# RANGER RUSSET CHARACTERISTICS

Release of A7411-2 as Ranger Russet, a high quality, dual-purpose russet potato variety.

The Agricultural Research Service, United States Department of Agriculture, Idaho, Oregon and Washington Agricultural Experiment States have participated in the development and propose the release of A7411-2. A7411-2 is intended for use for fresh market and for processing into frozen-fried products. A final decision on a variety name is pending.

A7411-2 was selected in 1977 from a cross of Butte and A6395-3. Selection and early testing of A7411-2 were done be J. J. Pavek and D. L Corsini, USDA-ARS, Aberdeen, Idaho. Advanced testing and seed multiplication were done by state, industry and private cooperators in the Western U.S.

A7411-2 is of late maturity with a medium-sized vine. It's tubers are long, slightly flattened, have a light to medium russet skin and white flesh.

Yield of A7411-2 is similar to or slightly higher than Russet Burbank (Table 1). Yield of U.S. #1's is significantly higher. The specific gravity of A7411-2 is consistently higher than that of Russet Burbank.

Baking and french fry quality are equal to Russet Burbank (Table 2). A7411-2 has been grown commercially for 3 years and has been highly satisfactory for processing. In storage, tubers of A7411-2 have relatively short dormancy while maintaining a medium to low sugar content. Seed tubers of A7411-2 are sensitive to excessive seed aging.

Tubers of A7411-2 are resistant to most economically important internal defects including hollow heart, net necrosis, and sugar ends. They are moderately susceptible to blackspot bruise (Table 3).

Seed of A7411-2 is available from seed growers listed in the Idaho, Montana and Oregon Seed Directories. Limited amounts are available for research purposes from J. J. Pavek and D. L. Corsini, USDA-ARS, or from S. L. Love, University of Idaho, Aberdeen, Idaho 83210.

Table 1. Total yield, yield of U.S. No. 1's and specific gravity of A7411-2 and Russet Burbank for trials conducted 1981-89.

| | State | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Idaho' | | | Oregon? | | | Washington3 | | | 3-State Average | | |
| | Yield (Cwt/A) | | | Yield (Cwt/A) | | | Yield (Cwt/A) | | | Yield (Cwt/A) | | |
| Clone | Total | U.S. No 1 | S.G. | Total | U.S. No 1 | S.G. | Total | U.S. No 1 | S.G. | Total | U.S. No 1 | S.G. |
| A7411-2 | 428 | 336 | 1.092 | 587 | 443 | 1.094 | 589 | 464 | 1.076 | 535 | 414 | 1.087 |
| Russet Burbank | 394 | 238 | 1.083 | 571 | 394 | 1.084 | 604 | 401 | 1.074 | 523 | 344 | 1.080 |

'Twenty-nine location/years are included in the Idaho data, including trials in Aberdeen, Kimberly, Parma, Rexburg, and Shelley.
[2]Eight location/years are included in the Oregon data, including trials in Klamath County, Hermiston and Malheur County.
[3]Four location/years are included in the Washington data including trials in Othello and Prosser.

Table 2. Baking and french fry quality of A7411-2 and Russet Burbank.

| | Baked Qualityl | | | French Fried Quality? | | | |
|---|---|---|---|---|---|---|---|
| Clone | Texture | Flavor | Overall | Color | Texture | Flavor | Overall |
| A7411-2 | 3.2 | 3.2 | 3.2 | 3.2 | 2.9 | 2.8 | 3.0 |
| Russet Burbank | 3.2 | 3.1 | 3.1 | 3.4 | 3.0 | 2.9 | 3.1 |

'Average of 3 evaluations conducted at Klamath Falls, OR and Blackfoot, ID. 1-5 rating scale with 1 = worst.
[2]Average of 4 evaluations conducted at Pullman, WA and East Grand Forks, MN. 1-5 rating scale with 1 = worst (darkest color, poorest texture and flavor).

Table 3. Internal defects in tubers of A7411-2 and Russet Burbank.

| | Defect | | | |
|---|---|---|---|---|
| Clone | Hollow Heart[s] | Net Necrosis[2] | Sugar Ends[3] | Blackspot Bruise[4] |
| | % | | % | |
| A7411-2 | 0 | 1.8 | 23 | 3.4 |
| Russet Burbank | 9 | 3.3 | 35 | 2.9 |

'Hollow heart - percent of tubers evaluated from 28 trials in Idaho, Oregon, and Washington.
[2]Net necrosis - 0-5 rating with 0 = best, evaluated 4 years at Kimberly, ID. [3]Sugar ends - percent of tubers showing sugar ends, evaluated in 8 trials in Idaho and Oregon under conditions conducive to sugar end development.
[4]Blackspot bruise - 0-5 rating with 0 = best, evaluated in 18 trials in Idaho.