
4. Keep all shields in place. Order new shields if damaged or missing.
5. Keep cutting edges sharp. Sharp cutting edges work easier and better. Check more often if working in rocky soil conditions.
6. Replace any worn or damaged parts immediately.
7. Check all bolts and nuts to make sure they are tight.
8. **NEVER GO UNDERNEATH EQUIPMENT.** Never place any part of the body underneath equipment or between movable parts even when the engine is turned off. Servicing this implement does not require going underneath.

Transportation Guidelines

Make sure when transporting unit that the unit is lifted as high at the tractor will allow being sure the unit is clear of the ground when transporting.

Care should be taken that at least 20% of tractor weight should be on the front tires. A safe speed should be maintained during transportation.

Tractor weight ballast may be needed to even out weight to maintain proper steering.

Do **NOT** lower unit to pavement, blacktop or gravel road while transporting. Damage to the unit can occur.

When transporting on roadways always use a Safety sign, and drive in a manner to allow other vehicles to pass you safely.



When traveling on public roads whether at night or during the day, use accessory light and devices for adequate warning to operators of other vehicles. Comply with all federal, state, and local laws.



Stop power unit and equipment **IMMEDIATELY** upon striking an obstruction. Turn off engine, remove key, inspect, and repair any damage before resuming operation. Never leave the seat of the tractor while engine is engaged.

Cleaning And Storage

After Each Use

- Remove large debris such as clumps of dirt, grass, crop residue, etc. from implement.
- Inspect implement and replace worn or damaged parts
- Replace and safety decals that are missing or not readable.

Before Extended Storage

- Follow cleaning instructions from above.
- Wash implement using low-pressure water spray.
- Be careful when spraying near scratched or torn safety decals or near edges of decals as water spray can peel decals off surface.

Spraying near chipped or scratched paint can also cause paint to peel more.

- Sand down scratches and edges where paint is missing and repaint to prevent rust.
- Inspect machine for worn or damaged parts. Replace any missing safety stickers.
- Store the unit in a shed or under tarpaulin to protect from the weather. The shank tines should be resting on boards or some other object. Keep out of soil when storing. This will reduce rusting.
- Store in clean, dry place away from human activity or livestock.

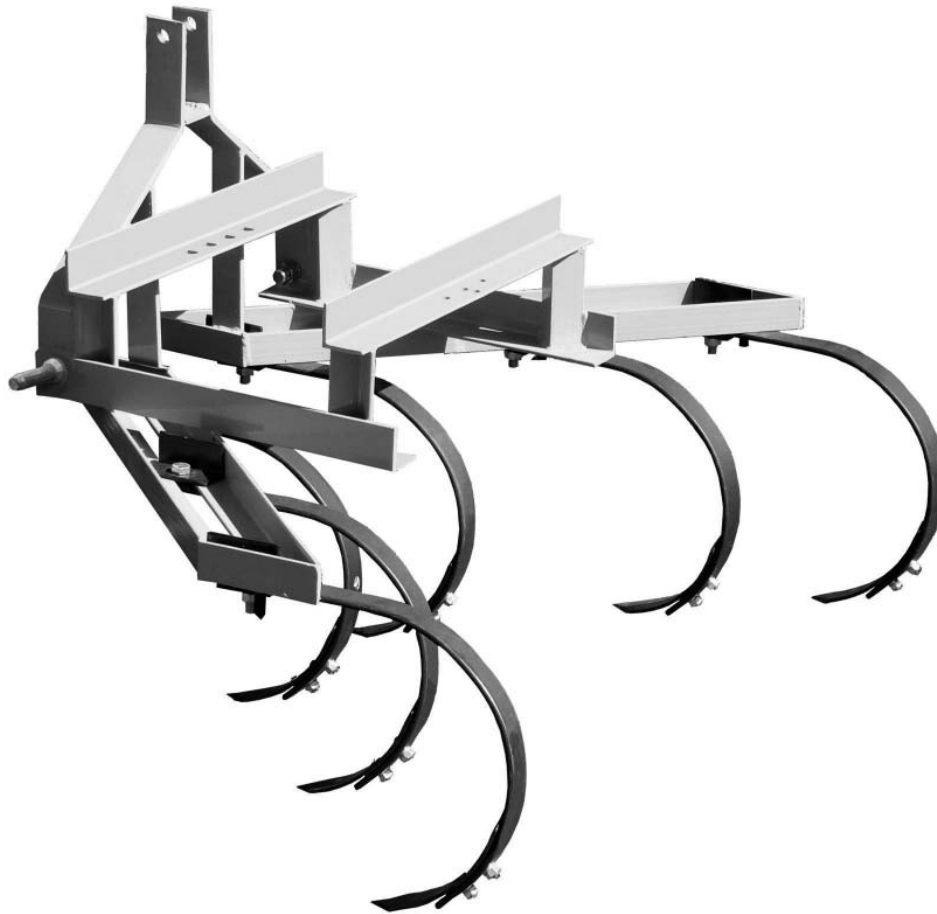
Safety Precautions

- Most accidents occur because of neglect or carelessness. Avoid needless accidents by following all of the safety precautions below.
- Machinery should be operated only by those who are responsible and are authorized to do so.
- Stop the engine, lower all equipment, lock the brakes, and remove the ignition key before dismounting tractor.
- Never stand between tractor and implement while tractor is being backed to a hitch. Loose fitting clothing should not be worn, to avoid catching on various parts.
- Detach implement in an area where children normally do not play.
- When performing adjustments or maintenance on an implement, lower it to the ground or block it securely at a workable height.
- Only a qualified operator should be permitted on the tractor when in operation; **NO RIDERS ALLOWED.**
- Make certain everyone is in the clear before starting tractor or raising / lowering equipment.
- Operate the tractor and implement only while seated in the driver's seat.
- Reduce speed when transporting mounted implements to avoid bouncing and momentary loss of steering control.

- A heavy load can cause instability of the tractor. Use extreme caution during road travel. Slow down on turns and watch for bumps. Tractor may need front counter-weights to counter-balance the weight of the implement.
- Reduce speed on hillsides or curves to avoid the possibility of tipping.
- Avoid driving too close to the edge of ditches or creeks.
- Do not transport implement on public roads without reflectors and Slow Moving Vehicle emblem in daylight and with approved warning lights at night and other periods of poor visibility.
- Due to the width of some implements, use extra caution on highways, farm roads, and when approaching gates.
- Always be sure the implement is in the proper position for transporting.
- Keep alert and watch the front, as well as the rear, when working with the implement.

WARRANTY

This unit carries a 1 year warranty, with the exception of wear parts. Dated proof of purchase required on all claims.



Single Row Cultivator - Fixed & Adjustable

No.	Description	Part No.	Qty.
1	C shanks	3018424	6
2	Field Points	3018425	6
3	Category 1 Lift Pins	3018352	2