



**SERIES 20 PASTURE HARROW
PRODUCT MANUAL FOR SETS**

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PASTURE HARROW SETS SERIES 20

PRODUCT MANUAL

This Product Manual must be given to the Owner of the Harrow and the Operator(s) of the Harrow and any person(s) who carry out any service work / repairs to the Harrow.

This Product Manual contains important information about the Harrow and its Intended Use, Safety, Set Up & Assembly Instructions and Operating Instructions.

Please read this Product Manual. Thank you.

Additional copies of this publication are readily available direct from Murray Agricultural Equipment.

SERIES 20 PASTURE HARROW

Thank-you for selecting an item of equipment or service part manufactured or supplied by Murray Agricultural Equipment – building quality & value priced harrows for Australia & export markets. This product manual covers complete harrow sets, components and service parts.

Please study the information contained in this product manual. Please retain this product manual for reference and re-read it from time to time to refresh your memory. Please ensure all future operators and owners of this product study this manual or the latest edition of this manual. Additional copies of this publication or the most recent edition are readily available direct from Murray Agricultural Equipment.

Correctly assembled, operated & maintained, and used for the purpose for which it was designed, this product should provide productive service. Your attention is drawn to information contained in this manual. Following the appropriate guidelines and instructions will contribute to reliable, effective performance and maintain the manufacturer's product warranty cover.

SAFETY

“A Special note – Please read it”

- Work safely and promote safety at all times.
- Familiarize yourself, employees & contractors and other people with all and any safety warnings, marks or instructions issued, marked or affixed to this product. Work in accordance with these instructions at all times when around this product.
- This product is intended to be pulled (towed) by a tractor correctly fitted with an approved rollover protection structure. This product is NOT intended for use with an “ATV” or “Ride on Lawn Mower” or similar machine.
- This equipment is not intended to be used or operated, serviced or repaired by children under the age of 18 years or persons who are not medically fit.
- Children, especially young children, should be supervised to ensure that they do not play with or near this equipment. Encourage children to keep away from farm machinery including this product.
- Do Not climb on Agricultural Equipment including this product.
- You and other people must be especially aware of the dangers from moving, sharp, falling or mobile components or equipment including tractors and engines, and of the danger from mechanisms or assemblies that can be activated remotely by other people.
- Wear and use the appropriate safety clothing and equipment.

- This equipment is not intended to be used on or travel on roads or freeways.
- When transporting this product in conjunction with (connected to) a tractor or another vehicle, transport only when safe to do so and **transport speed** (not work speed) should not exceed 20 kph.
- Electrical Safety; “Look Up And Live” When near powerlines, always Look Up And Live & Look Around And Live. Contact with powerlines and other electrical wires can end in tragedy.
- Replace any safety or warning labels on this product if they become damaged, unclear or unreadable. Labels are available as a service part.

SERIES 20 PASTURE HARROW SET – “MEDIUM / HEAVY DUTY”: USAGE INFORMATION

The Murray Series 20 Pasture Harrow is designed to be used as a “Medium / Heavy Duty” Pasture Style Harrow pulled (towed) by a **tractor correctly fitted with an approved rollover protection structure**. In general it is suitable for pasture areas larger than 40 to 60 hectares (100 to 150 acres) in total where the pastures are in good or reasonable condition or in areas that pastures need an extra tickle up or working by a pasture style harrow. Maximum operating speed is 7 km / hour. The Series 20 Pasture Harrow is **Not** intended to be used as a “Light Duty” style “Pasture Harrow” (refer to the Murray Series 05 Pastureland Harrow – “Light Duty”) or as a “Cultivation” style harrow or as a “Levelling” style harrow etc.

NOT INTENDED FOR USE WITH AN “ATV” OR “RIDE ON LAWN MOWER”

THE MURRAY SERIES 20 PASTURE HARROW (OR ANY OTHER MURRAY HARROW) IS NOT TO BE ATTACHED TO / USED IN CONJUNCTION WITH OR PULLED BY AN “ATV” OR “RIDE ON LAWN MOWER” OR SIMILAR MOTIVE POWER MACHINE.

Murray Agricultural Equipment expressly prohibit the attachment to / use with or pulling by an “ATV” or “Ride On Lawn Mower” or similar form of machine regarding a Series 20 Pasture Harrow or any other Murray Harrow.

If, for whatever reason, attachment / or use in conjunction with or pulling by an “ATV” or “Ride On Mower” or similar form of machine was being considered **STOP NOW!**

DO NOT PROCEED WITH ASSEMBLY OR ATTACHMENT!

If you purchased this Harrow **brand new** contact the Murray Dealer that sold this Harrow to you or Murray Agricultural Equipment NOW to **arrange a return of this Harrow.**

SET UP INSTRUCTIONS

DANGER; Use extreme caution to prevent injury when handling or working with the tine sections (points) as the tines are very sharp. A Tine or Tines should never be assembled in any other position that the way they were designed or intended to be positioned, ie; Tines should never be assembled so some or all of the tines are positioned the other way or positioned so they are pointing upwards etc.

When assembling equipment for delivery or in preparation for field work please follow these general instructions.

Always refer to the appropriate assembly drawings and / or instructions during assembly.

“Left” and “Right” are relative to a position behind the implement looking forward to the hitch point.

Assemble the implement on a solid, level surface wherever possible.

SERIES 20 PASTURE HARROW SET: NORMAL PACKAGING

“DRAG” TYPE SET;

Quantity	Description
1	“Front” Drag Type Harrow Drawbar
1	Bundle (or stack) of the required number of Tine Harrow Sections
1	Or 2 (as required) bundles of Harrow Chain Mesh

ADDITIONALLY FOR, “HOIST LIFT” TYPE SET;

Quantity	Description
1	Hoist Frame (2 Pull, use the plates welded in each corner)
1	And when required, Set of “Lift Chain Assemblies” attached to the Chain Mesh And / or
1	“Rear Lift” Harrow Drawbar

SERIES 20 PASTURE HARROW SET: ASSEMBLY INSTRUCTIONS

SAFETY TIP: Safety Glasses should be correctly worn by the person(s) removing tie-wires.

STEP 1: Remove all tie-wires and shipping tags from components.

STEP 2: **ASSEMBLY TIP; we suggest you use the front harrow drawbar as an assembly guide, therefore;** Lay out front harrow drawbar, with labels facing up, on solid level ground large enough for the harrow set. (Naturally, leave enough space for the remainder of the set.)

STEP 3: Carefully, place the individual tine harrow sections with their tines downwards so that they line up with the drawbar and the tine harrow front hooks correspond with their respective drawbar rings sets.

STEP 4: Assemble the end ring of each ring set to its tine harrow front hook.

STEP 5: Unpack and unroll the chain mesh bundle(s) and place at the rear of the harrow sections so the attaching couplings line up with the rings welded on the last rank of the tine harrow sections. Note; the chain mesh section can lay either way; there is no top or bottom.

STEP 6: Assemble the couplings to the welded rings.

STEP 7: Applicable to Sets with a coverage wider than 2.59 M / 8'6". Where the Chain Mesh section is supplied in two "halves", assemble the joining plates on a drag type set together using the bolt and 2 locking nuts. (When assembling a "Hoist Lift" type set, assemble the joining plates together using the bolt with the nut on the inside and the nut welded onto the half link of the centre "Lift Chain Assembly" on the outside).

STEP 8: To assist in transportation, the tine harrow sections are supplied rigid with the 2 locking nuts firmly "pulled" up on their respective long bolts. The harrows should never be used in this state. The result may be that the nuts become loose due to the severe vibration caused from working and components separate from the tine harrow section. On each of the long bolt assemblies (with the exception of the bolt assembly in the last rank [rear] of each tine harrow section) back off the outside nuts and loosen the inside nuts so that the ranks of tines are able to move freely around their respective pivot points.

Operating note: Please allow for freeing up of the "stump jump" action after the early stages of the implement's use. (Refer to section: Operating Instructions for further details). Carefully retighten the outside nuts in order to firmly lock the 2 locking nuts together to stop the assemblies from becoming loose in operation.

If you are assembling a “Hoist Lift” type set, please continue from step 9. If not, please refer to sections; Special Notes & Operating Instructions.

STEP 9: Place the Hoist Frame over * the assembled Front Lift Harrow Drawbar, Harrow sections and Mesh Chain section with the 3-point linkage mount pins facing towards the front harrow drawbar.

* Alternatively, the Hoist Frame may be fitted to the * * *
Alternatively, the Hoist Frame may be fitted to the tractor’s 3-point linkage system prior to attaching the harrow set and then, with care, the harrow connected to the Hoist Frame.

The Hoist Frame is fitted with Category I and Category II lower link pins and top holes. A Category I top pin is supplied. Please use a bush (not supplied) to convert the category I top pin to category II or use a category II pin (not supplied). Use the 3 supplied lynch clips for the top and lower fittings to ensure these areas do not become disassembled.

STEP 10: Disassemble the 2 pull bolts located on the front of the hoist frame and position the front lift harrow drawbar so that each of the 2 front pull rings are between the two mount plates located at each front corner of the hoist frame. With the bolt heads underneath, assemble the pull bolts through the bottom and top one hole plates with the pull rings in between the plates and secure with the nuts and steel split pins supplied. When the harrow is fully assembled bend the split pin’s legs to avoid the nuts becoming undone.

STEP 11: Where rear “lift chain assemblies” are supplied: The number of lift chains varies according to size of set and whether the chain mesh is a standard or a super type. The centre lift chain, if supplied, slips over the centre hook on the rear of the hoist frame and the outside lift chains slip over their respective outside hooks. Where ever possible, select the end link of each “lift chain assembly” to slip over a lifting hook.

We recommend, wherever possible, that the “lift chain assemblies” are not in tension while the harrow is in operation on the ground. By having the assemblies “loose” it assists in the correct operation of the harrow set and reduces the wear on the chain itself. Adjustment of the tractor’s 3-point linkage fittings may assist in complying with this recommendation.

STEP 12: Where a “rear lift drawbar” is supplied: Fit the rear lift drawbar on the back of the hoist frame by placing the 2 pull rings on the drawbar over the hoist’s 2 outside rear lifting hooks. Disassemble each of the harrow lift clip assemblies and reassemble around their respective outside tine on the rear rank of each harrow section.

SPECIAL NOTES:

If the harrow set is **not** required to be “taken apart” we generally recommend that all or some of the couplings, links, harrow hooks etc, be closed up. Safety Glasses should be correctly worn by the person(s) hammering the couplings, links, harrow hooks etc closed. For a permanent situation welding of these closed up components may be considered.

Please ensure the person who is carrying out any welding work is qualified as a welder if this step is undertaken. Ensure all safety procedures are adhered to during welding.

Please dispose of any packaging and shipping items thoughtfully. Thank you.

SERIES 20 PASTURE HARROW SET: OPERATING INSTRUCTIONS

Recommended maximum working speed is 7 kph. For better results, and to safeguard the implement, do not operate the harrow above this speed. Operation at a speed greater than 7 kph (4 mph) will result in premature wear and damage to the harrow and may void manufacturer's product warranty.

For a "hoist lift" type set we recommend, wherever possible, that the harrow's "lift chain assemblies" are not in tension when the harrow is in operation on the ground. For further details please refer to Step 11 of the set up instructions in this manual.

Tine harrow section locking nuts: it is recommended the tightness of the 2 nuts on each of the tine harrow section's "long" bolts be checked several times during the first few hours of work and there-after when required to assist in keeping the 2 nuts firmly locked together. Failure to carry out this procedure may result in the nut(s) becoming loose with the result that nuts, tines, spacers and bolts may separate from the harrow sections and become lost in the field.

The “stump jump action” of the tine harrow sections may become freer when any paint and/or metal burs around the pivot points are worn off during the early stages of the implement’s use.

The tine harrow sections should never be used in a rigid state with the “long” bolts and 2 locking nuts “pulled” up. For further details please refer to step 8 of the set up instructions in this manual.

Special operating note: flexibility is essential for effective working of a Murray Pasture style harrow. Wear is a natural consequence of flexibility. Operation below the recommended maximum working speed will assist to optimise the implement’s working life.

Replace any safety or warning labels on this product if they become damaged, unclear or unreadable. Labels are available as a service part.

Inspect this product prior to use. Ensure that all couplings, rings, hooks etc are correctly assembled / attached. Replace any parts (couplings, rings, tines etc) on this product if they become worn or unserviceable.

Safety Glasses should be correctly worn by the person(s) hammering couplings, links, harrow hooks etc.

NEVER GET UNDERNEATH A HARROW; Safe work practice directs that operators and other persons never get underneath a Harrow Set or components of a Harrow at any time while attempting to clear or clean the Harrow of grass matter or any other material or blockage and when carrying

out maintenance or at any other time whether the Harrow Set or components of a Harrow are attached to a 3 point Linkage Lift frame or a drag type set. Failure to do so will / may result in death or serious injury.

NO RIDING ON A HARROW; Owners and Operators must ensure that no person(s) or animals ride or are carried etc on a Murray Harrow. Failure to do so will / may result in death or serious injury.

**SERIES 21 HOIST FRAME – 3 POINT LINKAGE FRAME;
(Where supplied)**

NO RIDING ON A HOIST FRAME; Owners and Operators must ensure that no person(s) or animals ride or are carried etc on the Murray Series 21 Hoist Frame or a Murray Harrow. Failure to do so will / may result in death or serious injury.

NO CARRYING OF ITEMS ON A HOIST FRAME; Owners and Operators must ensure that no item(s) apart from one Murray Harrow Set designed to attach to a Murray Series 21 Hoist Frame is placed or carried on a Hoist Frame. The Murray Series 21 3 Point Linkage Hoist Frame is designed to carry, when correctly attached, one Murray Harrow set only. It is **not** intended to be used at a load carrying device or a material handling lifting device or a pulling / pushing device. Failure to do so will / may result in death or serious injury.

Murray Series 21 Hoist Frames must never have their maximum lifting capacity exceeded at any time. Exceeding a Murray Series 21 Hoist Frame's maximum lifting capacity at any time will / may result in damage to the Hoist Frame and property & equipment etc and will / may result in death or

serious injury to person(s) and animals. Safe work practice directs that operators and other persons never get underneath, nearby or on top of a Murray Hoist Frame. Ensure all people have their feet, arms and body clear of Harrows and Hoist Frame when the Harrows & Frame are being raised, lowered and during field work & transport. Failure to do so will / may result in death or serious injury.

STAND CLEAR OF “PINCH POINTS”; Owners and Operators must ensure no person(s) or animal(s) are permitted to stand within or be allowed to be nearby a “Pinch Point”. A Pinch Point maybe an area between the front of a Hoist Frame & Harrow Front Lift Drawbar and the rear of a tractor when the Hoist Frame is connected to a tractor.

A Pinch Point maybe an area between a Harrow Set and the rear of a tractor when the Harrow Set is NOT connected to a tractor and the tractor is being reversed so as to enable the Harrow Set to be attached to the tractor. A Pinch Point maybe an area between the tractor’s rear tyres and a drag type Harrow Front Drawbar when the tractor and attached Harrow Set is turning a corner.

Operating Instructions for Towing Vehicles;

This equipment is not intended to be used on or travel on roads or freeways. When transporting this product in conjunction with (connected to) a tractor or another vehicle, transport only when safe to do so and **transport speed** (not work speed) should not exceed 20 kph.

When towing equipment combinations, the maximum equipment combination ground speed shall be limited to the lowest specified ground speed of any of the towed machines.

The maximum travel speed is that specified in the operator's manual(s), Speed Identification Symbol (S I S), or information sign of towed equipment, or the limit of the road conditions, **whichever is the lesser**.

GENERAL

Additional copies of this publication are readily available. Please contact Murray Agricultural Equipment.

We do not recommend the adding of any extra weight to this harrow.

If you require assistance in any way with the Murray Series 20 Pasture Harrow please contact your dealer, area distributor (where applicable) or Murray Agricultural Equipment.

Information contained herein is from data available at time of publishing. Due to a policy of continual product research and evaluation, Hugh Murray & Son Pty Ltd trading as Murray Agricultural Equipment reserves the right to change specifications without notice and without obligation.

E. & O. E.

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NOTES

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CUSTOMER PURCHASE INFORMATION:

Date of Purchase:

Dealer Purchased From:

Model No.:

The above information will help us to service any warranty
claims.