

Quick-cut Greens Harvester

ASSEMBLY AND INSTRUCTION MANUAL



Watch the video!

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Farmer's
FRIEND LLC

Instruction Manual for Model 1503



Fast, effortless harvesting for the small-scale grower. No more kneeling, no more knives or scissors. One person can easily cut over 175 lb. per hour. Powered by a cordless drill, the harvester's 15" serrated blade makes a smooth, clean cut. A rolling macramé brush pulls individual leaves into the blades and then throws them to the back of the basket. This unique design allows the Quick Cut to harvest sparse stands of salad ingredients as effortlessly as it harvests full stands. The neat, clean surface it leaves behind is perfect for those planning on a second harvest from the same bed. The harvester is just as effective when the crop is more mature or "leggy." Universal mount will accept almost any cordless drill; 18 or 20V drills work best (not included). Weighs 6.5 lb. without a drill. Add another 3-5 lb., depending upon your drill. Made in USA.



OPERATOR SAFETY:

WARNING:

This manual describes how to operate this product efficiently and how to protect yourself and others from harm while doing so. Before assembling or operating your harvester, you must read this manual in its entirety. You must also understand and obey all safety rules, precautions, and instructions in this manual.

You must be alert at all times, and be physically capable of handling and controlling this harvester safely. Never attempt to operate the harvester if you are fatigued, or under the influence of alcohol, medication, or any other substance that can affect your judgment, vision, reflexes, or coordination.

DANGER

Moving blades! Keep hands clear while machine is in operation. Always remove battery when not in use or when servicing. Failure to do so could result in serious or even fatal injury.

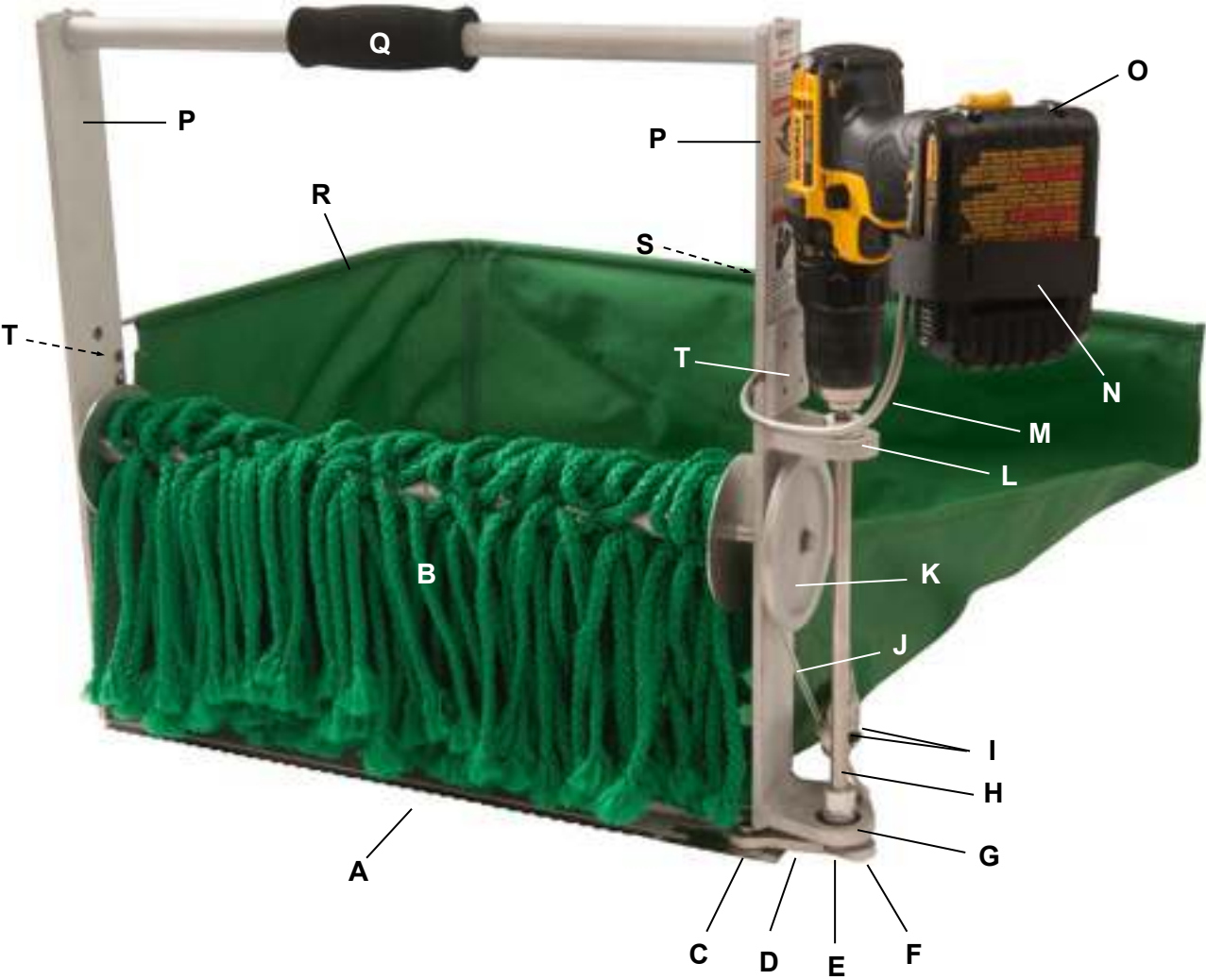
WARNING

Read and understand this operator's manual completely before ever using this machine. Failure to follow operating instructions could result in serious or even fatal injury.

CAUTION

Closed toe shoes required during operation. Cut resistant gloves required when servicing blades. Failure to take these precautions could result in serious injury.

COMPONENTS:



- | | |
|-----------------------------|------------------------------|
| A Single Blade | K Roller Pulley |
| B Macramé roller | L Upper Drive Shaft Bearing |
| C Blade Slide Bearing | M Drill Support Arm |
| D Crank Arm | N Velcro Strap |
| E Crank | O Cordless Drill* |
| F Crank Bearing | P Frame Uprights |
| G Lower Drive Shaft Bearing | Q Handle |
| H Drive Shaft | R Basket Frame Arm |
| I Idler Pulleys | S Basket Support Arm** |
| J Serpentine Belt | T Backing Plates & Screws*** |

* User supplied cordless drill
** Not visible (behind drill)
*** Not visible (on other side of frame upright)

ASSEMBLY:

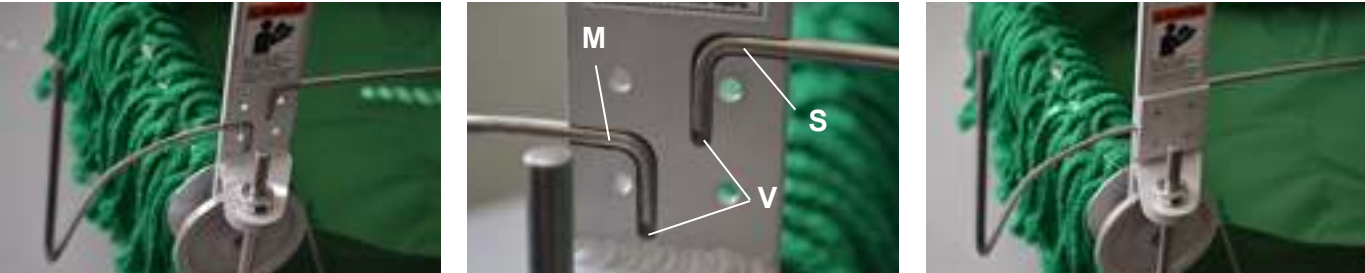


Take care when removing from packaging, in case blade guard has come off in transit.

1. **Remove harvester and other contents from packaging.** Loose contents should include food grade lubricant, drill support arm with velcro strap, two backing plates, and six flat head screws.
2. **Attach basket to frame:**
 - a. **Left side:**
 - i. Insert end of basket frame arm (R) into its mounting channel (U) on the left frame upright (P).
 - ii. Cover with small backing plate and secure with two mounting screws.
 - iii. Remove small screw and washer near the backing plate mounting screws, and secure the corner of the harvester basket to the left upright with them.




- b. **Right side:**
 - i. Insert end of basket support arm (S) into mounting channel (V) on the right frame upright (P).
 - ii. Insert the end of drill support arm (M) into mounting channel (V) on the right frame upright (P).
 - iii. Cover with large backing plate and secure with four mounting screws.



3. Adapt drill to the harvester:

- Carefully remove tape and guard from blade.
- Insert battery into drill. Set drill clutch to maximum torque (or as indicated on some models the “drill bit” position – see below). Set drill speed to maximum setting. Open chuck fully, then shift back to clockwise.
- Slide cordless drill chuck over top of drive shaft as shown below. There should be at least $\frac{3}{4}$ " of drive shaft inside the chuck, otherwise slippage could occur.



 **Stop! You are about to engage the drive of this machine. Ensure that the blade is free of obstruction and that it is not near you or anyone else.**


- Grasp the keyless chuck with your left hand, and slowly squeeze the trigger until the drill starts to turn and the chuck makes contact with the drive shaft (H) . As it does so, the macramé roller (B) should start to turn and the blade will begin to reciprocate back and forth. Firmly grip the chuck and hit the trigger again to seat the chuck securely onto the drive shaft. Be careful not to pinch your fingers between the chuck and the harvester frame.
- Back the clutch off to 1/2 of its max setting. This should allow adequate operating torque and jam protection for the harvester.
- Hold the battery end of the drill against the drill support arm (M) and wrap the velcro strap around them as shown to the right. This merely keeps the drill stationary when the harvester is transported.



 **Stop! Remove battery from drill.**

1. Basic single cut operation:

- Position harvester at the end of the bed
- Insert battery in drill.

 **Stop! You are about to engage the drive of this machine. Ensure that the blade is free of obstruction and that it is not near you or anyone else.**

- Squeeze the trigger fully and glide the harvester into and through the crop, maintaining the desired cutting height.
- It may be necessary every so often, especially with taller crops, to pause and flip any cut greens bunched up behind the roller to the back of the basket.
- Reposition where you left off and begin again.
- When full, empty basket contents into a harvest tote by holding the end of the basket closest the operator over the tote vertically, and shaking it slightly.
- Return to step 2.e. and continue harvesting.



2. **“Cut-and-come-again”**

operation: For this, a very level, even cut is desirable, so that in subsequent cuts, you are able to cut just above the previous pass in order to harvest only new growth from the crop. Re-growth in cut-and-come-again plots is typically much less dense than the original growth. The Quick Cut Greens Harvester allows harvesting even sparse stands because the unique macramé roller draws any standing leaves it encounters into the blade for a quick, clean cut.


3. **Taller or “Leggy” crops:** It may be desirable to cut at a considerable height above soil level and leave behind leggy petioles. You will also find it difficult to cut anything taller than the distance between the cutter bar and the shaft of the macramé roller. For this reason, if you desire to do so, you may need to cut just the top portions of the leaves of more mature stands. Simply maintain the desired cutting height evenly across the crop, leaving behind the unwanted stems.

4. **Keep it sharp!** It is critical for proper operation of this product that the blades be maintained and sharpened often. Refer to the **MAINTENANCE** section for in-field sharpening and periodic redressing of blades.



MAINTENANCE: *This tool is a fine cutting instrument with many moving parts. The better it is cared for, the better it will continue to perform in the field. Periodic cleaning and sharpening as well as careful storage are crucial to keeping it in working order and ready when you need it.*


1. **Lubrication:** For convenience we have included a small amount of food grade lubricant with your harvester. The blade should be lubricated before first use and periodically thereafter. We would suggest lubricating it every time you re-dress (not field sharpen) the blade.

 **Stop! Ensure that the blade guard is installed before you proceed.**

- a. Remove the blade guide pin and pivot the blade forward. This will leave the blade guide slot accessible for oiling.
- b. Slide the tip of the lubrication bottle along the slot and squeeze the bottle slightly to drizzle oil into it. Also oil the blade slide bearing (C) at the right end of the blade.
- c. Re-install the blade and guide pin. Use a rag to wipe off any excess oil.



2. On-site sharpening in the field:

 **Stop! Remove battery from drill and don a pair of gloves.** Cut-resistant butcher's gloves are best, but if unavailable heavy leather work gloves are recommended.


- Turn the harvester on its left side (the side without the drill).
- Using a **Johnny's 9175 Round Diamond Hone**, "strop" the hone back and forth across the top blade; do not attempt to sharpen individual scallops.
- Repeat for the opposite side.



3. Redressing the blades: We recommend using a **Work Sharp Tool and Knife Sharpener** to redress the blade. This can be purchased on our website.

- Place harvester on a work bench with the blade hanging over the edge.
- Install a grey fine grit belt on the sharpener and rotate the head all the way clockwise as viewed from the side so that the top pulley is pointing forward as shown below.




 **Stop! Remove battery from drill and don a pair of gloves.** Cut-resistant butcher's gloves are best, but if unavailable heavy leather work gloves are recommended. **Don safety glasses also.**

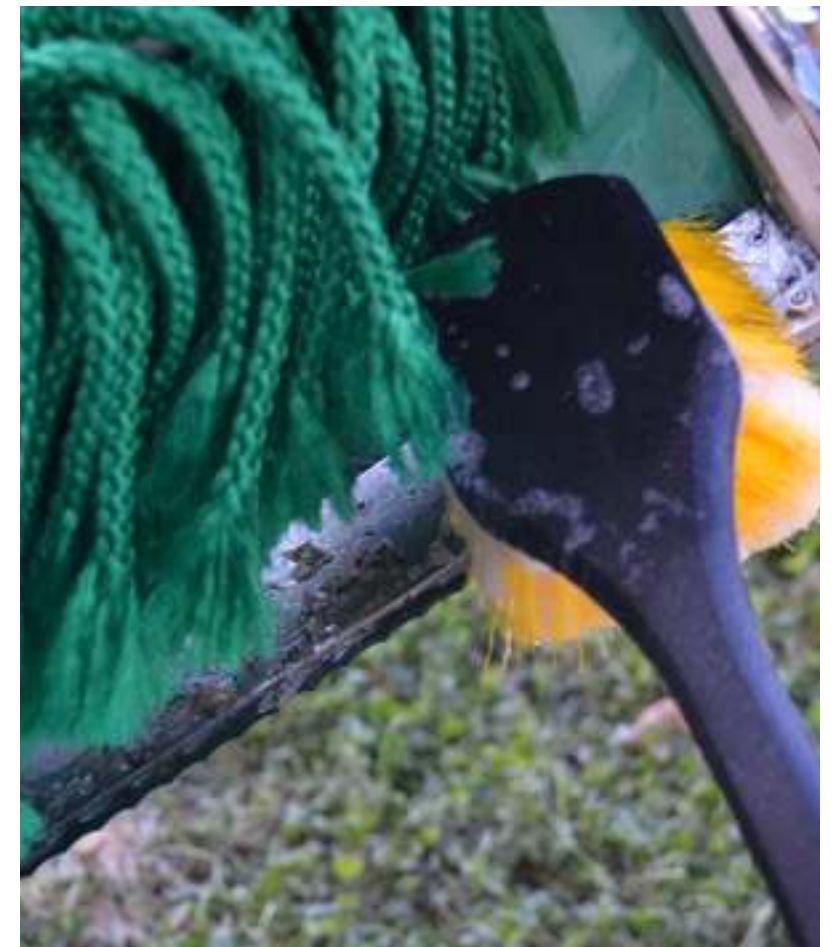
- Approach the blade with the sharpener as shown above. When sharpening, hold the sharpener at a slight angle so that you are contacting the blade with only a portion of the belt. This will help prevent rounding off the points on the serrated blade. rotary tool or drill so that the grinding stone is at a similar angle as the bevel in the scallops of the blade. Sharpen each scallop in the blade individually - just a couple seconds each should be enough in most cases.
- Turn the harvester over and repeat for the opposite side of the blade.



4. Post harvest cleaning:

 **Stop! Remove battery from drill and don a pair of gloves.** Cut-resistant butcher's gloves are best, but if unavailable heavy leather work gloves are recommended.

- Remove blade guard if installed.
- A damp rag may be enough to clean your harvester. If not, set your hose nozzle at "Jet" or similar highest pressure setting, and hose off the lower assembly and basket, removing any soil and remaining crop material from the harvester.
- If crop material or juice has been allowed to dry on the blades or material, you can use a stiff bristle brush and a wash solution of water and liquid dish detergent to clean the harvester more thoroughly. A long handled brush is ideal as it keeps hands further from the blade.
- Place guard back over blade.



5. **Storage:** It is extremely important that you store your harvester in a safe spot to prevent inadvertent damage and accidental injury.

- Remove drill.
- Place guard over blade.
- Hang in a secure, dry location with the blade facing the wall.





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