Vegetarian 87-09

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I. NOTES OF INTEREST

A. Vegetable Crops Calendar


B. New Publications


Penn State Weed Identification Fact Sheet Series 1 ($5.00 per set).

Set 1 includes:

Jimsonweed
Lambsquarter
Velvetleaf
Large crabgrass
Redroot pigweed
Johnsongrass
Canada thistle
Common ragweed
Yellow nutsedge
Fall panicum
Dandelion
Barnyardgrass
Green foxtail
Yellow foxtail
Giant foxtail
Witchgrass

Penn State Weed Identification Fact Sheet Series 2 ($5.00 per set).

Set 2 includes:

Field bindweed
Mouse-ear chickweed
Common milkweed
Crowfoot
Poison ivy
Pokeweed
Hempdogbane
Horsenettle
Common cocklebur
Common burdock
Common chickweed
Teasel
Wild buckwheat
Wild carrot
Yellow rocket
Shepherd's purse

To order, checks must be made payable to the Pennsylvania State University and sent to:

Penn State College of Agriculture Publications Distribution Center
112 Ag Administration Building
University Park, PA 16802

(Stall: Vegetarian 87-09)

II. COMMERCIAL VEGETABLES

A. Florida Seed Arbitration Council.

Florida law, Chapter 578, provides a unique mechanism for handling disputes between farmers and seed dealers. County agents should be familiar with this aspect of the Florida Seed Law since they are often asked for advice in situations where seed is suspected of being faulty. To avoid any possibility of confusion, pertinent parts of the law are reproduced directly:

578.09 Label requirements.—Each container of agricultural, vegetable, or flower seed sold, offered for sale, exposed for sale, or distributed for sale within this state for sowing or planting purposes shall bear thereon or have attached thereto, in a conspicuous place, a single label containing all information required under this section, plainly written or printed in the English language, in century type, giving the following information:

(1) FOR TREATED SEED—For all agricultural, vegetable, or flower seed treated as defined in this chapter:

(a) A word or statement indicating that the seed has been treated or description of process used.

(b) The commonly accepted coined, chemical or abbreviated chemical (generic) name of the applied substance and the words "poison treated" in red letters, in not less than 1/4-inch type.
(c) A caution statement such as "Do not use for food, feed, or oil purposes."

(d) Rate of application or statement "Treated at manufacturer's recommended rate."

(e) If the seed is treated with an inoculant, the date beyond which the inoculant is not to be considered effective (date of expiration).

(3) FOR VEGETABLE SEED IN CONTAINERS OF 8 OUNCES OR MORE.—
(a) Name of kind and variety of seed.
(b) Net weight.
(c) Lot number or other lot identification.
(d) Percentage of germination.
(e) Calendar month and year the test was completed to determine such percentages.
(f) Name and address of the person who labeled the said seed or who sells, distributes, offers or exposes the said seed for sale within this state.
(g) For seed which germinate less than the standard last established by the department, the words "below standard" shall be sold which falls more than 20 percent below the standard for such seed which has been established by the department, as authorized by this law.
(h) The name and number of restricted noxious weed seed per pound.

(4) FOR VEGETABLE SEED IN CONTAINERS OF LESS THAN 8 OUNCES.—
(a) Name of kind and variety of seed.
(b) Name and address of person who labeled the said seed or who sells, distributes, offers, or exposes the said seed for sale within this state.
(c) For seed which germinate less than standard last established by the department, the additional information must be shown:
1. Percentage of germination, exclusive of hard seed.
2. Percentage of hard seed when present, if desired.
3. Calendar month and year the test was completed to determine such percentages.
4. The words "below standard" in not less than 8-point type.
(d) No seed marked "below standard" shall be sold which fall more than 20 percent below the established standard for such seed.

578.27 Arbitration council; composition; purpose; meetings; duties; expenses.—
(1) The Department of Agriculture and Consumer Services shall appoint an arbitration council composed of five members and five alternate members, one member and one alternate to be appointed upon the recommendation of each of the following: the deans of extension and research, Institute of Food and Agricultural Sciences, University of Florida; president of the Florida Seedsmen and Garden Supply Association; president of the Florida Farm Bureau Federation; and the Commissioner of Agriculture. Each member and alternate shall continue to serve until replaced by the department.

578.26 Complaint, investigation, findings, and recommendation prerequisite to legal action.—
(1) When any farmer is damaged by the failure of agricultural, vegetable, flower or forest tree seed to produce or perform as represented by the label attached to such seed as required by s. 578.09, as a prerequisite to his right to maintain a legal action against the dealer from whom such seed was purchased, such farmer shall make a sworn complaint against such dealer alleging damages sustained. The complaint shall be filed with the department, and a copy of the complaint shall be served on the dealer by certified mail, within such time as to permit inspection of the crops, plants, or trees by the seed arbitration council or its representatives and by the dealer from whom the seed was purchased.
Please file this article so you will be able to accurately advise growers of the law.

(Maynard: Vegetarian 87-09)

B. Vegetable Consumption up 27% – Diet, Tops Reason

The reason respondents (1,300 households surveyed) gave for eating more fresh vegetables was a concern with a well-balanced diet. Two other diet-related concerns were ranked less frequently than concern about a balanced diet among reasons for eating more fresh vegetables—nutrition (70%) and calories (65%). Other reasons include: salads, snacking, good value, availability, and better quality.

With Florida’s unique “season of production”, there are relevant questions our industry should address if they wish to be part of this expanded consumption trend; (1) are we providing the kinds of commodities desired, and (2) are they delivered having the required quality (appearance, nutrition, flavor/texture)? Focused attention on what is being consumed would help to make the Florida vegetable industry more competitive.

As would be expected, dinner is the most common time for eating fresh vegetables. Those surveyed were asked to identify consumption over four periods: breakfast, lunch, dinner, and snack. The average percentages were: dinner (62%), lunch (22%), snack (11%), and breakfast (4%). Predominant vegetables eaten during the four periods were not identified.

The conventional supermarket is still the most popular place for consumers to shop for and purchase produce. Of 13 factors surveyed that could influence where a shopper shopped for fresh produce, cleanliness/appearance of the produce department and its fresh produce, cleanliness, taste/flavor, and freshness or ripeness were the most important considerations. Further down the list in importance were: that the product looks appealing (71%), price (70%), nutritional value (59%), size (44%), displayed loose or bulk (42%), and least important was brand name (8%).

Respectively, various types of leaf lettuce, asparagus, “sweet” bulb onion types, romaine, mushrooms, broccoli and cauliflower are apparently drawing the largest number of first-time consumers, according to the survey.

Vegetables with the greatest percentage of respondents having ever purchased them were: head lettuce (97%), carrots (95%), tomatoes and sweet corn (91% each), cabbage and cucumbers (88% each), celery (86%), russet potatoes (84%), bell peppers (83%), broccoli (82%), and cauliflower (80%).

Head lettuce is the item purchased most frequently when in season and available, followed by tomatoes, cucumbers, sweet corn, asparagus, and carrots.

Detailed results of this consumer survey, taken of about 1,300
households nationwide were presented in The Packer's magazine Focus, 1986-87.

(Gull: Vegetarian 87-09)

C. The Difference Between Irrigating and Watering

To many people, these terms refer to the same thing: applying water to a crop, lawn, or potted plant. Irrigation, however, carries an additional connotation that sets it apart from simple watering. When we apply water in a scheduled and measured fashion to supply only the crop water requirement during a drought period, then we are irrigating. When we set up the portable gun or sprinkler system and run it until the soil looks wet or until water puddles in the alleys, then we are watering.

As water quantity and quality become larger political and economic issues, more pressure will be placed on us to be efficient and careful water users. This means we must be able to predict the need for water during the crop season, accurately schedule irrigation events, and apply water in a measured and efficient manner. When thought of in these terms, irrigation management is very analogous to fertilizer management. Both involve processes of predicting a need, measuring the proper amount of water or fertilizer to apply, and finally applying it in the most efficient manner. In fact, water and fertilizer management programs should be thought of as being linked. Actions in one program are likely to affect the efficiency of the other.

Water Requirements

Water is used in our vegetable fields in two processes: evaporation of water from the soil surface and transpiration, the loss of water from the leaves of plants. The sum of these two processes is called evapotranspiration or ET. This is the crop water requirement, the amount of water needed by a crop to avoid stress, and will vary according to crop.

The irrigation requirement is the total amount of irrigation water needed for crop production including water losses or inefficiencies in delivering the water to a crop. Inefficiencies include leaky pipes, wind drift, evaporation from open ditches, deep percolation of water out of the root zone, and others. Rainfall, if it is stored in the root zone, reduces the amount of water that must be pumped. We can see that irrigation water supplements water already in the soil to provide the crop water requirements in the same fashion that fertilizer supplements the native soil fertility.

Scheduling Irrigation

Plants are generally poor indicators of the need for irrigation. By the time wilting has begun, many plant growth processes have slowed so that yield is threatened. Because of this problem irrigations are better scheduled based on the soil moisture status using one, or a combination of 2 methods: the water budget method or the soil moisture indicator method.

The water budget method operates much the same as a bank checkbook system of deposits and withdrawals. You need to know how much water can be stored in the crop's root-zone soil, and the level below which water stress will occur. You can then calculate how much water to apply and when to apply it by estimating the ET losses. ET can be estimated by measuring evaporation from a standard free-water surface, the U.S. Weather Bureau Class A evaporation pan. Many researchers have found a good correlation between crop ET and pan evaporation. Irrigation water is applied when the ET losses equal your critical level of soil moisture depletion.
The soil moisture indicator method uses an instrument that can directly measure the soil moisture status. The tensiometer is most often used in field situations. The tensiometer is a relatively inexpensive instrument consisting of a long plastic tube filled with water, a porous ceramic cup at one end, a screw-cap at the other end, and a vacuum gauge attached in between. The tensiometer is placed in the soil with the ceramic cup in the root zone. As the soil dries out, water is pulled out of the tube creating a vacuum which is registered on the gauge. As the gauge approaches a predetermined critical level for your soil and crop, irrigation water is applied.

The tensiometer tells when to irrigate but not how much. To determine how much, you need to know the "moisture characteristic curve" for your soil. Your Extension irrigation specialist can help with this. This will allow you to calculate the amount of water to be applied to restore the tensiometer reading to the desired value. Tensiometers have the advantage of permitting automated irrigation control because they can be fitted with a switch on the vacuum gauge to control the pump.

Irrigation System Management

Optimum irrigation water management involves predicting and scheduling irrigation events, but also it includes a program to make those events efficient. This program includes:

1. Flow meters to measure amounts of water applied.
2. Checking the conveyance system for leaking and clogging.
3. Testing the system for application uniformity.
4. Reducing sprinkler losses due to drift and evaporation by irrigating during windless periods such as early morning.

Irrigation is an important factor in successful vegetable production. However, it requires increased attention for optimum management and this is becoming more important today with economic and political pressures on farmers. The objective of this article is to point out the major components of irrigation management programs some of which will be covered in more detail in future articles. The basic question is: Are you practicing irrigation or are you just watering?

(Hochmuth: Vegetarian 87-09)

III. VEGETABLE GARDENING

A. A Brief History of "Conch" Peas in Florida

A classification of the various types of southern peas, also known as cowpeas, is at best confusing. However, what emerges fairly clear is the consumer's preference for the cream peas, which are also called "conch" peas.

Conch peas represent a group of southern peas characterized by white peas or cream peas having little or no eye color markings. When cooked, the peas and cooking water remain bright. The taste is mild and somewhat sweeter than the "crowders". While some varieties become mushy, most are crisp and tender. Many of the early varieties produced very small seeds, so it is to be expected that most consumers still associate small seeds with conch peas.

There are two basic plant types of cream peas - bush conchs and running conchs. Several strains of each exist, which vary in seed and pod size, pod color, and the way the pods are borne on the plant. Due to the fact that seeds are often saved by
growers, there may be no consistent differences between some named varieties. For example, the varieties known as 'Bush Conch' and 'Two Crop Conch' have been interchanged over the years with the popular 'Texas Cream 40'.

Another designation for one group of bush conchs, at least in Florida, is the Cabbage pea. Here and in other states bordering Florida cabbage peas are also referred to as White Acre peas, but 'White Acre' should be reserved for the small-seeded, running conch strains of southern pea. The term 'Acre' seems to refer to the plant type's habit of covering a lot of ground. Since the cabbage pea is a determinate bush type, it should not be called an 'Acre' pea.

Dr. A.P. Lorz worked for many years as a plant breeder with the Florida Agricultural Experiment Stations to develop new varieties of southern peas, primarily of the cream type. His varietal releases were many, and although his contributions to society are virtually unsung, they are consequential and noteworthy. In particular, Dr. Lorz attempted to increase the size of the seeds so that shelling the cream type would not be such a tedious task. From his efforts came 'Zipper Cream', often sold today as Zipper peas. This is a wonderful pea with large, bright easily-shelled peas having all the good taste and qualities of the cream type.

Some other early named strains or varieties of the cream type are 'Conch', 'Gentlemen', 'Terrace', 'Running Acre', 'Rice', 'Lady', 'Lady Fingers', 'Much', 'Catjang', 'Texas Creams', 'White Acre', 'Lady Edible', 'Sah-dandy', and 'Carolina Conch'.

Some of the cream types that Dr. Lorz added to the group are: 'Topset' (in 1961), 'Climax' (in 1961), 'Floricream' (in 1964), 'Snappea' (in 1964), and 'Zipper Cream' (in 1970). 'Dixiecream' is a cream type released by Georgia's B.B. Brantley in 1965 for processing and home garden production.

Those of you wishing to read further about the cream or conch type of southern pea are referred to the release circulars for the Lorz varieties mentioned, FES Circulars S-130, S-132, S-154, S-160, S-210, and to the following reports:


(Stephens: Vegetarian 87-09)

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