

SOME ECONOMICS OF POTATO STORAGE

by
Howard V. Copenhaver
Farm Services Officer
Peoples National Bank

In starting to look at the economics of potato storage, I first looked at the dollar value and whether it was a needed capital expenditure on the part of the potato grower. The longer I inquired as to the need for potato storage, I began to realize that it just wasn't the dollars you as a grower have invested. But, what has potato storage done for this industry?

Potato storage for this area has created a chain-like reaction in this industry. From technical and positive research on how to keep potatoes in large quantities and at high quality for extended periods of time, have come the fresh and processing plants that operate on almost a year round basis. Just here in the Columbia Basin alone, this has created 12 new processing plants with 11 of them coming in the last 9 years.

This in turn has turned the wheels of progress on - in this industry, by creating jobs of all kinds. From construction - to production to service related occupations. To illustrate this, I would like to point out the growth of bank deposits for this area. As of December 31, 1965, there were in excess of \$50,000,000 and as of December 31, 1972, they now exceed \$99,000,000. I am sure the potato industry can be credited for a large portion of this increase in total deposits.

Believe it or not, lending institutions are always interested in you as a borrower and your winning and paying out on whatever venture or project you go into.

Simple economics tells us that if we can preserve a perishable product, such as potatoes, and sell it when the processor and customer want it, more money is to be made on this commodity. All we have to do is think back a few years when this area attempted to sell nearly all of the potatoes through the fresh market slot and how disastrous it was in some years. A potato storage is just one of the means of brokeraging this perishable commodity on a futures market.

In discussing the subject of potato storage, I think it should be approached as if the grower and investor would be discussing it with me as a member of a lending institution.

Of course, my first question to you will be the old standard. Why do you want to build a potato storage?

I believe there are a number of questions that should be asked before we go too far on this subject.

1. Is potato storage on your farm necessary?
2. Are you going to stay in the potato business?
3. If so, how many acres do you plan to grow each year?
4. How many acres CAN you grow each year within your normal crop rotation?
5. Do you have the space?
6. Do you have the place to put it so it is convenient to unload, load out, proximity to fields, roads, drainage and road restrictions?
7. Will the construction and ownership make you money?

8. If so, how much?
9. What changes will have to be made in equipment, harvesting, hauling, pilers? What will the costs be for the changes?
10. What market are you selling on? The fresh, processed, open or contract?
11. Who will you be selling to? Are they fiscally sound and able to meet their commitments during the years you are paying for your storage?
12. What are the quality standards you have to meet with your storage?
13. What delivery dates are required?
14. What are the tax advantages to your farming enterprise?
15. What type of storage is best for your area?
16. How many bids for its construction?
17. Do you have adequate electrical service in your area?
18. Earliest date to start construction?
19. How do you propose to finance this structure? And at what rate of interest can you afford to pay?
20. Can you rent cheaper than own your own storage?

To give you an idea of the amount of potato storage here in the Columbia Basin, it is estimated that there is well over 1,100,000 tons of available storage. Now, just around Moses Lake alone there was approximately 13,000 tons of storage unused in 1972. My question is why was it unused?

1. Potatoes used at a faster rate in 1972 than prior years? Maybe.
2. Unused storage did not meet quality standards being required by the plants? Maybe.

I really feel that much of it went unused because some owners failed to answer all of the aforementioned questions and some I have missed, before the facility was constructed.

To look further into the situation, let's take a look at the 1972 production figures for the State of Washington. A total of 73,000 acres were grown which produced a record breaker of 418 cwt per acre or 20.9 ton per acre. This was the highest in the United States. With as fine a quality as anyone would ever want.

Another interesting fact that must be considered is that by October 6, 1972, 70% of the fresh sales had been met and 80% by November 8, 1972. The production figures for the State further show that 80% of the total crop of 30,495,000 cwt. is processed with 75% or more being under contract by the time summer harvest begins.

So it still appears good to go ahead and look at building a potato storage. We know to build quality storage, it will cost approximately \$1.00 per cwt. or \$20.00 per ton to construct and properly equipped it. I mean one which has a good fan system that will provide proper air movement, humidity, and temperature for as long as you wish to reasonably store potatoes.

With growing emphasis on quality as well as quantity, you as growers must be able to meet the standards of the fresh or processing market with whomever you have a contract. With this in mind, contact a quality builder who is experienced in the construction of potato storage for your area for your best estimate. Whether you build above or below the ground or half in or half out.

When a lender knows that you have \$550.00 or better per acre into a crop of potatoes, you better have the best.

Some of the data that was used for researching my material indicates a growing trend toward larger storages. It also appears that growers who can meet the demanding quality standards that are becoming evident in this industry, are also growing more acres.

For our example today let us assume that the grower plans to grow 250 acres of potatoes, two circles, at 20 plus tons per acre or 200 acres of 25 tons per acre. If these figures hold true you will need to build a 5,000 ton storage. I am told if you go smaller you should plan to increase the cost per ton because much of the equipment and the building supplies will not reflect the quantity discount that will be apparent at this higher tonnage.

One builder tells me the smallest storage he has built since 1967 is 3,700 tons. A 5,000 ton storage times the \$20.00 per ton of course, equals \$100,000.00 investment. Now I am sure that most of you would tie this in to a Real Estate loan but not always if it is planned to be a long term investment.

With interest rates predicted on the rise, I am using 8% for a start. One Hundred Thousand Dollars (\$100,000.00) at 8% based on a 20 year loan amounts to annual payments of approximately \$10,186.00, at 10% annual payments of approximately \$11,746.00, at 12%, annual payments will be \$13,388.00 & 12% on 10 years - \$17,699.00, 12% on 7 years - \$21,912.00. Five thousand (5,000) tons at \$3.50 per ton storage charge, yield an income of \$17,500.00 annually. The maintenance costs per year are quite low to date anyway. They should not exceed \$200.00 annually the first 5 years or \$300.00 thereafter. You would have to store at least 3,000 ton annually just to meet the payments at 8%.

So, purely from the figure standpoint, a fair return on this investment can be had every year. But again, I must caution you, you must keep the storage at 3,000 ton or more every year. Of course, I know these figures must be adjusted to suit individual financial conditions. We also know that there are additional monies paid for the storage of potatoes into late winter and early spring, based on time and quality out.

In further pursuing the economies of potato storage based on a 20 year life of the storage, after all maintenance insurance, construction cost and proper depreciation schedules have been applied, it appears that you have stored your potatoes for a figure between \$2.60 to \$3.00 per ton over the 20 year period according to one large storage firm. Yet other growers indicate a figure as high as \$6.00 per ton.

In summary, let me emphasize the following points:

1. Decide now whether you want to own your own potato storage for 1973 and 20 years to come.
2. Be sure you fully understand the financing you are obtaining before you start.
3. Start construction well in advance of when you need it. It always takes longer than you think.
4. Be sure it is being built by a quality builder.

5. Take all the precautions possible that a quality product will come from it. You get paid only for what comes out, not what goes in.
6. Go over your final plans thoroughly with your banker or lender before you sign the final papers so he knows what you are doing. He doesn't like surprises and neither do you.