

Plan For Next Year's Fertility Decisions

NORCROSS, Ga. — Now is the time to begin planning for next year's fertility management decisions. Review the 1992 season, production records, and most recent soil tests. Re-evaluate yield goals for 1993 and plan fertility applications according to projected needs.

High yields mean high removal rates. Many farmers were pleasantly surprised in 1992 with higher than expected yields. Fertilizer dealers and extension offices can

provide tables to help estimate nutrients removed in harvested crops. Plans for 1993 fertilizer applications should include replacing nutrients removed in 1992 yields.

High yielding crops under favorable weather conditions tend to remove nutrients from deeper in the soil profile. Dry spring and early summer conditions in 1992 in many areas encouraged deep rooting of crops. It also meant less compaction to restrict root growth. The result was subsoil

"mining."

Nutrient removal from deeper in the profile is not detected with normal soil testing. Soil tests may actually show increased nutrient levels in the upper part of the soil profile as plant residues decompose and release nutrients on the surface. Subsoil "mining" and nutrient accumulation at the surface do not reduce the need to replace nutrients removed by crops.

If 1992 fertilizer applications included amounts intended to

meet the needs of the 1993 crop, high yields may have cut short the supply left for next year. Recalculate needs and apply supplemental fertilizer if expected carryover will not meet the projected needs for next year.

Dry spring and early summer reduced leaching and denitrification losses of nitrogen. Higher yields were attainable in 1992 with lower rates of nitrogen than usually expected. This does not mean rates for 1993 should automatically be cut. Remember that winter and spring rainfall and temperatures should be considered in estimating nitrogen which will remain in the soil over winter. Also remember that high yields in 1992 did remove more nitrogen in the harvested crop.

Not all farmers harvested high yields in 1992. They may have more potential nutrient carryover for 1993, but shouldn't expect large soil test increases for the extra carryover. Generally, for common silty clay loam soils, the soil potassium test will increase about one pound per acre for each 4 pounds of potash carryover; the phosphorus (P-1) test will increase about one pound per acre for each 9 pounds of phosphate carryover.

Best advice is to plan normal application rates for the 1993 crop. Remember that carryover phosphorus and potassium will contribute to building soil tests and will be accounted for in the next round of soil testing.

Don't overreact to low crop prices. Unfortunately, high crop yields over large production areas can result in lower market prices. That does not justify cutting back on basic inputs such as fertilizer. Over a wide range of fertilizer and crop prices, the optimum rate of fertilizer for maximum economic yield production does not change. Plan for normal applications for the 1993 crop, regardless of the prices. When crop prices are low, there is an even stronger incentive to increase yield levels to optimum so that fixed costs can be distributed over more units of yield and profits can be increased.

We cannot predict the 1993 growing season. This year brought many surprises. Consider the points above as you plan for the coming season. Most important — plan for a good year! That will insure the system will be in place to support a good crop, and the resources will also be available to reduce stress should the season be less than ideal.

Farmers Can Flourish In Warmer World

HUNTINGDON (Huntingdon Co.) — Farmers in some U.S. locations can continue to make a profit even if the greenhouse effect warms the climate, although they may have to change crop mix and techniques, according to a Cornell University study.

Harry Kaiser, a Cornell associate professor of agricultural economics, said his study differs from much of the previous work in this area in that his computer models track a gradual, decade-by-decade change in climate and give farmers the opportunity to respond with later-maturing crop varieties. A number of previous studies have looked at a one-time doubling of greenhouse gas levels.

"Farm adaptability is crucial in determining the agronomic implications of climate change," he said. "Models that don't allow for such adaptability show corn yields declining substantially after the year 2000. Our results show that corn yields can be as high as 90 to 95 percent of current levels if farmers can choose later-maturing, higher-yielding varieties." Additionally, according to Kaiser,

agricultural scientists may develop new varieties with enhanced yield.

Kaiser examined two climate-change scenarios, both of which have some likelihood, according to widely used models. One is warmer by 2.2 degrees Celsius in the year 2070 and 10 percent wetter. A more severe scenario increases temperature by 4.2 degrees and diminishes precipitation by 20 percent.

A warmer and wetter climate does not harm farmers in southern Minnesota, which has some of the country's best farmland. Corn yields decline by 10 percent from current levels, while yields of soybean and sorghum increase. Even under the hotter and drier scenario, corn yields fall just slightly more to 86 percent. "Farmers are not worse off," Kaiser said. "They can maintain profitability by adjusting their crop mix."

The mild scenario also is kind to Nebraska farmers. Winter wheat yields could increase by as much as 25 percent, while corn declines slightly to 95 percent of current levels. Under the more se-

vere scenario, yields of corn, soybeans, and wheat drop substantially, but Kaiser pointed out that Nebraska farmers could offset those predicted effects by expanding their use of irrigation.

Kaiser, who plans to extend his studies to farms in Illinois, Ohio, and the Southeast, discounted any fertilizer effect from high levels of atmospheric carbon dioxide. Some studies have proposed that plants would benefit by exposure to more carbon dioxide, but recent research has cast doubt on this view.

Jon Erickson, a Cornell graduate student in resource economics, argued in a recent Cornell staff paper that "Relying on carbon dioxide from industrialization to fertilize the world's agriculture is analogous to relying on your car's exhaust to fertilize your home garden."

Water supply, along with limited nutrients and atmospheric pollution, are widely recognized as the chief limiting factors in crop production worldwide, he said. Some climate change scenarios predict drier climates or suggest higher variability, with frequent swings between droughts and floods. Under such conditions, more carbon dioxide in the atmosphere would not increase plant yields.

Swim Suit Workshop

LEBANON (Lebanon Co.) — In a few hours, you can create a flattering swimsuit without breaking the budget. Attend the Swim-suit Workshop at Lebanon Valley Agricultural Center Saturday, May 1, from 9 a.m. to 3:30 p.m. You will learn every step of construction as you sew the suit in class. The class is taught on a conventional machine with serger adaptations given. Guidance will be provided for buying fabric and patterns. A class supply list will be sent upon registration. To register, send \$14 for members, \$17 for non-members to Lebanon Co. Sewing Guild, 75 Rocherty Rd., Lebanon, PA 17042. For more

information, call Linda at (717) 274-1197.

PANTS WORKSHOP

LEBANON (Lebanon Co.) — Getting pants to fit can be frustrating. Learn how to choose the right size pattern and alter it according to your body shape at a Pants Workshop sponsored by Lebanon Co. Sewing Guild. Choose one of two workshops to be held at the Quality Inn, 625 Quentin Rd., Lebanon, on Thursday, January 21, from 9:30 to 11:30 a.m. or 7-9 p.m. To register, send \$8, if member, \$10, if non-member, to Lebanon County Sewing Guild, 75 Rocherty Rd., Lebanon, PA 17042 or call (717) 274-1197.



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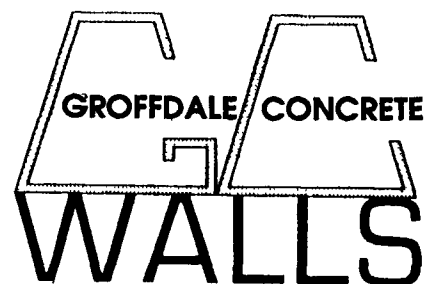
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