

XVIII FOLIAR NUTRIENT APPLICATION TRIAL

Objective: Compare the use efficiency of foliar applied nutrients as it relates to yield and quality of *B. napus* canola.

Background: Boron is one of the micronutrients that has been shown to reduce yield in deficient soils. Companies have been developing foliar applied nutrient products, which may have a role in enhancing canola yields under deficient conditions.

Methodology: This trial was bulk seeded to SW Peak and laid out in small plots (6 feet x 40 feet) with six replications in an RCB design. The plots were harvested with a small plot swather and combine. The treatments included the following foliar applied boron products:

1. Check
2. Borosol - 1 pt/ac at bolting (onset of stem extension)
3. Borosol - 2 pt/ac at bolting
4. Borosol - 1 pt/ac at bolting + 1 pt/ac 6 days later
5. Molybor - 3 pt/ac at bolting

Observations: Fall soil tests indicated that the site had low levels of boron (0.6 ppm). The trial was set up using small plots due to lack of space and potential variability of boron levels in the field. The trial was seeded on May 21 on higher ground that would not be subjected to standing water. Tissue samples taken at the 4 to 5-leaf stage indicated low boron levels (14 ppm) in the plants. Molybdenum (an extra micronutrient in Molybor) was not tested for in soil or tissue samples.

Results:

FOLIAR NUTRIENT APPLICATION TRIAL						
Thief River Falls, MN						
System	Yield (%)	Yield (lb/ac)	Yield (bu/ac)	Contribution Margin (\$/ac)	Oil (%)	Days To Maturity
Borosol 1 pt + 1 pt	95	1205	24.1	8.34	44.6	95
Borosol 1 pt	97	1232	24.6	13.10	44.2	95
Borosol 2 pt	101	1281	25.6	16.93	44.6	95
Check	100	1269	25.4	18.97	44.7	95
Molybor 3 pt	101	1282	25.6	12.31	44.0	95
LSD		82.2	1.64		0.68	
CV%		6.6	6.6		1.2	

Discussion: Foliar applied boron treatments had no effect on yield or days to maturity. Contribution margins reflected differences in yield, micronutrient treatments and application costs.