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Bulk Handling vs. Sack Handling of Grain on Farms in the Pacific Northwest
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Bulk Handling vs. Sack Handling of Grain on Farms in the Pacific Northwest

The question of methods of handling grain has received much attention from wheat growers in the Pacific Northwest during the last few years. Large acreages of wheat land in this area are very rolling in topography and present more difficult problems in grain handling from those presented in other areas. In a study of the comparative cost of bulk handling and sack handling of grain and the farm management problems involved in making the shift from sack to bulk handling on farms in the Pacific Northwest, the Agricultural Experiment Stations of Oregon, Idaho, and Washington working with the Bureau of Agricultural Economics of the United States Department of Agriculture have arrived at some interesting conclusions.

The greatest appeals which bulk handling make to the grain grower are, first, the elimination of the arduous labor involved in handling sacked grain and, second, the elimination of the cash expenditure for sacks. To the farmer, handling grain in sacks, observing neighboring farmers handling their grain in bulk the difference in physical labor required in obvious. When times are hard and every effort is being made to reduce cash outlay, savings by the bulk method in eliminating the sizeable bill of expense for sacks proves highly attractive. The average cost of the combining operation was found to be cheaper for bulk handling than for sack handling while the average cost for hauling was slightly cheaper for sack handling than for bulk handling. Considering all phases of the problem the average savings realized from bulk handling during 1929 on the farms studied were approximately three and three-fourths cents per bushel on hilly land and four and one-half cents per bushel on level land where the grain was bulked directly from the combine to the shipping point. Man labor costs in combine operation are less under the bulk method of handling grain because the sack method requires from 1 to 2 more men per combine crew. Fourteen and sixteen-year old boys and men beyond their prime are not overtaxed as members of the bulk harvesting crew. Less "out of pocket" expense results when such family labor replaces the stalwart hired hand required when harvesting by the sack method.

Hauling grain in bulk is easier but not cheaper than hauling sacked grain. The bulk truck must be in almost constant attendance at the combine to prevent delay. The saving of time gained by ease in loading and unloading bulked grain may easily be lost by this "tending" operation. The cost of hauling bulk grain from the combine to farm storage was found to be nearly as great as the cost of hauling from combine to shipping point. It was found too, on the 316 farms studied, that farm storage of bulk grain cost more per bushel than storage at commercial rates at shipping points.

A number of growers are following the practice of bulking by "cutting in". A small number of sacks are purchased and used several times during the season by bulking at the elevator. In following this method the farm organization for handling sacked grain is not materially changed. This practice

Note: These conclusions were based on detailed information secured from wheat growers and wheat handlers in the region. The complete results of the study will soon be available in a bulletin of the United States Department of Agriculture.
reduces the cost of the sacks but effects no savings in the amount of man labor and gives little relief from the physical exertion expended in sack handling. Congestion is experienced at the elevator when trucks wait in line while the sacked grain is "cut in".

Shifting to bulk handling is very much easier, and greater savings result, where the land is level or only gently rolling. The efficacy of the bulk handling system under favorable ground conditions is demonstrated by its wide spread use in the comparatively level wheat producing areas of the middle west. While still in the process of experimentation, some progress is being made in the development of satisfactory bulking equipment for use on steep slopes. The most difficult problem to solve is encountered where steep slopes are accompanied by light porous soils. Under such conditions the bulk combine tends to cut deeply into the soil, presenting difficult draft and traction problems. Combine wheels may need to be widened, additional horses or larger tractors may be required, and lighter loads of grain may be carried in the bulk tank. Where slopes are extremely steep additional investments in equipment and added labor expense are incurred in transferring the grain from combine to trucks for the haul to shipping point. Before investing, growers planning to shift to bulk handling where slopes are steep should assure themselves that the contemplated equipment is adapted to their conditions.

Bulking machinery for use on level land has long since passed through the experimental stage and reached the point where satisfactory performance may be expected from most equipment offered for sale.

Where grain is bulked directly from combine to shipping point, little outlay is necessary in converting sack equipment for bulking. With the present meager facilities for storing and handling grain in bulk at most country shipping points, however, relatively few growers may enjoy this simple organization without quickly overtaxing their shipping facilities. Any sizable volume of bulk grain delivered to small country elevators must be immediately loaded out and shipped to market to make room in the elevator for new supplies as they arrive from the farm. This practice tends to produce temporary gluts at terminal points with a consequent depressing effect on price.

It seems apparent that adequate facilities for storing and handling bulk grain must be developed at the country shipping point or growers must erect their own farm storage plants. It has been shown that farm storage is more expensive for the grower on the average sized farm than storage at commercial rates at the country shipping point. It has been further demonstrated that the investment in the farm storage plant with its attendant upkeep expense and the extra labor involved in additional handleings of the grain, materially reduces, and in some cases eliminates, savings which might otherwise accrue to the bulk handling method. The inability to obtain loans on farm stored grain and the lack of an entirely adequate system of improved roads which would permit delivery of grain at any season of the year, are factors still further discouraging farm storage.

Probably the most plausible solution of the storage problem lies in the erection of adequate bulk handling facilities at the country shipping point. The grain trade through the entire region has made its investments primarily in warehouses and equipment for handling sacked grain. They will not willingly relinquish a profitable business in the sale and handling of sacks and, in
addition, provide much more expensive facilities for handling grain in bulk, to permit the grower to follow a more efficient method of handling grain on the farm. In a few areas where growers have largely shifted to bulk handling, established dealers have been forced to provide bulk handling facilities or lose all their trade. Such pressure, however, can not be exerted till the majority of growers in any community have made the shift. It seems more probable that such construction will in many instances be delayed until growers are financially able to erect facilities by cooperative effort.

While an ultimate shift to bulk handling over much of this region is desirable and may be expected, the change should proceed cautiously, care being exercised to coordinate the movement so that bulk handling facilities at country shipping points and terminal markets shall keep pace with increasing volumes of bulk grain received from the farm.