



*Vegetable Crops Department*  
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1. Roadside Marketing of Vegetables:

One type of marketing of vegetables that has not progressed much over the past years is retailing at roadside markets. The states of New Jersey and Indiana each have about 1500 roadside markets selling fresh farm produce. A large percentage of these are grower owned and operated. Some growers sell practically all they can produce through this type of outlet.

It would certainly be worthwhile for some of our vegetable growers to look into roadside marketing as a means of selling their produce. Success in roadside marketing depends on a number of factors:

- (1) Good Location - The best locations are farms adjacent to well-travelled roads and near to centers of large populations. The outlet should be neat looking, well pointed out by signs, and have easy accessibility from road and ample parking for automobiles.
- (2) Good Produce - The housewife will pay a premium for high quality, fresh produce with good appearance. A wide variety of farm products for sale on a regular schedule over a long period of the year will bring repeat buying from an increasing number of customers in a short time. Prices must be competitive with those of regular retail outlets. Vegetables that lose quality rapidly or must be

harvested somewhat immature for the normal trade are naturals for roadside markets. These include sweet corn, garden peas, vine ripe tomatoes, field ripe cantaloupes, strawberries, greens, etc.

Those interested in the possibility of roadside marketing should get a report of a joint study made by the University of Delaware and the United States Department of Agriculture entitled "Farm Roadside Marketing." It is available for \$2.00 from Food Business Institute, University of Delaware, Newark, Delaware 19711.

## 2. Poultry Manure and Possible Boron Toxicity:

At least two or three times each year, we run into situations where vegetable plants in seedbeds or fields show a boron toxicity as a result of application of poultry manure. Boron may reach extremely high levels in poultry manure if the poultryman uses borated compounds as insecticides to control fly larva where the droppings accumulate. In one sample, a grower added the equivalent of twenty-one pounds of borax per acre by the application of five tons of chicken manure to the acre.

Poultry manure is an excellent fertilizer for vegetable crops, provided it does not contain toxic levels of boron or possibly other harmful materials. If in doubt, have a representative sample analyzed before using it.

## 3. Seed Size and Depth of Planting:

Uniform maturity in most vegetable crops is extremely important for once-over harvest, large yields, uniform quality and grade and for efficient use of labor and harvesting equipment. Work done in the Vegetable Crops Department by Mr. Alam and Dr. Locascio demonstrated quite clearly the effect of size and depth of planting on seedling emergence and subsequent rate of growth.

The research showed that the uniformly-sized, larger seeds germinated earlier, produced larger plants and yielded and matured earlier than the smaller seeds. Depth of planting had considerable effect on time of seedling emergence. The deeper the small-size seed of a crop, like broccoli, are planted, the longer they take to emerge and for the plants to grow to maturity as compared with the larger seed of the same crop planted at the same depth.

This work points out the advantages of "precision planting." For uniformity of maturity, etc., more and more vegetable growers in the future will be planting sized seed, properly spaced at a uniform depth in the soil.



#### 4. Aluminum as a Possible Repellent of Aphids:

There have been several reports recently in trade and technical journals dealing with aluminum as a repellent for aphids. Aphids not only cause injury to plants directly, but transmit harmful viruses from plant to plant. Control or exclusion of aphids would indeed be a major breakthrough in virus control.

Dr. W. D. Moore and associates tested aluminum as well as other materials to determine if aphids could actually be repelled. They used yellow straightneck squash as the indicator crop in two experiments. Their results showed that aluminum foil and white plastic used as a mulch reduced the incidence of watermelon mosaic (a good measure of aphid infestation) to a highly significant degree.

These results are only preliminary and are not ready to be recommended on the commercial farm. Considerably more testing must be done to determine details on methods of application, costs, possible returns, etc.

#### 5. Additional Herbicides for Vegetables:

Several new herbicides have been approved for use on certain crops within the past year or so. Most of these herbicides are being suggested for use on a trial basis only until they are tested further by the Experiment Stations and more experience is gained with them by growers. The recently approved herbicides and the crops on which they can be used are:

- (1) Amiben - peppers, tomatoes and squash (yellowcrook or straightnecks)
- (2) Benefin - lettuce
- (3) Linuron - carrots
- (4) Pebulate (formerly PEBC) - tomatoes
- (5) Trifluralin - bush beans, Lima beans, broccoli, cabbage, cauliflower, okra, southern peas, peppers and tomatoes

With an already serious labor problem at hand, growers are looking for all "laborsaving devices" available. Herbicides, when properly used, can lower labor needs as surely as other recognized laborsaving practices, such as use of mechanical harvesters, precision placement planters, bulk loading and unloading equipment, etc. Herbicides will play a more important role in vegetable production with each passing year.

6. Other Items of Interest:

(a) Marigolds and Nematode Control -

Preliminary work of the U. S. Department of Agriculture and other agencies has shown that a South American type marigold may control several species of nematodes when grown in a soil. This work is very preliminary. The Experiment Station is conducting research on this crop now. Marigolds are not yet recommended for this purpose.

(b) Vegetable Field Days -

We are already starting on the 1966 round of vegetable field days. Dr. J. W. Wilson announced one for February 15th at 1:30 P. M. at the Central Florida Experiment Station, Sanford, Florida.

(c) Compatibility of Insecticides, Fungicides and Foliar Fertilizers on Watermelons -

We have mentioned this on several occasions before. Here is the summary of a paper presented by Drs. Adlerz and Schenck. Draw your own conclusions.

"A 3-year study was conducted on compatibility of 48 combinations of 4 insecticides, 4 fungicides, and 3 foliar fertilizers. Only 4 treatments never showed evidence of incompatibility and were commonly above average in disease or insect control or yield. Only 4 combinations of materials were clearly incompatible each year. Many other combinations gave evidence of incompatibility, but not consistently. A study of 3 or more years is necessary to determine whether a material will be consistently incompatible."

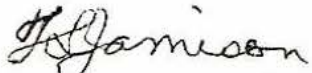
(d) Effects of Soil Fumigation on Fertilization -

There seem to be a few misconceptions on the effects of soil fumigation and the fertilization to follow after fumigation. Here are some established facts that should be taken into consideration in planning a fertilization program on vegetables following fumigation:

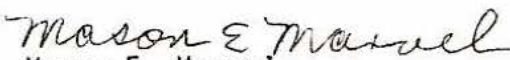
(1) Minor elements are not greatly affected by fumigation. There is no need to change the minor element program following soil fumigation.

(2) Nitrogen behavior in the soil is affected by fumigation, however. The microorganisms necessary to convert organic nitrogen to inorganic nitrogen and further nitrate - nitrogen are greatly reduced. It is absolutely necessary, therefore, to supply a large percentage of the nitrogen in the readily available nitrate form following fumigation. Nitrification returns to normal gradually in four to twelve weeks depending upon many factors.

Sincerely,

  
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