

BLAZER RUSSET

AGRONOMY NOTES

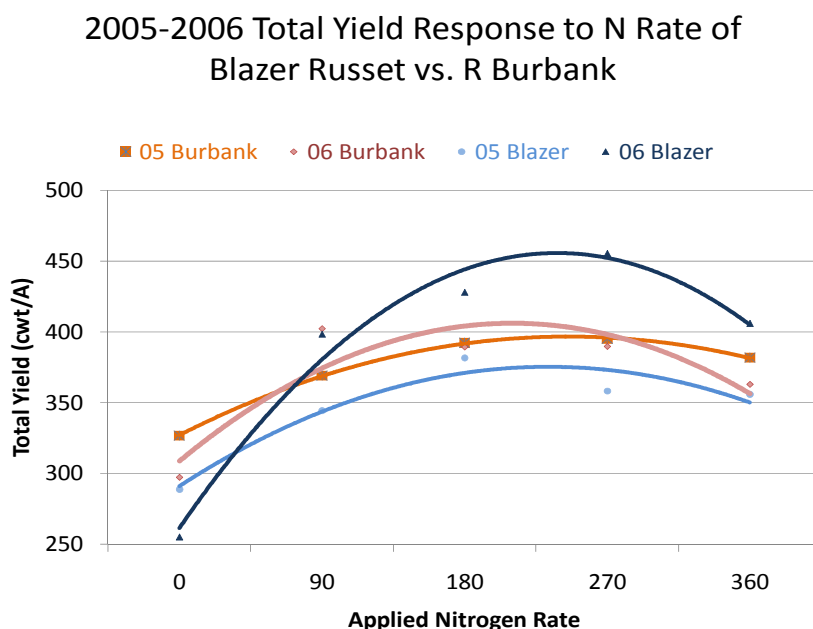
Blazer Russet – (A8893-1)

Blazer Russet is an early-maturing, dual-purpose russet variety that has found a niche within the processing industry as a replacement for Shepody. It produces a high percentage of U.S. No. 1 tubers and has an attractive appearance and excellent culinary quality, which makes it very suitable for the fresh-pack industry. Its ability to bulk early also makes it useful as an early processor.

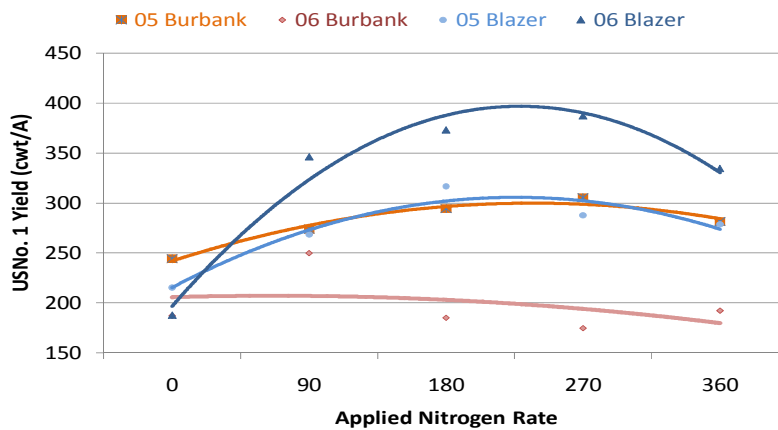
Fertilization

The following graphs present N response data from 2005 and 2006 for Blazer Russet and Russet Burbank grown on a Declo sandy loam soil at the University of Idaho Aberdeen Research and Extension Center. Trials were grown following grain in the rotation. Row spacing was 36" and in-row spacing was 10.6". Crops were irrigated to maintain available soil moisture above 65%. University of Idaho recommendations were followed for herbicide, pesticide, and fungicide applications.

Nitrogen response studies were conducted using five N application rates (0, 90, 180, 270, 360 lb N/acre) with half of total N applied pre-plant with the remainder divided into three equal applications at 2 week intervals starting at tuber initiation. Pre-plant available soil nitrate concentrations were 16 lb N/acre in 2005 and 18 lb N/acre in 2006.

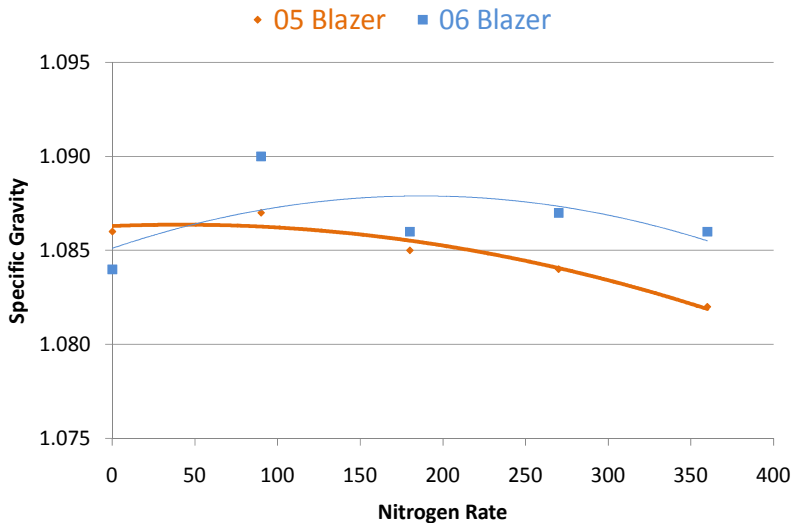


2005-2006 USNo.1 Yield Response to N Rate for Blazer Russet vs. R Burbank

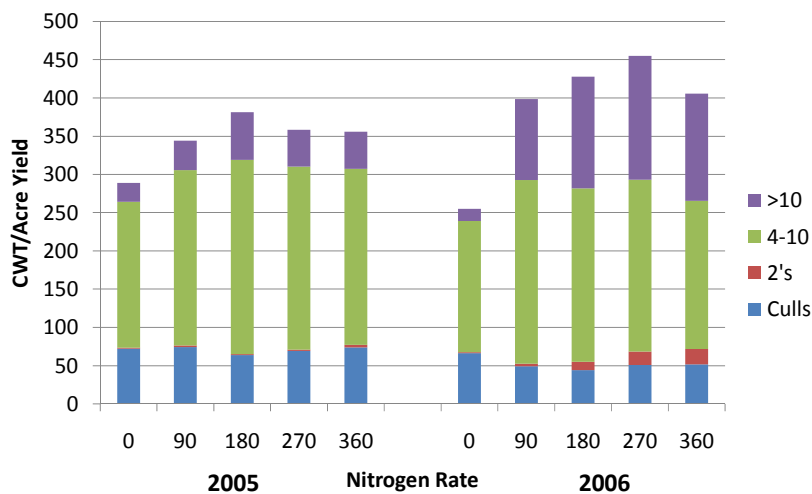


Total and US No.1 yield response to N application indicate that Blazer Russet requires about 90-100% of the N required for Russet Burbank (200-220 lb N/acre in southeastern Idaho). However, a higher proportion of the seasonal N requirement should be to Blazer Russet applied early in the growing season to support the earlier tuber development. Typically, one-half to two-thirds of the total N requirement (100-140 lb N/acre) should be applied by row closure, with subsequent in-season applications made via sprinkler irrigation based on petiole nitrate concentrations. Nitrogen uptake decreases substantially after August 1, so do not make N applications after that time. Petiole nitrate sufficiency levels are similar to those for Russet Burbank. Specific gravity of Blazer Russet is moderately sensitive to N application rate, with gravities decreasing gradually at high N rates.

2005-2006 Specific Gravity Response to N Rate



2005-2006 Size Distribution - Blazer Russet



The highest yields of 4-10 oz and > 10 oz US No. 1 tubers were obtained with N rates that produced maximum yield, while excess N reduced yields of US No 1 tubers and increased the proportion of culls and 2's.

Spacing

Optimal seed piece spacing for 36 inch wide rows is 9 to 11 inches with a planting depth 5 to 6 inches as measured from the top of the hill to the top of the seed piece. Blazer Russet has an intermediate number of eyes that are uniformly distributed. Consequently, seed piece size should range from 2.0 to 3.0 oz. Depending on seed piece size and in-row seed piece spacing, seeding rate per acre will range from 19.8 to 36.3 cwt/a when planted in rows spaced 36 inches.

Irrigation

Seasonal irrigation requirements for Blazer Russet are similar to those for Russet Burbank, although Blazer Russet is significantly more resistant to water-stress related tuber defects. Available soil moisture (ASM) should be maintained within the range of 65 to 80% for optimal yield and quality. Plant water uptake decreases appreciably in late August, so irrigation application rates need to be adjusted according to soil moisture measurements to avoid developing excessively wet soil conditions that promote disease.

Harvest

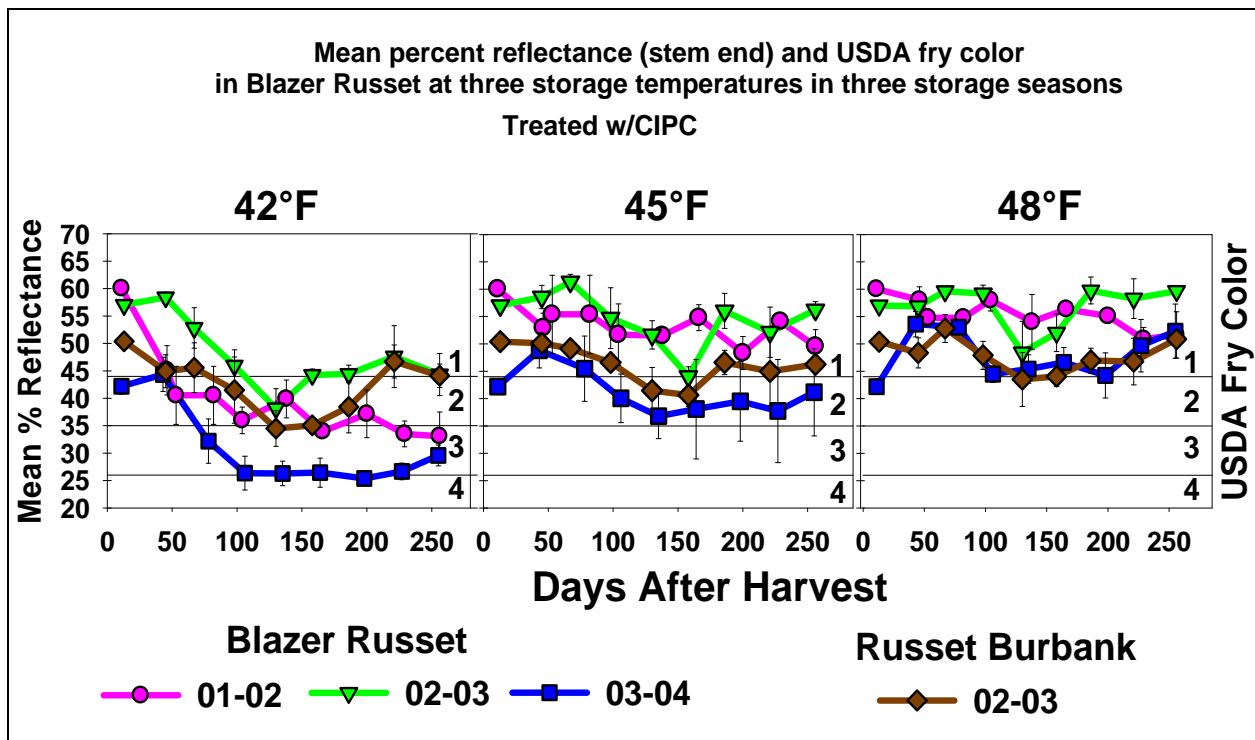
Blazer Russet's resistance to black spot bruise is similar to Russet Burbank but better than Ranger Russet. Therefore, available soil moisture after vine kill should be maintained above 60% to minimize

tuber dehydration. Ideally, tubers should be harvested at 50-60° F pulp temperatures and drop heights should be minimized to reduce tuber damage.

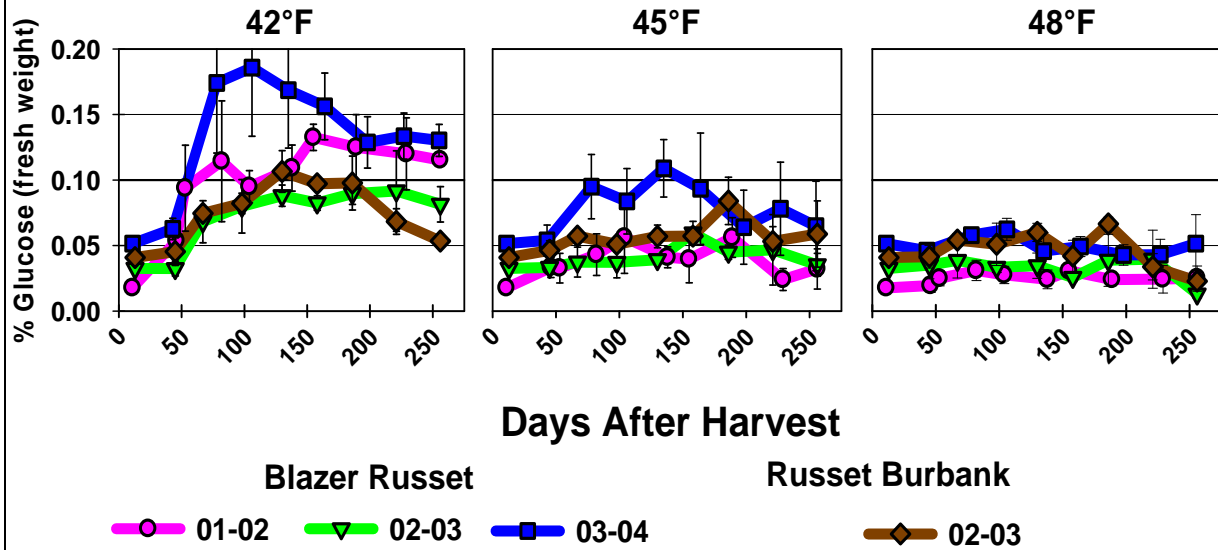
Storage

Tuber dormancy for Blazer Russet is about 40 to 50 days shorter than Russet Burbank. Consequently, apply a sprout inhibitor after 2 to 4 months when tubers are stored at relatively warm temperatures of 45 to 48° F. In the absence of tuber dry rot problems, Blazer Russet can be stored up to nine months for processing or fresh market uses.

During three years of storage research at Kimberly, Idaho, Blazer Russet exhibited low sucrose sugar concentrations from harvest throughout nine months of storage at 45 to 48° F. Glucose and fry color from non-stressed tubers also remained acceptable throughout nine months of storage with glucose concentration peaking at about 120 days in storage and then progressively decreasing. Research with Blazer Russet indicates that in growing seasons with normal growing temperatures, a storage temperature of 45° F is appropriate for processing. However, in years with significant periods of high temperature stress during the growing season, a storage temperature in the 46 to 48° F range may be necessary to maintain optimum processing quality.



Mean percent glucose (fresh weight) in Blazer Russet at three storage temperatures in three storage seasons.



Revised January 15, 2009