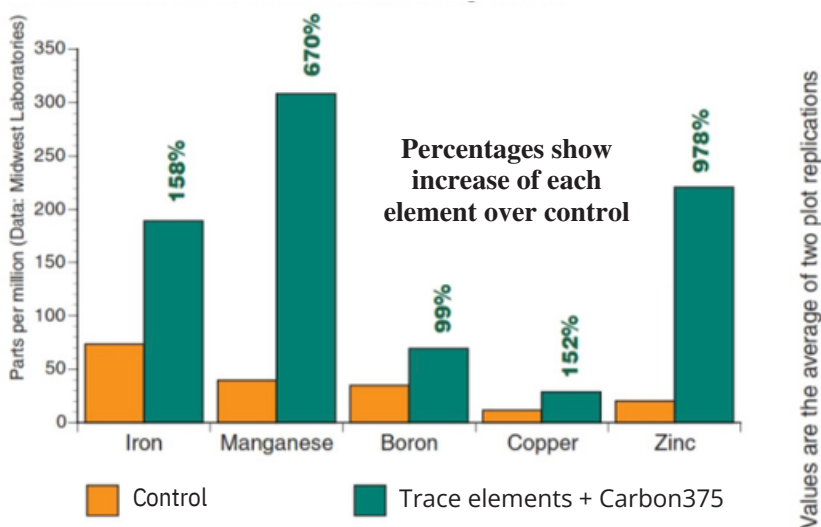


Trace Element Content of Alfalfa Multiplied with Single Foliar Application of Micronutrients Plus *Carbon375*

Trace element content of new alfalfa growth 11 days after foliar spray with Defender G tank-mixed with Carbon375.



On Sept. 16, 2010, we sprayed two 12 ft. x 12 ft. plots of alfalfa with a trace element blend in a tank mix of 1:256 **CARBON375** and water. This was intended not as a statistical test, only a screening for effect. The alfalfa was about eight inches high, recovering from a third cutting, and growing vigorously. In the next 10 days, 2.08 in. of rain fell in three storms, so the alfalfa was thoroughly washed down and most external residual would have been removed. On Sept. 27, we snipped leaf and stem samples of new top growth from the two treated plots and two untreated controls adjacent to the treated plots on comparable soil. Samples were sent to Midwest Laboratories, and the averages are shown at right. We can fax the original lab reports to anyone interested. In this trial, we didn't apply the trace element pack alone. We've seen previous trials where **CARBON375** amplifies the trace-element analysis, and simply wanted to check out alfalfa's



We think this tissue analysis fairly represents what's "in" the leaves and stems, rather than measuring exterior residue. We clipped new growth, and the plots had over two inches of rain between spraying and sampling.

response to **CARBON375** together with traces. We've learned with repeated field trials this summer and fall that **CARBON375** enhances absorption and translocation of foliar-applied trace elements. This could make foliar application an even more effective management tool for balancing micronutrients in growing crops.

Our next phases of research will focus on optimum levels of traces for cost-effective improvement in test weight, crop health and yield. In spring 2011 we intend to begin testing several formulations of micronutrients, including those chelated with humic acid and not EDTA or phosphites.

If glyphosate-resistant alfalfa is approved for general use, monitoring of micronutrients will become more essential because glyphosate chelates or ties up essential nutrients.

Previous tests of CARBON375 on alfalfa in Montana have shown an increase in alfalfa tonnage and relative feed value.

Also, we had a 2009 experiment with unintended consequences in 2010. We had rented a small test area on a local farmer's new seeding of oats and alfalfa. We sprayed **CARBON375** by itself on the oats and alfalfa, and saw an 8% yield increase in the oats in 2009. Then in the spring, we noticed a taller, higher regrowth of alfalfa where we had sprayed those test strips in 2009. Apparently the alfalfa seeded with the oats had responded to **CARBON375** by developing deeper roots, which reflected in faster emergence and regrowth this spring. Alfalfa on treated strips bloomed earlier. The test strips had to be cut and baled separately from the rest of the field. The farmer put up with that, because he had more yield!

