On Using Soil Tests

Lack of sufficient lime is responsible for up to 80 per cent of the severe losses in crop production in fields of Pennsylvania, research at Pennsylvania State University indicates.

Newton J. Bair, graduate assistant in agronomy at Penn State, described such findings August 19 at joint meetings of the American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America in New York City.

Bair studied 60 Pennsylvania farms, where each had a crop failure in a large portion of one or more fields. First, he examined available records on past soil management and studied soil characteristics in the fields. Then he tested in the fields for soil pH and phosphorus, plant phosphorus, potassium, and nitrate nitrogen.

"I was surprised and rather disappointed to find so many problems associated with a need for lime," he stated.

Laboratory analyses of soils and plants from good versus poor areas confirmed his field observations. There were no cases of trace element deficiencies. There were cases where very high nitrate nitrogen levels existed in soils given heavy applications of manure. In at least one case the high nitrate level in forage created animal health problems.

Based on his studies, Bair recommended that farmers obtain soil testing kits from their county offices of the Cooperative Extension Service. Soils should be tested and recommendations followed.

Development of diagnostic procedures to explain why crop failures occur in part of soil testing research done by the faculty and staff of the Agricultural Experiment Station at Penn State.

It may seem to some that this long-standing recommendation, by Extension officials, Lancaster Farming and most leading crop authorities, is overdone. But we think the importance of a soil testing program cannot be overemphasized.

Soil testing should be considered as just one more tool available to help the farmer take the guess-work out of his farming and enable him to get high crop yields year after year.

The advantage of soil testing is far greater than simply eliminating the prospect of a very poor crop.

By applying lime and fertilizer at rates which the soil actually needs, rather than guessing and giving the soil what the farmer guesses it needs, there may actually be instances where the farmer will find he doesn't need to apply as much lime and fertilizer as he thinks is needed. This can result in a direct savings.

Much more frequently, we expect, he will find his soil needs more of some elements and less of others than he had planned. This means that by simply changing the relative amounts of the various elements, he can get much better crop yields at little or no extra cost.

As crops take nutrients from the soil, the ability of the particular soil to grow a particular crop may change drastically over the years. Only through yearly soil tests can the farmer know for sure what the changes are and how to correct them in advance. Without tests, he is guessing and if his guess is wrong, he will have to accept one or more years of reduced crop yield before he can make adjustments based on crop experience.

We find that growing numbers of farmers who expect top yields, such as 125 to 150 bushels of corn or more per acre, are increasingly turning to soil tests as a necessary and low cost tool to help them.

As the cost-squeeze continues, as farmers are asked to become increasingly efficient and productive on scarce acreage, we think more and more farmers will see soil testing as one of the easiest, least costly and fastest means of getting to where they want to go.

Steady Costs, Rising Demand?

Our reports continue to indicate a record or near-record grain harvest nationally this fall.

Despite extensive blight damage to some individual corn fields in Southeastern Pennsylvania, the situation nationally will almost certainly be a much larger corn crop than last year and it will likely be the biggest crop ever.

In addition, production of many other grains is expected to be considerably above last year. This includes barley, up 13 per cent; wheat up 12 per cent; grain sorghum, up 31 per cent, according to a report by H. Louis Moore, Penn State marketing specialist. Only oats, of the major grain crops, is expected to be down, and only be six per cent. These are the latest figures, which will be changing as the crops are actually harvested.

The record corn harvest in the U.S. was 4.7 billion bushels in 1967. Most projections we have seen so far indicate a harvest of 5 0 to 5.5 billion bushels. This compares with only 4.1 billion bushels last year.

The much larger harvest this year is expected to be the result of a combination of two major factors. First, the acreage planted for corn is considerably higher, an estimated 11 per cent, than last year Second, yields are expected to be considerably higher than last year, when combination of blight and drought kept average corn yields to 71.8 bushels per acre. The previous year, in 1969, the average was 83.9 bushels and this is expected to be closer to the 1971 average. Moore's report notes that the 1969 yield level would result in a 5.4 billion bushels crop this year.

Pennsylvania's corn acreage is estimated at 1.47 million acres, up 13 per cent from last year and 17.5 per cent above 1969. This means that Pennsylvania, like the nation as a whole, potentially has a much larger crop than in 1970 and that considerable blight loss can be sustained without dropping the total corn crop below 1970 levels.

It would appear at this point that the coming year may be nearly a complete reversal of the past year in terms of crop and livestock prices.

During the past year, feed costs were steadily rising, putting tremendous pressures on livestock producers to maintain profit margins As a result, there has been a tendency to hold back livestock numbers in recent months.

The cost squeeze which resulted from high and rising costs was reinforced by declining or relatively stable consumer demands because of high unemployment and generally unfavorable economic conditions nationally.

But during the next year, it increasingly appears as if livestock producers will see declining, or at least stable, feed prices.

Indications have been that the economy is beginning to pick up steam with unemployment being reduced. This should result in increasing demand for meat and poultry products.

The combination of lower costs and rising demand should spell favorable livestock markets for the next six to 12 months.

After that, the expectation should be for farmers to begin increasing livestock and poultry numbers to take advantage of better profit margins.

This situation could turn out to be somewhat different, of course, if something happens that the national grain output is not as good as expected, or if the economy does not continue to develop as expected. Otherwise, the general trends should be self-evident.

LANCASTER FARMING
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NOW IS THE TIME..

By Max Smith
Lancaster County Agent

To Beware Of Silo Gas

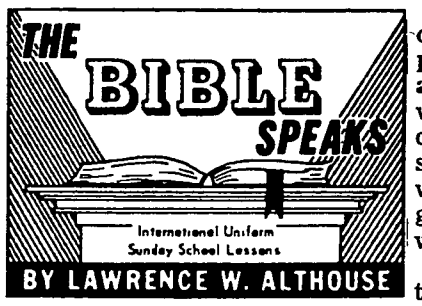
We repeat this word of caution concerning various poisonous gases that may develop at silo filling time. With blighted corn and with corn that has had heavy applications of nitrogen fertilizer, we have a chance of heavier gas formation. From the time the silo filling operation starts until at least 10 days following the process, all members of the farm family should be warned to stay out of and away from the silo. Most gases are heavier than air and will come down into the silo chute or settle on the surface of a partly-filled silo; this is the reason for keeping out of the silo during the filling operation until the blower has been running for at least 10 to 15 minutes. Some of the gases are yellow and some are colorless; most of them have the odor of laundry bleaching materials. Don't take chances and be on the alert for the gas formations.

To Protect Farm Machinery

The current growing season is coming to an end and many pieces of farm machinery will not be used until next year. Good farm management requires the storing ot fhe machinery in a place under roof and out of the weather. If the machinery can be kept dry, it will last much longer. Rust is the main enemy of most machinery and will shorten its usefullness. It's not too late to construct a pole shed or some other structure under which to put the farm machinery. The storing of the machinery in barns is a common practice, but increases losses in case of fire. The greasing of all working parts is also a part of good machinery storage.

To Manage Alfalfa Carefully

The decison as to when to make the last cutting of alfalfa is often difficult and can effect next year's production. Many research experiments reveal that if a field is to remain for another year in alfalfa, it should not be cut after the middle of September in this part of the country. We realize that many fields have been cut late in September and when weather conditions permit another 6 to 10 inches of growth before a killing frost, there appears to be less damage done. However, if cold weather arrives soon after the crop is removed late in September, the damage may occur. It is advised not to take any alfalfa cutting after mid-September for best results. The removal of the crop several days after a killing frost may do less damage than just prior to the frost, but weather conditions late in the fall are not favorable for good hay making.



THE UNKNOWN

Lesson for September 5, 1971

Background Scripture: Psalms 42, 53, 139, Acts 14 15-17, 17 22 31
Devotional Reading Psalms 111

What is God really like?

When the Apostle Paul went to Athens, he went to a city where men did a great deal of speculating on this question The Areopagus, which in English we call Mar's Hill, was a place where a group of philosophers met for discussion and debate Paul went to that hill so he might speak to the men gathered there.

Rev. Althouse

"Men of Athens, I perceive that in every way you are very religious" (Acts 17 22)

The meaning of "religious"

What did Paul mean by this? Did he mean that he had witnessed their religious rituals and rites? Did he mean that he had observed very pious living in Athens? No, he meant neither of these. What he meant was that he had observed that they were very much preoccupied with the question, "What is God like?" The Greeks in general and the Athenians in particular were known for their great curiosity about the meaning of life

Sometimes this word "religious" gives us a great deal of difficulty. The reason is that people often mistakenly believe that a man's religion is identifiable with a particular religious group or organization Using this reasoning, we would say that a man who belongs to a church or synagogue is "religious," and the man who does not is not "religious."

But the truth of the matter is that most men (if not all) have a religion of some kind. That is, they have some definite beliefs about the meaning of life and reality. John Bright, the Biblical scholar, has defined religion in this way: "For that to which a man looks for his ultimate well-being, his salvation no less, and from which he derives his standards of conduct—that is his God."

What you worship as unknown

Thus, the question is not whether a man has a religion, but rather what kind of religion he has Throughout the city of Athens were monuments to many of the gods in which the Athenians believed At one spot he found even a monument "to an unknown god."

At this point, Paul makes a very surprising statement: "What therefore you worship as unknown, this I proclaim to you" (17.23b) By this he means that the source of life and reality does not have to be unknown. God CAN be known. No one needs to remain in the dark as to what God is really like, for the message of the "good news" can make him known to us.

That is still Christianity's message to the wondering world. Even though God is always so much more than all we can say about him, still through the person of Jesus Christ it is his will to make known the unknown and reveal himself to us.