

These data indicate that a K deficiency in Russet Burbank potatoes will not occur as long as petiole K concentrations remain above about 7 percent. Growers monitoring the K status of potato plants can use this concentration to schedule additional K materials via fertigation. Applications should be made 15 to 20 days before petioles reach this concentration for best results as there is a lag period for uptake to occur. Future petiole K concentrations may be estimated by plotting known concentrations against time and projecting the concentration trend line. This should be done for each field as the pattern of petiole K concentration with time is highly variable. For highest tuber yields and quality, K concentra-

tion of the petiole should be kept above the 'K balance' concentration until about 20 days before scheduled vine kill or harvest for best utilization of K sources. This will also allow tuber K concentration to decrease towards the optimum concentration. **BC**

Dr. Westermann is Soil Scientist, USDA-ARS, Kimberly, ID. Dr. Tindall is Agronomist, J.R. Simplot, Pocatello, ID. E-mail: ttindall@simplot.com

Research conducted with partial financial support from PPI, IMC Global (Great Salt Lake Minerals & Chemical Corporation), Agrium Inc. (Cominco Fertilizer Inc.), Idaho Potato Growers Association, and Idaho Fertilizer and Chemical Association.



Alberta: Canadian Spring Canola Yields Keep Climbing

The report of a 71 bu/A spring canola yield featured in the recent article "High Yielding Canola Production" (*Better Crops with Plant Food* 84: 26-27) was out only for a short time when reports of even higher canola yields were received. Mr. Lenz Haderlein, a research agronomist with Agrium, reported a spring canola yield of 96 bu/A in 1996. These record yields were obtained from a potassium (K) response trial conducted at the University of Alberta Ellerslie Research Farm near Edmonton, Alberta. The trial site had been a long-term alfalfa-brome hay field, broken in fall 1994 and left fallow during 1995. The site had high background nitrogen (N) fertility (146 lb/A), marginal K (201 lb/A) and sulfur (S) levels (41 lb/A), and deficient phosphorus (P) levels (15 lb/A).

The spring canola cultivar Quantum (*Brassica napus*) was seeded on May 8 at 14 plants/sq. ft., with a side banded fertilizer application of 93 lb N/A, 31 lb P₂O₅/A, and 18 lb SO₄-S/A. The K was applied at rates of 0, 13, 27, or 40 lb K₂O/A as potassium

chloride (KCl). Even though K levels were considered marginal by soil test at this site, there was no response to K additions. The 1996 growing season was characterized by abundant rainfall through June, July and August, with air temperatures cooler than the long-term normal and an open fall, free of any early frost. Across the six replicate, four treatment trial (24 plots total), canola yields ranged from a low of 82 bu/A to a high of 105 bu/A at a grain moisture content of 4.5 percent. These high yield results illustrate that when optimum environmental conditions are matched with superior cultivars and balanced nutrient management, high yields of spring canola are achievable in the sub-humid climate of western Canada. **BC**

Source: Mr. Lenz Haderlein, Research Agronomist, Agrium, Redwater, Alberta. E-mail: lhaderle@agrium.com and Dr. Adrian Johnston, Western Canada Director, PPI/PPIC, Saskatoon, Saskatchewan. E-mail: ajohnston@ppi-ppic.org