

FEBRUARY 2010 NEWSLETTER

Smart Zones-Putting Yield Data to Good Use: Gary Coates, CCA

The “Smart Zones” concept is a new type of geo-referenced soil sampling now offered by Agronomic Solutions. Smart Zones differ from standard zone sampling by using Yield data (multi-year preferable) to further define management zones. Digitized soil type maps are traditionally used to define zones, but overlaying yield data can ground truth the soil type lines and reveal accurate productivity areas. Excessive erosion, terrace building, and previous crop history are factors that can affect soil type accuracy over time. Yield data is used to correct any of these errors.

The example to the left show black lines which are the management zone lines for this field. The yield points represent a typical year for this field. The zone lines were drawn using a combination of soil types, yield, and topography to best represent well versus poor producing areas in the field.



What is great about Smart Zones is that they can be used for several operations for several years: Soil sampling, Variable Rate N-P-K, Variable rate planting, and other operations concerning inputs.

Creating Smart Zones provides a great way to plan ahead for soil sampling. We create Smart Zones at least one season ahead of sampling to allow time for gathering and processing yield data. This also provides a way to preview the zones. Let’s put all this yield data to good use!

Keeping Up with Removal Rates: Troy Gronau, CCA

Just how much in nutrients are you removing from 200 bushel corn and 60 bushel beans?

200 bushel corn = 76 lbs P and 60 lbs K

60 bushel beans= 48 lbs P and 90 lbs K

That totals **124 lbs P and 150 lbs K** for the whole rotation. Are you putting that back into the soil?

Crop removal is definitely something to keep in mind when planning for next year’s crop. One thing to consider is corn stover. Will you leave it there? How much will you take off? Will it end up as animal feed or bedding or ethanol production? On average, one acre of corn produces approximately 5,500-6,000 lbs of dry stover. When you remove that from your field, there is about 16.5lbs P and 69lbs K that will need to be made up somewhere else: possibly from manure or more fertilizer. That is one more decision that will be made for your operation.

A good soil sampling program will help keep track of input needs from high yielding crops removing all these nutrients. Spring is just around the corner (we all hope) and Agronomic Solutions is ready to sample your acres for spring 2010!

Removal Table	Lbs P	Lbs K
Corn (per bu)	.38	.3
Corn stover (per ton)	5.9	25
Soybeans (per bu)	.8	1.5
Soybean stover (per ton)	2.8	9.9
Alfalfa (per ton)	12.5	40

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Scouting: Parker Edgington

Early weed and insect detection can be crucial to any corn and soybean producer. Early weed pressure can have season long effects on yield and overall plant health. Weeds rob crops of minerals and nutrients it needs to produce grain. Identifying which weeds are in a field will help determine which type or blend of herbicide to apply. Morningglory is one weed that has become resistant to glyphosate. When it is found in a field it should have an impact on what type of product is used in conjunction with the herbicide program that is already in place. Timing is also important. Control weeds early. As seen in the figure taller weeds cause greater yield loss.

Early identification of pests is also crucial to the quality of your stand in both corn and soybean production. Cutworms are a major pest of corn in its early developmental stages. Black cutworms are the most damaging type of cutworms since they mainly will eat the stem off just below the soil line causing death to the plant. Since young soybean leaves are very lush they are easy targets for the bean leaf beetle. Bean leaf beetles eat large oval shaped holes in leaves. High populations can have significant effects on plant health and loss of yield potential.

