



FLORIDA AGRICULTURAL EXTENSION SERVICE
UNIVERSITY OF FLORIDA
INSTITUTE OF FOOD AND AGRICULTURAL SCIENCES

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1. Timing Pesticide Application on Beans

Pesticide to control insects and disease on the foliage of beans are generally used on a preventive basis. To obtain the greatest economic benefits from pesticides, it is necessary that applications be made at the proper time. Observations over the past five years by researchers shed some light on this problem.

Working with beans at the Central Florida Experiment Station, Dr. Greene and associates simulated different degrees of defoliation at various stages during the development of bean plants. They observed that as much as 25% defoliation one week before bloom resulted in a yield reduction. This was not the case when plants were equally defoliated just one week later during bloom.

These results point to the importance of good insect control during the early stages of growth. Secondly, if insects will cause no problems from the standpoint of actual pod injury or in mechanical harvest, it may not be necessary to attempt to control them just before harvest.

Conover, working with pole beans, observed that rust control was of great importance in the early stages of growth. In one of his reports, Dr. Conover states, "Where sulfur was used before bean pod set, followed by 7% maneb, yields were no better than sulfur alone, although rust control was better. This is interpreted to mean that rust control before bean set has more effect on yield than control later in the crop.

Both of these examples demonstrates the importance of early and timely pesticide application. In some cases it is possible to reduce costs by eliminating applications of pesticides at the more advanced stages of maturity when they will not materially increase yields. These same principles hold true for some of the other important vegetable crops.

2. Placement of Fertilizer

Growers in Florida are using several different fertilizer placements at the present time. These include broadcast, broad band, single band, double band, and a combination of these. Which of these should the grower use in his operation? The answer to this question is a complex one. Stated in simplest terms, fertilizer should be placed where crop plants can get it easily, but will not cause injury to the crop. Two methods of placement to be discouraged are: (1) in a band below the seed drill, or (2) as top-dressing above the seed drill.

Until a few years ago the standard recommendation in almost all situations was to place the fertilizer in bands located two to three inches to each side and slightly below the level of the seed or transplant roots.

One must bear in mind that fertilization rates in general have increased tremendously within the past decade. Recent research on fertilizer placement in Florida indicates that the recommendation for band placement of fertilizer may have to be modified in the near future. Researchers have observed in many cases that broadcasting of fertilizer results in yields which are as good or better than band placement when fertilization rates are high. At the lower levels of fertilization this is not necessarily true.

It appears that a combination of broadcast plus band placement might offer good possibilities. Until further research data is available, it is suggested the growers test newer fertilizer placement techniques on a limited basis only.

3. Potassium Effect on Tomato Graywall

Tomato graywall causes severe losses to growers planting varieties that are not resistant to this disorder. After several tests over a period of years, Mr. N. C. Hayslip and Dr. J. R. Iley concluded that there is a definite relationship between potassium rates and incidence of graywall.

They tested rates of potassium (K_2O) ranging from 50 to 800 pounds per acre. They summarized results from four experiments by stating, "there was a highly significant increase in graywall at the 50 pounds K_2O per acre level in all tests as compared with the 400 and 800 pounds of K_2O rates. In only one of the four experiments was there a significant difference between 400 and 800 pounds of K_2O ."

They noted some variations in intensity of graywall from one harvest to another. These observations led them to conclude that, "This variation suggests that graywall was not a simple potassium deficiency, but that the effect of potash in reducing graywall was indirect." They observed that graywall appears to be more prevalent in moist, cool, overcast weather and least prevalent during dry, bright, warm periods.

Based on these studies, it may be advisable for growers to apply about 400 pounds of K_2O per acre if they plant varieties that are not resistant to graywall.

4. Recent Variety Releases

New vegetable hybrids and varieties are being released in large numbers by seedsmen, the Land Grant Colleges and the U. S. Department of Agriculture. Only a small percentage of these can be tested before they are made available to growers. For that reason growers should go easy on planting new hybrids and varieties and put these in limited trials only. Some of the more recent releases are:

1. Planter's Jumbo cantaloupe - Released by USDA Vegetable Breeding Laboratory at Charleston, South Carolina. Tested under code number VBL 67-1 in Florida. A large fruited, high quality melon produced on plants resistant to downy and powdery mildews. This variety has looked good in our trials.
2. Southland cantaloupe - Released by Auburn University. Southland has good disease resistance but has not come up to Planter's Jumbo performance in limited Florida trials.
3. Summerfield watermelon - A release by U. S. Department of Agriculture at Charleston. This large melon is a cross between Fairfax and Blackstone. It is wilt and anthracnose (Race 1) resistant. Summerfield is a round-oval melon with rinds striped like a Congo. It should be tried on a limited basis by growers wanting an attractive, round, big melon.
4. Florida Releases - Experiment Station plant breeders in Florida have been busy also. Presently, several breeding lines of three types of vegetables are under consideration for possible release. These include sweet corn, celery and tomatoes.

5. Membership in Florida State Horticultural Society

The Florida State Horticultural Society is one of the oldest and largest in the nation. Any person interested in horticulture should be a member of this great society. Annual dues are only \$6.00. Mr. M. E. Marvel, Chairman of the Membership Committee, urges non-members to join now by sending their dues to the Office of the Secretary, Florida State Horticultural Society, P. O. Box 552, Lake Alfred, Florida, 33850. The next meeting of the society will be November 4-6, 1969 in Miami, Florida. Join the society and plan to attend.

Sincerely,


James Montelaro
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