

Tri State Seed E-Update November 2018

Many of you included MESZ fertilizer with your seed this year as an “in the row” starter to make sure the seedlings have access to enough Phosphorus for a good start and added winter hardiness. Great decision! Let’s do the math now for the “whole crop”!

A 70-bushel wheat crop removes 130 lbs. of Nitrogen and 44.8 lbs. of Phos. If you included 10 lbs. of MESZ per acre with your seed you succeeded in replacing 4 of those 44.8 lbs. Remember MESZ is by percentage 12-40-0 10 +1Zn. Remember NPKS, that second number is Phosphate. That means 40% of the 10 lbs. you applied or 4 lbs. was usable Phosphate. Agronomic research has documented that you will receive an additional 4 to 7 lbs. for each 1% organic matter you have in the soil from decomposition and mineralization. So, let’s be generous and say you have 1% organic material in the soil and you have gained an additional 5 or 6 lbs. of Phosphate. Now you are up to 10 lbs. available for the next crop. Where is the balance coming from?

Here is how you tell! Not so hard.....take a soil test. ‘Phosphorus’ is not available to the plant until it is converted into ‘phosphate’. Your soil test should come back to you with the phosphorus values represented in parts per million, ppm. In order to convert ppm into pounds per acre just multiply ppm by 2. If your test shows 11 ppm, you have 22 lbs. of phosphate. One other thing to remember, if your soil is > 7 pH, ask the lab to use the Olsen test. If your soil is < 7 pH ask them to use the Bray test. In the Bray test p-1 is the amount available, p-2 is the amount available plus what is not yet released in the soil. To convert ‘phosphorus’ to ‘phosphate’ simply multiply the amount of phosphorus by 2.3 to get the phosphate the plant can actually use. If you had 11 ppm on your test, you actually have 50.6 lbs. of phosphate available. Just enough for the next crop. Keep your values above 11 ppm and you are good.

In the adjacent photo you will see some yellow stripes appearing rather uniformly on the leaves of this seedling wheat. This was taken about one month ago, in the sand west of Moses Lake. Anyone want to venture a guess what the causal organism is? The answer is cold nights and warm days. The interval between the lighter spots is how much the plant grew each day. No reason to be concerned, the plant will fix itself. The soils were so warm the plant wanted to grow at night but lack the photosynthetic capacity to fix the chlorophyll.

If you wish to receive the E- Updates just email me your e-address to dana@tristataseed.com and we will put you on the list. Thanks! Dana

