

Lime is important for vegetable crops

UNIVERSITY PARK — Be cautious in applying fertilizer to vegetable croplands and home gardens already rich in plant nutrients. You could waste time and money, as shown in several years of experiments by plant nutrition scientists at Penn State.

In vegetable experiments, one-third of the crops showed no response to added fertilizer. This indicated good reserve supplies of nutrients already in the soil, says Cyril B. Smith, plant nutritionist with the Agricultural Experiment Station at Penn State.

Smith claims most gardens and

vegetable fields have "soil banks" rich in plant foods. What is often needed, he said, are small quantities of certain nutrients to balance out the crop needs, instead of a whole range of plant foods in large amounts.

"The greatest efficiency takes place," he affirms, "when just enough fertilizer is applied to satisfy current needs."

He strongly advises all gardeners to use lime in growing vegetables. He said nutrient studies of sweet corn show that lime makes available at least 40

percent of the plant foods needed beyond those already in the soil. With a good liming program, the vegetable grower is almost half way toward the goal of supplying needed plant food.

Smith and associates confirmed these statements in a series of lime and fertilizer experiments extending over the past three years. The research with major vegetable crops was carried out in 11 major production areas of the Commonwealth and was supported by funds from the Pennsylvania Department of Agriculture.

The studies show the value of

having soil tested for lime and fertilizer needs. Soil sampling kits are available from county agricultural agents or from the Merkle Soil and Forage Testing Laboratory at University Park. The lab telephone number is (814) 863-0841.

In general, good yield responses were obtained with reasonable quantities of nitrogen and phosphorous fertilizer used on sweet corn, snap beans, and lima beans. Tomatoes and cabbage gave best results with nitrogen, phosphate, and potash. Additions

of other nutrients such as magnesium, boron, or zinc did not increase yields.

"The first small quantities of fertilizer usually give the highest possible response from vegetables," Smith stated. "Our experiments also showed the best results when fertilizer was banded along the rows, instead of being spread over the entire garden or field. With banding you can cut your fertilizer use in half. Banding supplies a larger portion of nutrients to the crop than broadcasting."

The Penn State experiments support the general belief that magnesium should be applied in lime but not in fertilizer. It was noticed also that uptake of magnesium and calcium is enhanced by nitrogen and phosphorous fertilizers but is depressed by using potash. Thus applying excess potash should be avoided.

Smith says that high calcium lime generally supplies, quite well, the calcium needed by vegetables but doesn't supply magnesium. Conversely, dolomitic (high magnesium) lime supplies magnesium very well. However, research results have shown that dolomitic lime is a poor source of calcium despite its calcium content of about 21 percent.

Thus, to supply reasonable quantities of both calcium and magnesium, Smith advises using a mixture of the two types or a calcitic lime containing 3 to 5 percent magnesium.

The Penn State scientist suggests applying the dolomitic type limestone only when magnesium is very low in a soil test. Magnesium should be applied in lime, he adds, but not in the more costly fertilizers or foliage sprays.

Are some changes needed in farm organizations?

NEWARK, Del. — National, state and local public policy issues affecting agriculture are increasingly complex and place an ever heavier burden on leaders and members of farm organizations. "The time demands on active participants are becoming impossible to meet," says University of Delaware extension economist Gerald F. Vaughn. For this reason, he urges members and leaders of local farm groups to consider how they can more efficiently and effectively represent the interests of agriculture.

"I'm confident it can be done," says Vaughn. He suggests three main approaches for individual groups. First, review the organization's goals. Second, try to work with other farm groups where possible to develop a unified policy on agricultural issues. And third, strive to strengthen leadership skills within each organization.

"Each Delaware farm organization should have a special evaluation committee to review its purpose, objectives and effectiveness in providing the direction that an aggressive, competitive Delaware agriculture requires in the 1980s and beyond," the specialist says. "It might even be helpful to conduct a comprehensive survey of the structure and operations of all our organizations, to identify their strengths, weaknesses and needs."

Many times groups lack specific goals, a major handicap in getting things done; or there's confusion and uncertainty about them. "There may be unrealistic or conflicting goals," he says. "This means a lot of valuable time is wasted on unproductive activities."

Mushroom banquet on May 11

KENNETT SQUARE — The American Mushroom Institute will hold its first annual banquet on May 11, at the Mendenhall Inn, Route 52, Mendenhall, to honor the 22 incorporators of the Institute, it was announced by Henry Roberts, President, AMI.

A cocktail hour at 6:30 p.m. will precede the dinner scheduled for 7:30 p.m. More than 300 members and guests are expected to attend.

The AMI was organized January, 1955, in Kennett Square. More than 170 growers, shippers, buyers and those interested in the industry will also be honored after the dinner.

Steve Kimmel, Avondale, is chairman of the banquet. His committee has arranged for entertainment to be provided by Ralph McKinney, local radio

Vaughn feels the Delaware farm community should strive for a unified policy and voice through cooperation among groups or, in some cases, through actual consolidation. "Few public policymakers these days have farm backgrounds and they seek a sense of direction on matters affecting farmers," he says. "But what direction is a policymaker to take when he or she hears so many voices, all claiming to represent agriculture and each offering different solutions to the same problem? Inaction or unsound policies can be the unfortunate result."

Some of the difficulty in uniting farm organizations toward a common goal is due to economics and cannot be eliminated. What's best for grain producers, for example, may not be best for poultry or livestock producers in the short run.

"But how much of the difficulty," Vaughn asks, "is due to lack of trust and openness within and among farm organizations? Might a group be so absorbed with its own needs and so protective of its particular sphere of influence that it fears its interest will be obscured by alliance with other groups? This is human nature and perfectly understandable. Farm organizations that rise above it in pursuing the long-run interests of agriculture are exceptional."

In a state with only 3,400 farmers yet dozens of farm groups, would Delaware agriculture be better represented by combining the resources of its farm organizations?" the specialist asks. "Would this be a more effective use of time and reduce competition?"

Finally, Vaughn feels there

should be renewed emphasis on leadership development within local farm groups. In some, leadership may be too concentrated in one person, or decisions may be made by a few rather than a majority of members. Sometimes only a few people may contribute to discussions, while others remain silent or are discouraged when they try to participate.

"Farm organization leaders usually have plenty of production training and experience, but they may need to refine their leadership skills," the specialist says. "They should be able to organize and lead groups of people in a highly interdependent farm and nonfarm world. It's important that they manage the limited available time to work with members to address concerns, establish goals, set priorities, and reach agreed ob-

jectives. More than ever this means conducting good meetings, writing and speaking effectively, identifying, defining and solving problems, and working successfully with people both inside and outside the organization."

Vaughn suggests more emphasis be given to developing leadership skills within the farm community, starting in 4-H, high school vocational agriculture, and FFA, as well as in college agricultural course work, Cooperative Extension programs for rural adults, and training programs provided by farm organizations.

"A farm organization is most effective," he concludes, "when group goals are clear and realistic, leaders and members share fully in attaining objectives, and cooperation or consolidation with a closely related group is undertaken where appropriate."

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