Adapting the Marbeet Midget Beet Harvester to Experimental Plot Harvest

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Two years ago it was decided to adapt the Midget Harvester to plot harvest. This endeavor was necessary as it was becoming more difficult to acquire labor, and especially experienced labor, to harvest plots. The Midget was chosen as it lent itself more readily to plot harvesting and was becoming more generally used in California. Accordingly, Luke Schmidt of the Blackwelder Manufacturing Company incorporated the ideas of L. A. Kloor, research agriculturist, Holly Sugar Corporation, and the author into the design of the additional equipment needed.

The following equipment is needed:

1. A chute attached to the end of the harvester elevator which diverts the beets into the weighing basket.

2. A weighing basket 2 feet x 2 feet x 2 feet and made of 1/4-inch mild round steel. This size basket will hold 250 pounds of beets. The basket is fitted with a bail which rests in two hooks welded to a movable shaft which holds the basket rigid while being filled.

3. A 300-pound capacity spring scale attached to the basket.

4. A tripod which is clamped onto the two sides and rear of the cart.

The following procedure is used:

The harvester is driven into the plot and continues until the elevator is full of beets. It is then stopped and a sample taken. The harvester is then driven to the end of the plot and stopped when all the beets from the plot are run through the topping discs. The beets are run into the basket and if desired another sample taken at this time. The beets are weighed and the weight recorded. The basket is emptied by means of a trap door in the bottom of the basket. The beets fall to the floor of the cart and are run out into the truck while the next plot is being harvested.

Five men are needed to conduct the harvest. These consist of a tractor driver, two men on the cart to collect the samples and weights and dump the beets, one man following the cart to pick up any beets missed by the pickup wheel and tie the sample bags, and a truck driver.

The primary advantage lies in the fact that it is possible to harvest with a smaller crew, the output per man hour being almost twice that of a harvest conducted entirely by hand. The equipment will fit on any Midget harvester. The Plot harvester has been used for two years in California and one year in Wyoming and has proved to be very satisfactory.

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