

amount of use, performance, and cost of operating equipment and to make suggestions for improving its operation. Definite progress is being made in the use of mechanical equipment in the Southeast.

Systems for harvesting and handling potatoes may be classified into three groups: (1) conventional system, (2) completely mechanized system and (3) partially mechanized system. In selecting equipment to partially mechanize, a grower should keep in mind the system he might ultimately use, since equipment selected for one system might be used later in another system.

The investment in a unit of equipment for the direct method of harvesting varies from \$7,500 to \$10,000. The average rate of harvesting for two-row machines has been about 100 hundred-pound packed bags equivalent per hour in Alabama and about 137 packed bags in the Hastings area. Data on cost indicate that if mechanical equipment is operated with reasonable efficiency, cost of harvesting and handling potatoes is 5 to 10 cents per packed bag less than with conventional methods. The amount of physical damage in mechanically harvested potatoes is no more than in potatoes dug and handled by the conventional method if the harvesting and hauling equipment is carefully operated and the packinghouse set up properly to receive potatoes handled in bulk.

The selection of equipment depends on such factors as capital available, type of equipment already owned, soil type, variety of potatoes, harvesting conditions and facilities for packing potatoes. The farmer should select the type of equipment that best fits his particular situation.

Rate of harvesting can be maintained at a high level by proper operation of the harvester and by obtaining as good field conditions as economical. Training labor on the harvester for the most efficient performance, and adequate maintenance to reduce time loss due to mechanical breakdown, are important factors in increasing output.

Careful operation of the harvester is essential if the amount of physical damage in the potatoes is to be kept low. The amount of agitation should be kept to the minimum that will provide an optimum amount of separation. Damage can be reduced by providing protection for the potatoes while on the harvester. Care must be exercised also in operating the elevator to prevent