

UPDATE ON VARIETIES BEING GROWN OR CONSIDERED IN THE NORTHWEST

by
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As new varieties come into commercial production and are examined in detail in disease, pest, stress, and performance trials, we continue to learn more about their strengths and weaknesses. Of course each grower, processor, and researcher has a somewhat different opinion on these matters. Following is my opinion on the performance and potential of some new and old varieties being grown in the Northwest. These opinions are based on dozens of trials in both sand and heavy soils, under both sprinkler and furrow irrigation, under various fertility levels, and following exposure to as many diseases, pests, and stresses as we could provide.

Russet Burbank. Will be hard to replace but has many problems - low grade, net and internal necrosis, brown center and hollow heart, blackspot bruising and susceptibility to almost every potato disease. Its good yields, good storing and cooking qualities and wide adaptability have built for it a reputation for quality and have made "oblong russet" the prime selection criteria in most U.S. breeding programs. Still the one to beat!

Lemhi. Very nice oblong russet with good yield and high percent No. 1's. Can be harvested early in the fall. Few external or internal problems except for serious blackspot susceptibility and occasional serious hollow heart. It seldom shows brown center and usually has less hollow heart than Russet Burbank in Washington trials, but hollow heart can be very severe under excessive irrigation. Hollow areas are usually not discolored so not noticeable or damaging during processing. It has good solids, low sugars and fries well, even when stored as low as 40°F. Preliminary results indicate that early harvests have much less blackspot bruising, even if put into long term storage. It does not store as well as Russet Burbank, sprouts sooner and has some storage rot problems because of bruise susceptibility. Can be stored at cooler than normal temperatures to partially alleviate these storage weaknesses. It has good resistance to scab and is not quite as susceptible to some early dying diseases as Russet Burbank, but very susceptible to early blight.

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It is not as resistant to Sencor damage as Russet Burbank. Bruise susceptibility limits its use, but works well for processing when taken directly from field to factory during a 3-month period in the fall. Early harvesting or extra cool storing should be tried. The spectre of blackspot bruising might prevent its use for fresh market.

Nooksack. An unusual processing and fresh market variety that produces blocky, medium-russet, smooth tubers that are often flattened and sometimes pear-shaped. Because of extreme dormancy, seed needs to be warmed extra long before planting, which sometimes causes seed piece rot and poor stands. Some evidence that fertilizer on seed pieces or high soil fertility slows down emergence. It has few eyes, so large seed pieces needed. It usually produces low number of stems and tubers, so the tubers are generally large in size. It requires less irrigation and somewhat less fertilization than most cultivars, especially Russet Burbank. It usually produces less total yield than Russet Burbank, but has few culls so often produces more total yield of No. 1's. Seldom has serious external or internal blemishes but often has stem-end browning and will growth crack if irrigation rates are high. Occasionally shatter bruises. Has very high solids and generally low sugars, but occasionally develops some sugars in storage which discolor fries. Can not be harvested as an early cultivar, must be allowed to mature and suberize properly. If this is done shows little bruising and stores well, usually requiring no sprout inhibitor. It harvested properly or immature it will develop storage rots. Very resistant to scab and Sencor damage and has some resistance to Colorado potato beetle. It is somewhat less susceptible to early dying diseases than Russet Burbank. Because of the serious internal, bruising and storage problems being experienced in Russet Burbank and other cultivar, and because more growers are learning how to get a good stand of Nooksack with resulting good yields, this cultivar is continuing to grow in importance. It is particularly valuable where deep-pitted scab is a problem with Russet Burbank. It is a valuable long-term storage variety that can be used for processing or fresh market.

Butte. A late season variety with long, smooth, medium-russeted tubers that have few external or internal blemishes, so has high percent No. 1's. Unless fertilized and watered quite heavily and grown over a long season does not produce good yields and will produce pear-shaped tubers. However, if fertilized too heavily in early season will produce vines too large and too much set with resulting small tubers. Has worked well in western Idaho. Has good solids and cooking qualities, but develops high sugars and has dark fries after cold storage. Sprouts early in storage and has some shatter bruise and storage rot problems. Ships well. Has good scab resistance, but is susceptible to early dying. Should be evaluated in Columbia Basin as a fresh market and processing variety to be stored only a few months at higher storage temperatures.

A-72685-2. Oblong, medium-russeted tubers. Very good yields, good percent No. 1's, rather large proportion over 12 oz. Seldom produces knobs but often has rough shape. Occasionally has hollow heart and internal brown spot, but probably no worse than Russet Burbank.

Has good solids, but often produces only fair fries after storage that are often limp, variable in color with sugar ends. Does not store well, has short dormancy and shrivels badly unless properly harvested and suberized. Has some storage rot and blackspot bruising, about like Russet Burbank. Susceptible to scab, somewhat sensitive to Sencor, susceptible to early blight, but some resistance to Verticillium and Sclerotinia wilts. Because of poor storability, handling and frying characteristics and susceptibility to scab, it is questionable as a processing cultivar in the Columbia Basin. Should be tried for fresh market potential because of its high productivity and can be processed out of field. Being considered for naming and release.

Norgold Russet. Has become established as a line to beat for early fresh market because it has the desired oblong russet type, is very early, has few internal problems, and can be handled and shipped with few bruising or rot problems. It is not high yielding, has serious blackleg and early dying problems, has low solids and only marginal culinary quality, but its scab resistance and attractive appearance will help it retain its popularity.

Norgold M. One of the better of a series of Norgold selections made in Nebraska which have larger plants that are not so susceptible to early dying diseases, and consequently, usually have large tubers and higher yields. Unfortunately, this more vigorous top growth seems to cause more roughness and hollow heart than is found in standard Norgold. In most trials, Norgold M has been superior to Norgold. This selection and some of its sister selections should be looked at more extensively by Norgold growers in the Columbia Basin.

LC-1. An interesting new line that has small, compact plants which produce a medium yield of smooth, oblong, medium-russeted tubers that often have a pear shape. Requires less fertilization and irrigation than most varieties. It is an early-maturing line susceptible to early dying disease, but with good scab resistance. Has few external or internal blemishes and good bruise and rot resistance. Has good storability and fair solids and good processing qualities directly out of the field. Develops sugars in storage with resulting discolored fries. As this line becomes available it deserves extensive trials as a replacement for Norgold.

Russette. Produces low yields of small, oblong, flattened tubers with heavy russetting. Has a serious weakness to growth cracking and often has elephant skin and hollow heart. It has long dormancy and stores well. Has good solids and eating quality, but builds up sugars in storage which produces dark fries. It is somewhat susceptible to scab and is susceptible to early dying. Will probably have limited use in the Northwest because of low yields and disease susceptibility.

BelRus. An attractive cultivar which produces a low yield of long, heavy-russeted tubers with few external or internal blemishes except a strong tendency toward elephant skin, especially on lighter soils. It is a good eating potato. Is susceptible to scab and early dying. Resistant to leafroll virus. Will probably find very limited use in the Northwest because of low yields and disease susceptibility.

Sangre. The best new red variety for the West to come along in many years. Produces good yields of smooth, medium to large tubers with bright red color. Slow to emerge--not an early red. If harvested mid-season when mature, is excellent eating. No external or internal blemishes. Occasionally some shatter bruise and scab. As seed becomes available will become very popular red variety.

Shepody. A long, white processing variety released recently in Canada. Produces yields equal or often better than Russet Burbank and also processes as well or better. Doesn't knob as bad as Russet Burbank, but is at least as rough otherwise. Mid-season maturity. Storability and sugar development in storage still not well established. Susceptible to most diseases, including scab. Should probably be widely tested as processing variety in West, but so far has not shown any particular advantages over Russet Burbank.