

STERIC PRODUCTS ON POTATO - 2003

Monday, March 15, 2004

Two trials were done in 2003 using NAP's steric chemistry products on potato. These were both done in the Columbia Basin in Washington State. The first was a small plot study and the second was a commercial scale plot.

The first plot tested Steric-S and Steric-K in a furrow irrigated field of Russet potato. The grower standard was to pre-plant broadcast incorporated dry fertilizer at 100 lbs/A 21-0-0-24S, 100 lbs/A 11-52-0 and 100 lbs/A 0-0-51-17S. The Steric-S 1X plot received 25% of the grower standard S. The Steric-K 1X plot received 25% of the grower standard K. The applications were split over the season. They were surface applied to the soil and then watered in. Statistical analysis of the harvest data showed no differences in yields or in grading components. Petiole levels were basically the same (Figure 1).

The second trial compared the yield of two complete commercial circles of Ranger potato. In this trial the grower standard was Steric-P, Thio-Sul[®], 0-0-15, and UAN32. The trial circle (all Steric Program) received Steric-P, Steric-S, Steric-K, and UAN32. Petiole analyses (see Figure 2) were performed weekly during the growing season. The same amount of N and P was applied to both circles. The amount of S from Steric-S and K from Steric-K were 25% of the S and K respectively as compared to the Thio-Sul^{®*} and 0-0-15.

The field receiving the all steric program yielded 2 tons more per acre of marketable crop. The petiole levels of N, P, K, and S for both fields were nearly identical (see Figure 2) even though only 25% of the K and S were applied to the all steric field.

Alan S. Wicks, Ph.D.
Director of R&D
Plant Nutrient Enhancing Technologies Group
EXCEL Bldg Complex
Northwest Agricultural Products
Pasco, WA 99301

* THIO-SUL[®] - a registered trademark of Tessengerlo Kerley, Inc.

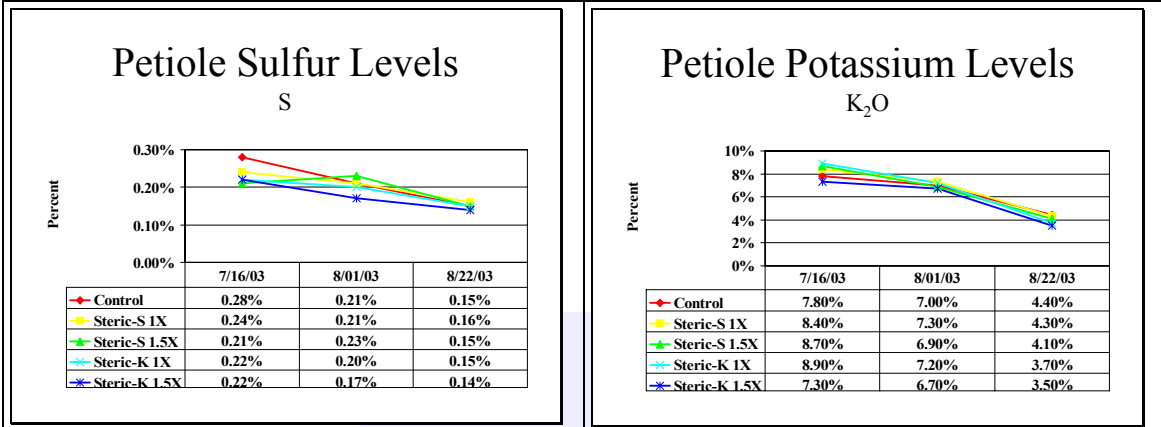


Figure 1: Petiole analyses for K and S. Furrow irrigated Russet potato. Control is grower standard. Plots receiving Steric-K 1X and Steric-S 1X received 25% as much K and S as the grower standard.

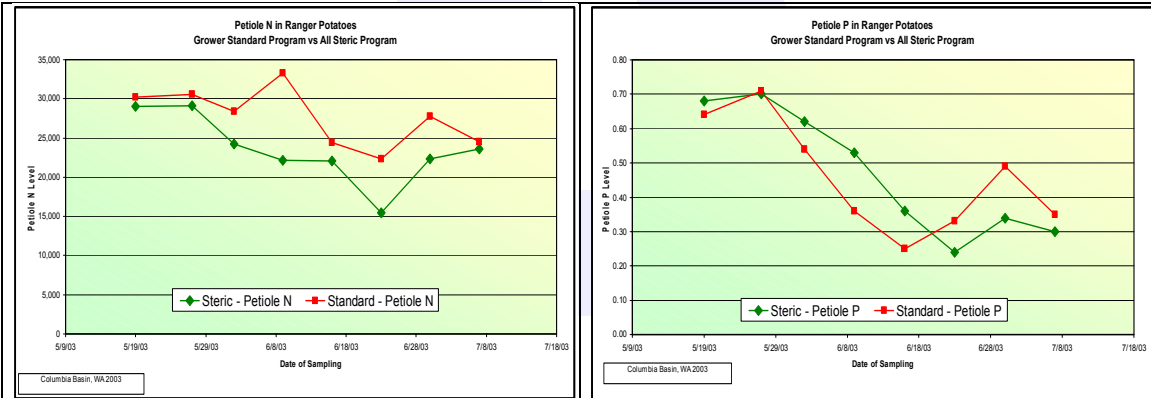


Figure 1A

Figure 1B

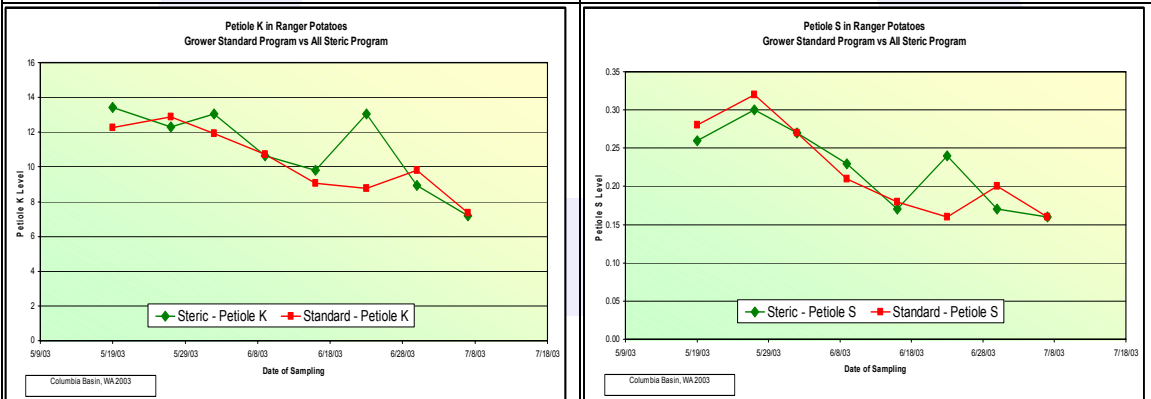


Figure 1C

Figure 1D

Figure 2. (A) Petiole N levels (B) Petiole P levels, (C) Petiole K levels, and (D) Petiole S levels. Both fields received UAN32 and Steric-P. The 'Standard' program received Thio-Sul[®] and 0-0-15 whereas the 'Steric' program was treated with Steric-K and Steric-S using the 1:4 ratio.

* THIO-SUL[®], A Registered Trademark of Tessenderlo Kerley, Inc