

STORAGE FOR FRESH AND DEHYDRATION

by

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What are we striving for in fresh and dehydrated potatoes? For fresh pack we want exactly what the name implies -- a potato that is as "fresh" as possible. We want that potato to be as near like a potato that was fresh dug as we can get it with no bruises or blemishes of any kind. The same applies to our potato for dehydration. Our best recovery, color and flavor occur when the potatoes are coming from the field.

Our Company starts our preparation for storage with our planting schedule. We recommend planting the last of April or early May for quality, type and yield for our storage crop. This schedule, under normal conditions, gives us the maturity we need for good fresh pack. We like to see the vines beginning to change color about mid-August with a gradual yellowing to early September. Then killing either by frost or chemical by mid-September or at least 10 days prior to digging.

We have found the best time in the Basin to harvest storage potatoes for fresh pack is the last week of September and the first week or 10 days of October. We seem to achieve good maturity and have a good temperature range for digging, handling and storing during this period. We harvest for storage at pulp temperatures as high as 65° and as low as 38° with good results, but we have found that harvest pulp temperatures between 45° and 55° seem to handle better in all aspects of the storage program. We attempt to regulate our volume harvested during the warmer periods so that we can bring the pile to about 50° as rapidly as possible. We follow standard storage practices from then on except that after the suberization period we bring our pile temperatures to 42° and hold them there until we are ready to use the potatoes. Before removal we warm the potatoes to about 45° to 48° to minimize shatter and other mechanical damage.

We store at 42° to minimize the loss from rot and other shrinkage factors. Our experience has shown that sound potatoes in good storage will keep well under these conditions as late as early June and possibly longer with the use of sprout inhibitors. Maintaining a 42° temperature has not given an excessive sugar situation for our operation.

The topic of storage structures and equipment have been thoroughly covered in the past, but there are some faults that are very common in our storages that it would be very easy to correct.

The floor of the storage is frequently neglected. A good floor needs to be clean, level and firm. On the fresh pack operation we lose too many potatoes due to fresh cuts and bruises during the removal operation. The greatest damage occurs when the scooper is encountering an obstruction. Many of our newer storages are being built with a nice cement sill on the door that is slightly higher than the floor inside. This makes it impossible to open a storage without cutting and bruising the potatoes. Depending on the structure we should either bring the floor up or the sill down but keep the floor level. Another idea that would pay dividends to the grower would be to place a concrete slab outside the door. This would help keep this storage area clean and level and greatly facilitate opening storages.

As we move more into the sand areas with storage we need more emphasis on the floor condition. A soft sand floor is impossible to load from without a high damage loss to the potatoes, not to mention the added cost in man hours handling the equipment. We would like to see all the storages in the sandy areas put a layer of clay dirt or other material in that could be firmly packed. It would pay for itself in potatoes saved. It would also save in damage to the ventilation pipes. With a firm floor leveled up to the pipe outlet the aluminum or steel pipes will last much longer. Too often we see floors a few inches lower than the vent outlet. This tends to damage the first section of pipe.

Our recommendations for storing potatoes in brief are:

1. Proper maturity.
2. Careful and timely handling.
3. Well prepared storage facility.
4. Controlled temperature and humidity.
5. T. L. C.

We believe that you cannot store potatoes by following all these practices; then dialing in the temperature on the control panel and forget it. Good storage management is like good potato growing -- the person who eats, sleeps and lives with it does the best job. We believe in continual monitoring of the pile condition.

We check all storages daily and go over the pile at least twice a week looking, smelling and checking. Automation is wonderful but to date I don't believe we have replaced the sharp eye and good nose.