MR. COUNTY AGENT:

The season’s on us again! I’m telling you? One nice side to this Florida vegetable game, you never have to wait for things to happen. Someone, somewhere, can always be going full swing.

For many of you it’s in order to call growers attention to the importance of early soil preparation, selection of adapted varieties, insurance from seed treatment, advantages of fertilizer placement....

Others could best spend time on reminders of likely disease and insect problems, advance notices on recommended controls, pesticide precautions.....

Still others could combine hind-sight and foresight to point out values of advance marketing plans, harvesting equipment, containers, pH adjustment for spring crops, etc....

You might have to reverse your field, but in general if you keep your head up, the field’s wide open.

OUTLOOK FOR VEGETABLES, 1952-53:

Think you'd do well to watch for and use the report of the Florida Agricultural Outlook Committee, July 1952, now on it's way out. Part of it goes about like this:

"Continued high consumer purchasing power should result in a high national consumption of quality Florida vegetables. In view of individual crop factors such as competition from improved processed packs, increased production costs, availability of labor, and price fluctuations, the sub-committee reminds Florida vegetable growers to market quality vegetables, to avoid excessive plantings, to be alert to current marketing conditions, and to give attention to better distribution of plantings between fall, winter and spring.

"A reduction in the over-all acreage of about 8 percent is suggested. Adjustments can best be made, not on an over-all basis, but with individual crops for each season. Reductions of as much as 20 percent have been suggested for watermelons, lima beans, and escarole, and reductions of 10 percent or less for tomatoes, snap beans, sweet corn, celery, and cabbage. An increased production of more than 20 percent is suggested for cantaloupes and cauliflower and increases ranging from 2 to 10 percent are suggested for eggplant, cucumbers, strawberries, peppers, Irish potatoes, and squash."

PRODUCTION GUIDES: Extension Circulars 96-104

At the rate the first group went out of print some of you boys must be finding a use for them! Anyway, as a progress report of a sort, the revisions on Sweet Potato and Watermelon were submitted for publication this week...also a new one covering Eggplant. O. K. so we've a long way to go, but we're pitchin'. Asked for color again.

We know they're not perfect, so how's about getting in YOUR suggestions? You'll probably be asked sooner or later, anyway.

AREA MEETINGS: that time again, too!

At your request we've started in on the area vegetable meetings circuit. Shoving-off with the Webster area's 3rd Annual on August 28th, 9:30 A.M. Start thinking about your's. Put 'em on paper.
RESEARCH REVIEW: Central Florida Station, Sanford

It's our opinion that you'd profit from a review of the vegetable research conducted from July 1, 1951 to June 30, 1952 in the various Experiment Stations over the state...without waiting for the annual report to be published. O.K., the finger's on us so we'll take a swing at it.

We may as well be straight on one thing...if you're going to read the following be certain you understand that these are notes based on the annual report manuscript, they are generally only single tests at best, and are not intended to be the complete picture or recommended practice.

The Central Florida Station staff is headed by Dr. R. W. Ruprecht, Vice-Director in Charge, with Entomologist J. W. Wilson, Plant Pathologist George Swank, Horticulturists P. J. Westgate and Ben F. Whitner, and Nematologists (USDA) J. R. Christie and Vernon Perry.

Most of you understand the hours of work that go into these fine projects. If we have not done justice to specific points, the researchers will let us know, and we'll pass the information on to you.

Cultural

Water Levels: A medium water level of 16" below the soil surface outyielded the high (5") and low (26") levels in both fall and spring crops of Pascal celery. Blackheart was present in the spring but not in the fall crop.

Broccoli Spacing: To avoid the high cost of harvesting broccoli side shoots, the effect of plant spacing in the row was studied. The greatest number of heads were obtained from 4" spacing, but individual heads were too small. The 12" spacing produced heads about equal in size to 18" and 24" spacings, but the total weight of broccoli harvested at 12" was in excess of the wider distances.

Varieties and Breeding

Cantaloupe: Georgia 47 was superior in disease resistance, quality and yield. Sanford No. 9 was second, but is still segregating. In observationals, Rio Sweet and Louisiana 7-1 were best, producing well-netted melons of good flavor. Some cross pollination was attempted with this crop in the hope of developing a well-netted variety resistant to downy mildew and having a good taste.

Broccoli and Cauliflower: No variety outstanding.

Celery: On muck at Zellwood, Golden No. 14 was best, while on the sand Golden No. 15 was best. In the Pascal varieties, Summer Pascal (FM) was best on muck, while Summer Pascal P W (K) was best on the sand.

Cooperative work with Cornell to develop a blight resistant celery was continued. Emerson Pascal did not exhibit the tendency to go to seed as it did last year; very little cold weather probably accounted for the low amount of bolting. Two Golden varieties were found highly resistant to blight. One Pascal was considered even better than Emerson Pascal.

Sweet Corn: Greatest differences were in earworm resistance. Gold Bond and Hybrid 33 produced ears too close to the ground. The variety showing the least worm injury, N. K., was latest to mature and most ears were poorly filled. Golden Security Red Tassel was among the best named varieties, having only light worm injury.

Cucumber: Severe wind injury. V. Hybrid produced the highest yield of marketable fruit. Palmetto produced the lowest yield.

Irish Potato: Red Warba produced the highest yield of No. 1 and total marketable tubers. Most of the varieties tested produced higher yields than Sebago.

English Pea: Dark Skinned Perfection produced highest yields.

Tomato: More weather troubles. Fall crop destroyed and spring yields and size
cut. In spring, Big Boy produced the highest marketable yield and largest sized fruit in both staked and unstaked plots. Stokesdale yielded second highest in staked and third highest in unstaked. Both varieties outyielded Rutgers.

Fertilizers and Soils

Soil Conditioners: Krilium, a synthetic resin soil conditioner, did not increase the yield of radishes nor the germination, growth or yield of beans on Leon fine sand.

Yields: A maximum yield of marketable celery was obtained at 4 tons per acre of a 5-5-8 fertilizer. Blackheart was limited to higher fertilizer levels.

In another celery experiment the all-mineral mixtures outyielded the regular mixed fertilizer in the majority of cases. Ammonia nitrate, versus all nitrate source, gave more favorable results than last year due to climatic conditions more favorable for nitrification.

Copper Toxicity, Iron Chlorosis: Preliminary indications are that copper residues from years of bordeaux sprays on celery and other crops have accumulated in toxic amounts, especially in the surface layer of old celery fields in the Sanford area. Iron chlorosis, stunting, and stubby roots are symptoms of copper toxicity. Celery is more tolerant of copper in the soil than corn. Beans, squash, cabbage, cauliflower, beets, and undoubtedly other crops, are adversely affected by excessive amounts of copper in the soil. Control measures are being investigated.

Iron chlorosis of numerous plants, one of the symptoms of copper toxicity, may be overcome by spraying the leaves with a dilute solution of ferrous sulfate, or by adding sequestrene NaFe to the soil. Ferric or ferrous sulfate added to the soil around the roots of such chlorotic plants have not corrected the chlorosis.

Magnesium Deficiency: Magnesium deficiency of celery, characterized by interveinal chlorosis of the older leaves, was corrected by addition of magnesium in the fertilizer or by dolomitic limestone.

Nematodes

Celery showed less injury by nematodes than usual this past season while sweet corn showed more. The lower incidence in celery may be due to more general use of soil fumigation. Cooperative studies in the use of chemicals for nematode, fungi, and weed control, have shown that methyl bromide is the most effective of any chemical treatment tried to date.

Studies on the build-up of nematodes in the soil showed that the stubby root nematode increased in numbers rapidly, while the build-up of the sting and awl nematodes was relatively slow.

Insects

Systemics: Two systemic insecticides were tested for the control of the cabbage aphid, applied at three dosage levels in the transplant water and as foliage applications. Samples of the treated cabbage were submitted for residue analysis. Further study is required before definite statements can be made concerning the practical use of these materials.

Red Spider Mite: A study of host plants, life history, habits and control measures of the red spider mite were conducted by John Patton, graduate assistant. Results are to be published elsewhere.

Corn Earworm: In the statewide cooperative project, mechanical problems of the application of liquid insecticides for the control of the corn earworm were studied at Sanford again this year. The highest percentage of worm-free ears was obtained where 2 pounds of technical DDT prepared as a 25% emulsifiable concentrate and 2.5 gallons of a 90° horticultural oil were applied per acre with one wide angle nozzle on each side of the row. Where the same amount of DDT and oil were applied in 65, 100 and 125 gallons of spray per acre, differences were not significant.
Insecticide-Fungicide Combinations

Dilan and Compound 269 formulated as wettable powders and emulsifiable concentrates, parathion and malathion as emulsifiable concentrates, were combined with ferbam, ziram, tribasic copper, zineb, manzate and SR-406 in a compatibility test. The SR-406 used was difficult to get into suspension. The emulsifiable concentrate of dilan did not mix satisfactorily with manzate. The emulsifiable concentrates of Compound 269 and parathion did not mix satisfactorily with manzate and SR-406. The emulsifiable concentrate of malathion mixed satisfactorily with all the fungicides except SR-406.

No indication of plant injury was observed after five applications at seven-day intervals of any of the mixtures. The addition of the insecticides did not appear to interfere with the effectiveness of the fungicides.

Damp-off and Red Root: On mixing fungicides with the soil, the materials in order of control were arasan SF, Robertson cooper, spergon and mathieson 290. Drenches of the soil with spergon, Z.a.c. and tersan gave no reduction in red root. Fungicides rated in order of control of damp-off and red root were: methyl bromide, OS-1199, chloropicrin, dichloropropene. CBP, applied in the row at seeding by the drip method with dosages of .05, .1 and .2 ml per linear foot, inhibited germination of seed of several crops in sandy soil but was only slightly phytotoxic to seed sown in acid muck soil.

Methyl bromide was suggested for use on celery seedbeds in Central Florida at a dosage level of 1 pound per 50 square feet.

Early Blight: Best control of early blight was generally in favor of the dithiocarbamates containing zinc, iron or manganese salts, or a combination of a carbamate and copper alternated weekly.

A combination of ziram and ferbam plus polyethylene polysulfide, and tribasic copper plus p.e.p.s., applied at 1, 2, and 3 week intervals, indicated a possibility of lengthening the interval between spray applications for diseases.

There was no significant difference in blight control when three and five nozzles per row were used. Fungicides applied with one nozzle per row did not control blight.

Downy Mildew: The top five materials for spraying for control of downy mildew on heading cabbage included manzate, nabam, SR-406, Phygon XL and nabam. Of the dust formulations used a 5% spergon and a 6% zineb dust at 30 pounds per acre gave best control.

For the control of downy mildew of cucumbers the best spray materials included manzate, zineb, nabam and SR-406. Of the treatments for controlling downy mildew of cantaloupes the outstanding one was a combination of nabam and tribasic copper; manzate, nabam and zineb were also effective.

Pink Rot: Data indicated that plots sprayed with nabam, zineb, manzate, phygon XL and nabam alternated with tribasic copper had a significantly higher number of diseased stalks than plots sprayed with copers, ziram, or ferbam.

Helminthosporium: Fungicides used in the statewide cooperative spray trials for the control of H. turcicum did not effectively control the sweet corn disease. Adherence to a definite spray schedule was thought to account for such a failure. Little fungicidal residue remained on the foliage at times due to wash-off by rains. Since no repeated attempt was made to provide a protective fungicidal cover the disease continued to advance. Two definite periods of infection were observed to be closely correlated with the rainfall.

There was no significant difference in yield or unfilled tips.

The addition of powdered milk (casein) to zineb-DDT emulsion mixture increased the physical compatibility of the two materials.

I'd like your opinions if similar research reviews on other Stations would be useful. If not...well, like I said to begin with, the field's wide open.

So long again,

[Signature]