

the washhouse under much more satisfactory working conditions.

This study points out the greatest possibilities for saving labor by mechanical harvesting devices. They are listed in order, from the possibilities of the greatest savings to the least:

1. Mechanical loading.
2. Mechanical stripping.
3. Mechanical top cutting.
4. Mechanical root cutting.

The development of mechanical loading would affect the following operations: packing, handling empty boxes, loading, stacking, unloading, dumping, and repairing damaged boxes. In addition, the saving in field box expense must be considered as well as the added weight of the field boxes. Under the present system 9 to 11 pounds of field box must be hauled to the field and handled a number of times to carry 39 pounds of celery to the washhouse. There are between five and eight tons of waste from an acre of ordinary yielding celery. The field boxes required to harvest an acre of celery weigh more than five tons and not only must be hauled both directions but also must be handled a number of times each round trip. There would be little difference in hauling the celery waste or the field boxes. Celery waste could be reduced at the washhouse by means of a press. By-product uses of celery waste are now being developed.

Mechanical stripping does not seem to be a likely development in the near future, because of the inherent characteristics of the stalk. With mechanical loading the job of stripping is greatly simplified, because all the celery is brought to the worker in the washhouse. The need to stoop over for each stalk is eliminated. Mechanical top cutting would save considerable stripping labor because there would be less stalk to handle.

It is not odd that the persons interested in mechanical harvesting have concentrated on root cutting. One naturally thinks of cutting the stalk from the ground as the primary harvesting job. Not until after a careful study of the time required to do the various jobs involved in harvesting does one realize that there are other functions far more important. To save the most labor present effort should be devoted to mechanical loading rather than to the root-cutting operation.