

Fertilizer Strategies While Strip-Tilling

Last week at the National No Till Conference in Springfield, Ill I had the privilege of being the moderator for a discussion on Strip-Till and Fertilization. Some of you may know nothing about Strip-Till. I have 3 clients in my Crop Consulting business who are strip-till farming. One has been at it for 5-6 years, another for 2-3 years, and the third one just finished their first year.

One of the first things to understand is strips are normally found in 1 of 2 ways, either with a shank (knife) or with coulters. Placing fertilizer with the shank allows one to place fertilizer deeper than with the coulters system. The coulters systems tend to mix the fertilizer with the soil in the strips.

If one wants to place high amounts of Urea or Potash the shank probably gives the best safety if placed deep. If Urea is limited and Potash rates are reasonable, the coulters systems can be a good way to incorporate nutrients, on all but the lightest soils.

One of the advantages to banding your nutrients in the strips is that it limits nutrient tie-ups in the soil. Therefore, within limits, one might raise the same yields without using as much P&K compared to broadcasting all of the P&K. One concern I have is, yes I agree more yield with the same nutrients unless one has used less than removal amounts. In time, if you use less than the removal amounts, you could have less than threshold levels. Soil Testing could prevent such an occurrence.

If you are building strips, how do you soil test?

I consider Strip-Tilling a great opportunity to build the “Ideal” fertility zone. From a fertility standpoint you are trying to place the nutrients where the roots will be growing. What better time, or place, to adjust the P&K, the micros, and the minor elements such as Calcium, Magnesium, and Sulfur?

Since we are banding these elements we should have less tie-up with the soil, therefore more availability of the applied nutrients. I feel the first couple of years we Strip-Till we should maintain full application rates of the nutrients, those to be determined by soil tests. This lets us build these “Ideal” fertility zones, possibly in spite of soil type. With broadcast applications, soil types come into play because of the Exchange Capacity of the Soil and it’s ability to tie-up nutrients. Banding maybe not so much.

How do we pull good soil samples in Strip-Till?

That probably depends upon how one builds the strips. If you build them 1 year and move over to split the middle for the 2nd year (ie. 30 “rows split to 15”), do you pull tests out of the original row before going back there for the 3rd year? Do you pull from the middle before going to that area for the 4th year?

If the strips are kept within inches of each other from year to year, do you just test that zone? Even though more roots grow within that zone, some draw from further away, provided you didn't smear that sidewall when you made the strips.

If the roots are drawing from outside that zone, how many cores do you pull from outside of the zone vs inside that zone? After 40 years in the consulting/fertilizer business I have my opinion as to which way to go with that.

I believe in this system where you pull the soil tests will determine where and how you place your nutrients.

That will be the subject of another commentary by Bill Moyer. Bill can be reached at LFBSolutions@msn.com, or by phone at 517-812-2483.