

VEGETARIAN

September 21, 1965

TO: COUNTY AGENTS, ASSOCIATES AND ASSISTANTS

NO: 70

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1. Fertilization of Okra, Squash and Southern Peas

In the past, our recommendations for fertilization of the minor crops have been based on limited research data. It was often necessary to "borrow" research results from closely related crops and apply these to the minor crops.

Dr. Paul Sutton, of the Strawberry Lab at Plant City, is investigating fertilizer requirements for several minor vegetable crops on sandy soils. In a preliminary summary of his results, he emphasized the need for considering the initial level of fertility before applying any fertilizer. Here are his results with three vegetable crops:

- a. Okra -- In tests in the fall of 1963 and spring of 1964, Dr. Sutton found a nitrogen rate in the range of 93 to 187 pounds per acre to give the highest yields. In all cases, a ratio of about 1.0-1.3-1.3 (N-P₂O₅-K₂O) produced the highest yields. (NOTE: This is almost equivalent to a 6-8-8 fertilizer, as suggested in Extension Circular 225).

b. Squash -- In two experiments with squash, Dr. Sutton noted that higher rates of nitrogen produced larger plants with fruits which were lighter in color and slightly rougher than those produced by plants receiving lower rates of nitrogen. Mixtures supplying 90-120-120 pounds of N-P₂O₅-K₂O in the first season and 100-186-120 pounds in the second season produced highest marketable yields. These rates are equivalent to 1500 pounds of 6-8-3 and 2000 pounds of 5-9-6 respectively. The fertilizer guide suggests 1500 of 6-8-3 with additional sidedressings, when needed for such soils.

c. Southern Peas -- There was no significant response to any of the fertilizer treatments with southern peas in either of the two seasons tested. It is quite apparent from these two tests that adequate residual fertilizer was available to both plantings of southern peas.

2. Interval Between Liming and Planting

It has been recommended that lime, when needed, be applied one to three months in advance of planting for vegetable crops. Due to circumstances beyond their control, growers often find that they have not limed the soil when planting time arrives. The question has been asked many times -- "Will it pay to lime just before planting?"

Dr. Paul Everett, of the South Florida Lab at Immokalee, investigated this problem last spring. He applied four tons of lime which was half dolomite and half high calcium limestone. His preliminary results show that agricultural lime applied just before planting can be very beneficial to watermelons, the test crop. Until further studies are made, growers should try to lime early. But, in a pinch, apply lime any time before planting, if it is needed.

3. Hybrid Cabbage Varieties

Hybrid cabbage varieties, even though recently introduced on a commercial scale, are gaining in importance with each passing season. In a cooperative study with the Main Station, where a mechanical cabbage harvester is being built for future tests, Dr. Dale Hensel, of the Potato Lab at Hastings, tested two hybrids for uniformity.

He found that both hybrids yielded quite well in a once-over harvest which simulated a mechanical harvester. King Cole and Market Topper hybrids yielded over 14 tons per acre. He also found that these hybrids had good "holding ability" in the field. Test plots harvested one week later yielded about the same as those harvested earlier and quality was comparable.

There are several other hybrid cabbage varieties on the market that look promising, also. Growers should try hybrid cabbage varieties on a small scale in the beginning.

4. Leafminer and Aphid Control in Watermelons

In a study primarily aimed at leafminer control, Dr. Adlerz, of the Watermelon Lab, in cooperation with Dr. Everett, at the South Florida Lab, found that materials giving best leafminer control also gave excellent control of aphids on watermelons. Of the materials approved, dimethoate (Cygon) and Guthion gave the best control.

Check plots not receiving an insecticide, developed heavy populations of aphids; treated plots developed none.

5. Potential for Marketing Fresh, Shelled Table Legume in Florida

Packaging of foods in "convenience form" is expected to increase during the coming years. Realizing this, Dr. D. D. Gull, in cooperation with other staff members of the Vegetable Crops Department, has been investigating methods of harvesting, shelling, packaging and storage necessary for retention of quality of the fresh product. His results indicate a very promising potential for fresh, shelled table legumes in Florida.

Commercial mechanical harvesters are available for Lima beans and English peas. These crops can be cut and shelled in the field with a mobile combine or vines transported to a stationary viner for shelling. Mechanical harvesters used for snap beans are being adapted for harvest of southern peas, also. A number of southern pea varieties have a growth habit of pods borne high on the plant, thus facilitating easy removal of the peas by cutting off the top portion of the plant. Lima beans and both types of peas can be shelled with commercial viners which are now available.

Shelling studies with southern and English peas, according to Dr. Gull, have shown that the shelled product can be kept in a fresh state for up to seven days. This shelf life is dependent upon care in shelling and proper refrigeration thereafter.

The sheller should be operated at a minimum speed to reduce injury to the peas. Chemical tests showed that practically all peas receive some bruising during the shelling operation. Some varieties of southern peas are much easier to shell than others and so the sheller should be adjusted accordingly.

Immediately after shelling, peas should be cleaned and refrigerated. Best holding temperature is 35 - 40°F. Refrigerated showcases are capable of maintaining at least 45°F. Fresh-shelled peas can be packaged in polyethylene bags or trays with plastic film overwraps for attractive display. Test marketing of fresh-shelled English peas

showed that customer reaction was very satisfactory. These peas were readily merchandised and brought a 10 - 15¢ per pound premium over frozen peas.

Shelled peas should be merchandised as rapidly as possible. English peas contain appreciable quantities of sugar which are lost soon after shelling unless proper handling techniques are employed. Southern peas are highly susceptible to color degradation and spoilage under the same poor handling conditions although flavor is less affected than for English peas.

For a successful fresh-shelled pea operation, the importance of quality control cannot be over emphasized. Peas must be of optimum maturity when harvested. Shelling must be done in such a way that a minimum of mechanical injury occurs. Shelled peas must be adequately refrigerated (35 to 40°F.) from the time of shelling until they are consumed. No chemical to preserve freshness has been found that is superior to refrigeration.

6. Brief Items of Interest

a. Revised Vegetable Production Guides:

1. Circular 193E Commercial Vegetable Insect and Disease Control Guide
2. Circular 96B Watermelon Production Guide
3. Circular 97A Sweet Potato Production Guide
4. Circular 103A Squash Production Guide
5. Circular 175A Okra Production Guide
6. Circular 176A Onion Production Guide

These circulars have been revised within the past few months. Be sure you have the most recent issue.

b. New Sweet Potato Varieties:

1. Julian - a new L. S. U. release. It produces a high quality potato for fresh market and processing. Tends to produce very few jumbos. Suggested for trial purposes only.

2. Gem - a release from North Carolina. Gem has been a consistently high yielder of quality sweet potatoes at Gainesville. It should be planted on a trial basis.

c. New Southern Pea Varieties

Two recent releases of the University of Florida should be of interest to southern pea growers in Florida. Both are described in circulars published by the Florida Agricultural Experiment Stations. Limited supplies of seed of these varieties will be available for the 1965-66 season.

1. Snapca - is a new cream-type southern pea which is excellent in the immature snap-stage. Processors like this variety for mixing with the shelled types.

2. Floricream - is a new all-purpose large seeded, cream type southern pea. It looks promising. A shelled pea for both fresh market and processing. Both varieties should be planted on a trial basis in the beginning.


d. Quality Vegetable Seeds

There is an old saying that, "Good seed is cheap at any price." Growers should plant the very best quality seed available. Too often seed is purchased at a bargain price at the expense of germination, yield and quality. Seed that is harvested from a left-over commercial crop in Florida is apt to be a gamble for the grower planting it. This is especially true of watermelon and bean seed.

e. Asphaltic Mulches

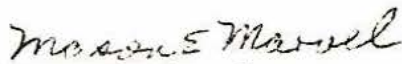
Research work on the use of asphaltic (petroleum) mulches has been conducted at several stations over the past two years in Florida. The tests covered a wide variety of crops including peppers, tomatoes, beans and the vine crops. Generally, the results have demonstrated some advantages for use of asphaltic mulches during the cooler part of the growing season. This type of mulch may have additional advantages, such as "anchoring" the soil against wind and water erosion.

The main disadvantage of the asphaltic mulches has been an increase in weed population. A good herbicide must be used together with asphaltic mulch for best results. The product is due to be marketed in Florida this coming season. Growers are advised to try asphaltic mulch on a small scale in the beginning.


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Sincerely,


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