

## RUSSET NORKOTAH STORAGE

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Russet Norkotah is a major variety grown for the Idaho potato industry. This variety produces a large percentage of U.S. No. 1 tubers with relatively low specific gravity that are typically not suitable for process market. Russet Norkotah is primarily grown and stored for the fresh market, although culls, off-grade, or non-contracted potatoes are often used in dehydrated products. Although, it is usually not used for processing it may be utilized for fresh-cut fries in restaurants.

Russet Norkotah is traditionally stored colder (38-42°F) compared to Russet Burbank (44-48°F) to retard sprouting and disease development and to maintain overall quality. At these cold temperatures reducing sugars increase in the tubers (Fig. 1). In general, the upper limit for percent glucose on a fresh weight (%fw) basis for premium dehydration products is 0.2 to 0.25% and for frozen fry processing is 0.05 to 0.1 %, depending upon the buyer and end-product. High levels of glucose will also result in darker fresh-cut fries, which may make the product unacceptable to the consumer. Storing Russet Norkotah potatoes at 39°F resulted in greater weight loss (Table 1) and glucose levels that would be unacceptable for premium dehydrated products. By storing them at a slightly warmer temperature of 42°F, glucose levels are marginal for premium products and weight loss is mildly reduced. A storage temperature of 45°F resulted in acceptable glucose levels and the least amount of weight loss.

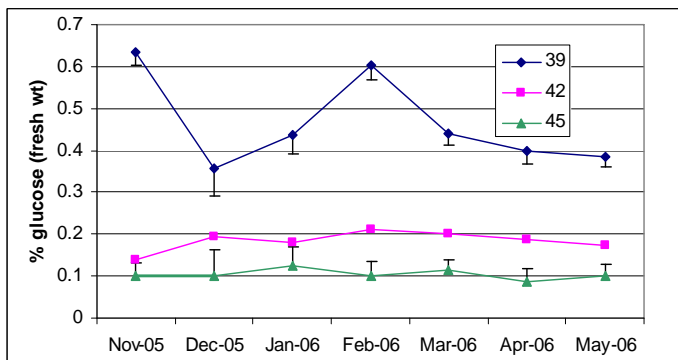


Fig. 1 Percent glucose (% fresh weight) of Russet Norkotah at three storage temperatures (39, 42, and 45°F)

Table 1. Percent weight loss for Russet Norkotah 220 days after harvest. Values followed by the same letter are not significantly different at p=0.05.

Storage Temperature (°F)	% weight loss	
39	5.4	a
42	4.5	b
45	3.1	c

Approximately 45°F storage temperature has been shown to be the point at which respiration in Russet Burbank potatoes and many other varieties is minimized. Our research shows a similar response for Russet Norkotah as evident by the least amount of weight loss at 45°F storage temperatures. The practice of storing Russet Norkotah at colder storage temperatures may increase susceptibility to pressure bruise, as well as increase shrinkage and reducing sugar levels. Colder storage temperature may eliminate the need for applying additional sprout control products, but the cost of sprout control may be offset by the decrease in weight loss observed at 45°F. Lower reducing sugar levels may also provide greater marketing options for the stored crop.