

Data were obtained on the cost of operating mechanical equipment, some of the changes needed to improve its operation, and the amount of physical damage to potatoes harvested.

Work was directed toward developing and testing equipment to be used at the packinghouses to aid in removing clods, vines and trash from potatoes hauled in bulk. Attention was given also to the problem of transferring potatoes from bulk trucks to bins as used by some of the packinghouses in the Hastings, Florida, area.

The purpose of this report is to describe the various systems and equipment being used to harvest and handle potatoes mechanically in the Southeast and to present data on amount of use, performance and cost. Major emphasis is given to describing problems encountered and suggestions for improving the operation of mechanical equipment. No effort is made to analyze cost and quality factors, as these data will be presented in another report.

SYSTEMS AND EQUIPMENT FOR HARVESTING AND HANDLING POTATOES

Systems for harvesting and handling potatoes, as used in the Southeast, may be classified into three groups: (1) conventional system, (2) completely mechanized system, and (3) partially mechanized system.

CONVENTIONAL SYSTEM

In the conventional system of harvesting, a one-row or two-row tractor-drawn digger is used to dig the potatoes and drop them back on the ground. They are then picked up by hand and placed in field containers—bags or boxes. When the potatoes are hauled from the fields the containers are loaded on trucks manually and are also unloaded manually at the packinghouse.

COMPLETELY MECHANIZED SYSTEM

In complete mechanization, both the harvesting and the handling are mechanized. Mechanical equipment is used to dig the potatoes and load them in bulk in special bodies mounted on trucks or trailers. The bodies are hopper-shaped and have in the bottom a draper chain (rod) conveyor by which the potatoes are unloaded (Fig. 1). This conveyor is driven by a detachable electric motor (Fig. 2).