Tissue Test and Foliar Applications of Micronutrients to Winter Canola

ISAAC MADSEN
DEPT. OF CROP AND SOIL SCIENCES, WSU

There are many questions surrounding micronutrients in canola production. In general micronutrients have been studied far less than macronutrients in canola production. The goals of our research were to (1.) evaluate the effects of foliar B, Zn, and Mo applications on canola and (2.) to look for varietal variation in micronutrient uptake. Foliar applications of B, Zn, and Mo were made in the fall when the winter is in the rosette stage and in the following spring at bolting. As can be seen from the initial results micronutrient applications did not increase yield, and at bolting applications appeared to damage yield (Fig. 1). The applications at bolting may have caused injury to the plant as B is known to be toxic to plants at high concentrations. Additionally tissue samples were taken from the canola variety trials and inter-species variation in nutrient uptake. No significant differences between canola varieties were found. However, inter-field variation was found to be high indicating that any difference between varieties may be masked by the heterogeneity of the soil supply of micronutrients as can be seen in the example of B uptake (Fig. 2).

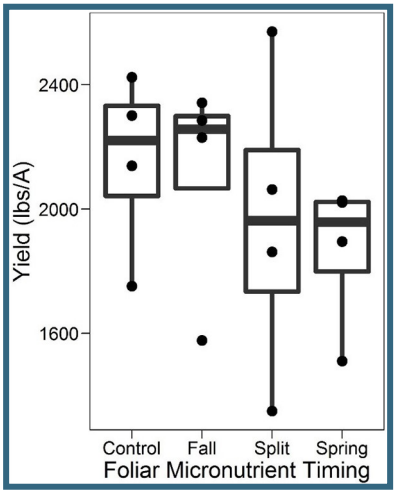

Figure 1. Winter canola yield response to fall, at bolting, and application of foliar B, Zn, and Mo.

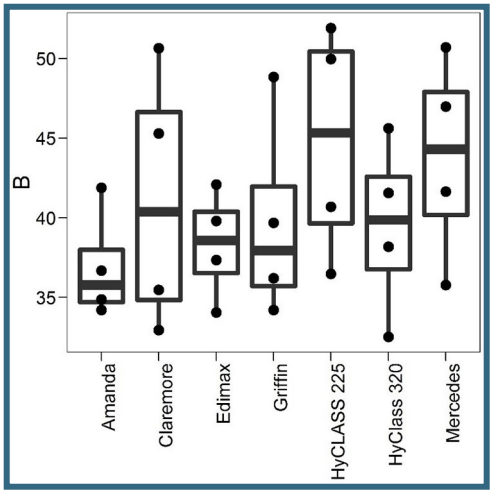

Figure 2. B uptake by different canola varieties within the same field. Demonstrating the effects of inter-field variability out weight the effects of variety in this particular instance.

Camelina: Ten Years of Cropping Systems Research at Lind

BILL SCHILLINGER, JOHN JACOBSEN, STEVE SCHOFSTOLL, AND BRUCE SAUER
DEPT. OF CROP AND SOIL SCIENCES, WSU LIND

Overview: Camelina is a short-season annual oilseed crop in the *Brassicaceae* family. Interest in camelina has increased substantially during the past 15 years because the oil is an excellent feedstock for producing low-carbon-emission biofuel and has a unique fatty acid profile as a potential edible oil. Camelina has been promoted as an alternative crop in low-precipitation dryland regions because of its low fertilizer requirement and drought tolerance. A 10-yr field experiment was conducted from 2008-2017 at the WSU Dryland Research Station near Lind, Washington to compare a 3-yr winter wheat (WW)-spring camelina-summer fallow (SF) rotation with the traditional 2-yr WW-SF rotation. Annual crop -year (Sept. 1-Aug. 31) precipitation ranged from 7.6 to 14.8 inches and averaged 11.1 inches. Camelina seed yield