

2002 Growers Idea Contest Finalists

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2002 GROWERS IDEA CONTEST FINALISTS

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This information provides a brief description of the idea. The author and the idea contest committee do not imply any guarantee of grower safety or satisfaction with the adoption of an idea. Users of any idea manufactured for resale assume all liability regarding patents on use of any idea for commercial sale. Individual growers who desire to utilize an idea are encouraged to contact the grower and/or agriculturist for specific details on use of an idea.



VACUUM SHUT OFF FOR JOHN DEERE PLANTER

The idea consists of four camper sewage duct valves that are spliced into the vacuum lines of a John Deere 24-row planter. These valves shut off the vacuum to groups of six planter units independently, thus preventing seed from being planted from those six units. Valves are opened and closed by use of automobile electric window motors operated by toggle switches mounted in the tractor cab. The planter units are shut off to prevent seed overlap on field margins, point rows, or over tile intakes. The idea works well and is inexpensive. This new idea was used one season. Cost was about \$300.00 in materials and it took about 10 hours to put together and mount on the planter. This idea was used on 518 acres of sugarbeet, and 1600 acres of corn and soybeans.

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HYDRAULIC DEFOLIATOR DOOR OPENER

The devise alleviates manually opening top doors on Defoliator to clean or inspect the machine. A mounted hydraulic motor turns the pipe on which the cable is mounted. The cable wraps around the pipe which then lifts the canvases. It saves on physical labor lifting heavy doors with dirt and beet debris stuck to the bottom of the door. Doors can be opened by anyone regardless of physical limitations. It performs very well. This idea has been used for one season. The cost was approximately \$600.00 - \$150.00 for metal, \$150.00 for hydraulic hoses, \$200.00 for a hydraulic motor, and \$100.00 in labor. The cost savings is that the doors can be opened by anyone regardless of physical limitations and attempt to reduce injury, back strain, and physical labor. This idea was used on 514 acres. This devise aids in ease of cleaning, resulting in the machine being cleaned more often. It also reduced clumps from the defoliator falling in the row finder row and thus reduced harvesting difficulties.

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PULL TYPE WEED CUTTER BAR

This idea was adapted from a loader-mounted sickle that was used the previous year. The grower wanted to cover a wider swath and be able to cover more acres in a shorter period of time. By mounting the sickle bars on the Melroe drag frame, the machine can be folded for transport. This idea consists of a 20 ft. and a 30 ft. sickle bar mounted on a Melroe drag frame. The overall width of the cutter is 46 ft. due to overlap of the sickle bars. The sickle bars are driven by hydraulic motors, which drive the gearboxes. The drives are adapted from two combine grain heads. Twelve-inch extensions were added to where the wheels connect to the frame to increase clearance over the crop canopy. This idea is used to cut weeds off at the height of the sugarbeet canopy. The cutter bar can be operated at speeds of up to 5 mph which allows the operator to cover up to 25 acres an hour. This idea has been used for one season. The cost of materials was approximately \$2,500. The idea took about 20 hours to assemble. The cost savings on this idea reduces the need for hand weeding of the sugarbeet crop. Cutting the weeds reduces crop competition from shading, and reduces weed seed production. Also, cutting weeds reduces the problems weeds cause at harvest time. This idea was used on 900 acres.

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STOP ON A TRIANGLE DRIVE ON A WIC DEFOLIATOR GEARBOX

This idea allows for easier removal of the drive from the drum because the bolts in the drive can be used to extract the triangle from the drum. The stop consists of a 13/4" pipe by 3/4" in length with a washer welded on the end. This stop prevents the triangle drive connected from the gearbox from shifting on the flail drum drive shaft. There were no problems encountered during the one season of use under tough harvest conditions. The stop was used for one season. This idea cost approximately \$2.00 in materials, and took about 30 minutes to put together. The cost savings was that the stop prevents wear of the drive shaft. The idea was used on 500 acres.

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THREE POINT HYDRAULIC DRIVEN SICKLE MOWER FOR LATE SEASON WEED CONTROL IN SUGARBEET

This idea originated because the wing gauge wheel had to be moved to fit the row and the gauge-wheel mounting had to be extended slightly so it could go over the top of the canopy. This tractor mounted CRP Clipper is manufactured by Faul Manufacturing, Harvey, ND. The CRP Clipper works well for late season weed control in Sugarbeet. Farmers often struggle with what to do with the late season weeds. This 25-foot clipper enables the farmer to increase the sunlight to the Sugarbeet canopy. By increasing the sunlight, tests have shown the plant will increase the quality of the crop. The CRP clipper is very functional. The height of the clipper is adjustable and the entire unit can be put in transport in a matter of minutes. This idea has been used one season on 3,000 acres. The cost was \$6,500. Cost savings is that the machine will clip at a rate of 20 acres/hour. Tractor speeds of about nine mph seem to work well. Slower speeds of less than five mph were not as effective, because it tended to push the weeds.

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