

Russet Norkotah is an early-maturing variety with long to oblong tubers and dark russet skin that was released in 1987 by North Dakota State University. This variety is well-adapted for the fresh market because of an attractive tuber shape, but not well-suited for processing due to low specific gravity. Russet Norkotah is very susceptible to verticillium wilt and early blight, which may affect management practices. It is susceptible to most viruses and field diseases such as pink rot.

Since the original release of Russet Norkotah, several other line selections have been developed from the breeding programs in Colorado and Texas. These line selections have different growth patterns that result in slightly later maturity and higher yield potential. The latest maturing and highest yielding line selection is designated CO#3. A group of line selections consisting of CO#8, TXNS112, TXNS278, TXNS223 and TXNS196 are all very similar in growth and development, with maturities and yields that are intermediate between the original Russet Norkotah and CO#3. In this

Table 1 shows the recommended seed piece spacing for Russet Norkotah and the line selections. Intermediate line selections will require slightly closer seed piece spacing, and CO#3 should be planted even closer. It is especially important not to plant the intermediate line selections and CO#3 at an excessively wide seed piece spacing because of the potential for developing large tubers that are susceptible to hollow heart. Planting and/or final hilling depth should be approximately 6 inches as measured from the top of the hill to the top of the seed piece.

Fertility

No research information is available concerning phosphorus, potassium, or micronutrient requirements for Russet Norkotah and the line selections. Therefore, follow recommendations developed for Russet Burbank potatoes. See Tables 2 and 3 for recommended phosphorus and potassium fertilizer application rates based on soil tests. Russet Norkotah and the line selections generally have a small root system compared to Russet Burbank; therefore banding phosphorus at planting may be highly beneficial. Additionally, if soil tests indicate low zinc, it may be beneficial to add zinc in a band application.

Variability among fields, field cropping history, and disease pressure in the field can all influence nitrogen requirements, making it difficult to determine optimum application rates for Russet Norkotah and the line selections. In short growing-season areas, such as the seed-growing areas in Idaho, all nitrogen can be applied preplant. In commercial-production areas, split-apply the nitrogen with part preplant, and apply the remainder during the growing season as discussed below.

These are two key points to remember and follow in managing nitrogen for Russet Norkotah and the intermediate line selections. First, nearly all of the nitrogen should be applied by the end of flowering. This is important because Russet Norkotah and the line selections all have a very determinate growth

habit and developing a healthy

—Apply 60 to 70 percent of the total nitrogen preplant. Make in-season applications in small increments of 20 to 30 units of nitrogen with 70 to 80 percent of the nitrogen being applied by the end of the first flush of flowers. All the nitrogen should be applied before the first signs of plant senescence. Use the petiole nitrate-N sufficiency ranges in Table 6 to guide seasonal nitrogen application decisions.

grower experience has shown that
CO#3 and CO#8 are more tolerant of
early season moisture stress than Russet
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