COMMERCIAL HARVEST ON INCENTIVE BASIS

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Michigan has grown potatoes for a number of years. The white varieties have been the predominate ones grown for the fresh and the chip markets. Growers have never produced the amount of potatoes consumed within our state.

In 1965 Ore-Ida Foods came to Michigan with their frozen potato plant. The variety of potato their plant required was the Russet variety. This was the first potato processing plant to consume such a large volume of potatoes and made quite a difference in growing potatoes in Michigan mainly because of the switch to the Russet varieties.

Ore-Ida to assure enough volume to operate at full capacity contracted acreage of potatoes in Michigan. In the first two years of contracting potato acreages there was only one incentive clause. That clause was for U.S. No. 1's and it read as follows:

"The base amount shall be increased by one cent per cwt. for each percentage point that the grade of said potatoes exceeds 50 per cent U.S. No. 1's. The base amount shall be decreased by one cent per cwt. for each percentage point that the grade of said potatoes falls below 50 percent U.S. No. 1's."

The processor bought, paid for and stored the potatoes as they were dug in the fall. Under these conditions the processor stood all the losses that occurred during storage. In other areas the contract was on an out of storage basis. That meant the grower would stand the shrink and losses for poor quality.

The better growers wanted an incentive clause written in the contract that would pay them for their efforts in producing quality potatoes. In 1967 this bruise clause was written in:

"Starting from 50% bruise free, for each 3 percentage points up to 80%, a premium shall be paid of 1c/each 3 percentage points with a maximum premium of 10c. From 50% bruise free down to 20%, a penalty shall be charged of 1c/each 3 percentage points with a maximum penalty of 10c."

Bruise means an injury, caused by a blow or fall, which does not break the skin but sometimes discolors the internal potato. On potatoes this discoloration will show up 48 hours later.

The potato industry is interested in this discoloration and bruise because under improper conditions this will cause the potato to deteriorate. Anyone using this potato has to cut it off, so it is wasted and makes for a costly operation because of weight loss and cost of labor. With Michigan being a manufacturing state the labor pay rate is high compared to other nonmanufacturing states. Regardless of who owns the potatoes when they are put into storage this bruise is a very important item.

To determine the bruise, a sample is taken from each load dug. This sample is taken to the plant and held for 48 hours, lye peeled and then inspected by State Inspectors. Any potato with a discoloration was called a bruise.

In 1967 another incentive clause was added to the contract. This was:

"The base amount shall be increased by two cents per cwt. for each percentage point the foreign material was reduced below 10 per cent to a maximum of 10c per cwt. The base amount shall be decreased by two cents per cwt. for each percentage point the foreign material exceeds 10 percent. The % of tare to be averaged over the contract. If the tare exceeds 15% the load shall be turned down."

This is pretty much self explanatory.

The last incentive clause I want to mention is:

"An increase of one and three-tenths (1/3¢) per hundredweight for each percent above 12 percent of ten-ounce or larger U.S. No. 1's and U.S. No. 2's processing grade combined up to 30 percent for a maximum of twenty-three cents(23¢) per hundredweight."

Today the thinking is towards the severeness of the bruise. This means the size of the bruise in comparison to the size of the potato. For example -- a large potato with a very small bruise with little waste compared to a smaller potato with a large bruise with a lot of waste.

The potato areas of Michigan have different problems which can cause lower grading. Following are three examples taken from the total cwt. purchased by the processor in 1968:

Greenville	No. 1's	58%
	No. 1's 10 oz.	7%
$\mathcal{A}_{i} = \mathcal{A}_{i} = \mathcal{A}_{i}$	No. 2's	29%
	No. 2's 10 oz.	6%
	Bruise Free	71%
Lakeview	No. l's	61%
	No. 1's 10 oz.	9%
	No. $2^{1}s$	22%
	No. $2's 10 oz$.	6%
	Bruise Free	65%
Edmore	No. 1's	62%
	No. 1^{1} s 10 oz.	11%
	No. 2^{\dagger} s	23%
	No. $2's$ 10 oz.	5%
	Bruise Free	72%

Some of these problems that can be controlled by the grower are as follows:

Stones
Soil Type
Handling technique
Dates of planting and harvesting

Some of the factors that the grower cannot control are:

Ground and air temperature Weather Maturity of crop

These are some averages per day on 100 acres and over showing bruise free compared to date of harvest and corresponding lower ground and air temperatures:

Sept.	11,	1968	78%
Sept.	28,	1968	76%
Oct.	15,	1968	73%
Oct.	31,	1968	68%

Some of the changes the growers are making in order to improve the number of bruise free potatoes include air machines to lesson stone bruising, sandy soil where available, and a few are experimenting with the use of windrowing to see if this will help to eliminate bruising and take less harvesting time.

The manufactors of equipment have gone along with designing machinery with less drop and more padding.

In the long run everyone has to be made aware of rough handling - the grower, processor, wholesaler, retailer, and all who handle potatoes.

The clauses included in the contract have been excellent incentives for the commercial grower and have meant extra dollars in the good grower's pockets.

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