

A MECHANICAL MEANS OF RIDING AND PULLING WEEDS

Lawson Smith, Nurseryman Rayonier Incorporated Glennville Nursery, Glennville, Ga.

One of the biggest problems in nursery operation is that of weed control. Many chemicals are on the market to control weeds, and other means are available, such as sprays and hand weeding. Since hand weeding is the surest method of destroying weeds, but very expensive, we have developed a means of riding and pulling weeds. For practical purposes, this device is called a Weed Puller.

The Weed Puller consists of a frame made of 1 1/2-inch galvanized pipe. The frame is 6 feet wide and 6 1/2 feet long at its longest point (fig. 1). On top of the frame is attached a roof made of two pieces of 4- by 8-foot corrugated aluminum roofing (fig. 2). Three adjustable seats are attached to the frame, and back rests are also- attached for comfort. Each seat has two foot rests; the rear two are adjustable. The tractor can be steered remotely from either front seat. The gas and lift can be operated remotely from the right front seat. 'Wheels are added to the rear to prevent scraping when coming out from the end of a bed, and they also take some weight off the tractor lift (fig. 3). The wheels can be adjusted up or down as the seedlings grow. For safety a switch is added to stop the tractor in an emergency. The Weed Puller travels at speeds of 1/4 to 1 m.p.h. depending on the amount of weeds in the bed. The Weed Puller travels about 2 inches above the bed. Three men can pull the weeds in 2 to 3 acres per day.

We use mineral spirits as a chemical weed control, but this chemical will not control several species of weeds. Therefore, much hand weeding must be done during the summer months. The use of mineral spirits remains fairly constant at a gallon per thousand seedlings, which results in a cost of about 17 cents per thousand.

In 1958 the cost of temporary labor used only for weed pulling was 15 cents per thousand seedlings. Since then we have been developing the weed puller, and no temporary help has been used. Our saving has been 15 cents per thousand less the cost of the Weed Puller and that of operating a tractor to pull it, a very small percent of 15 cents.

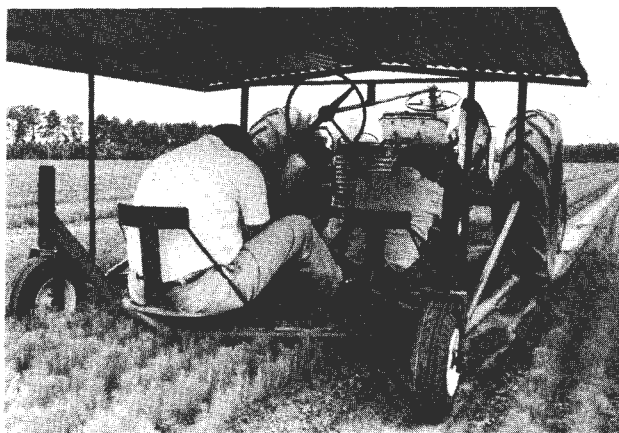


Figure 1.--Weed Puller with remote steering apparatus. The frame comes to a point and allows the rear man to ride over center of bed. Note wheels can be adjusted up or down.

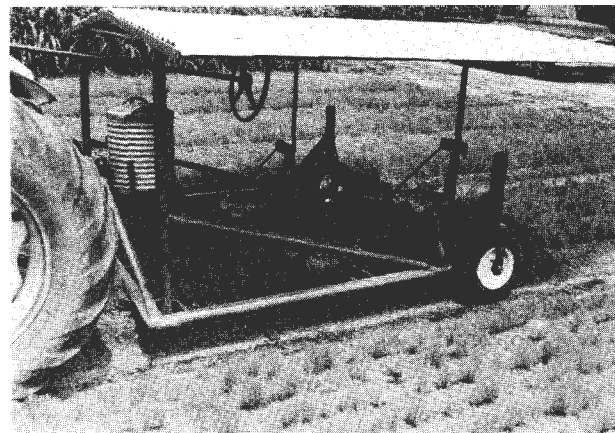


Figure 2.--Bracing, seat arrangement, roof, and water cooler (side view).

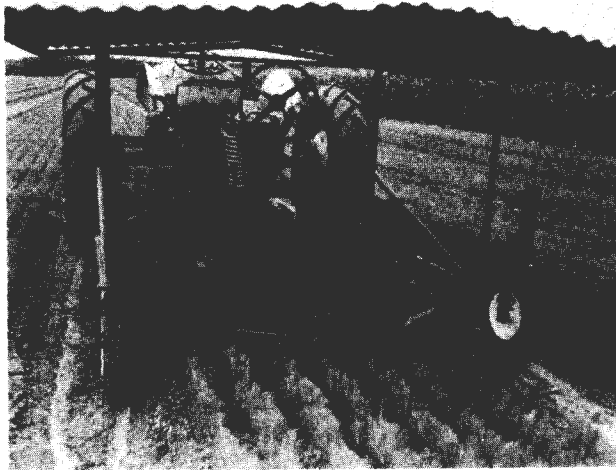


Figure 3.--Each front man weeds three rows of shoulder on his side. Rear man weeds the two center rows and pulls weeds missed by front men (rear view).

The cost of the Weed Puller has been approximately \$175.00 since used parts, such as a universal joint, a steering wheel, and the seats, were purchased. The three-point hitch was made from parts of an old cultivator.

Much thought has gone into making the Weed Puller. It is not perfect; however, when pulling weeds sitting and riding is much better than walking and stooping. The aluminum roofing reflects heat and makes it possible to work in the hottest part of the day and still be reasonably cool.

The Weed Puller has many advantages. The following are just a few:

1. Cuts the cost of operation.
2. Men ride while pulling weeds. Even though legs are cramped, strain is relieved on back and legs as stooping is eliminated. Riding in the shade makes the job more pleasant.
3. For large nurseries, additional Weed Pullers could be attached on each side of the Weed Puller, thus working on three beds with one tractor.
4. Next spring, we anticipate using the Weed Puller to straighten straw on beds after planting.