UNIVERSITY OF FLORIDA

Cooperative Extension Service

Institute of Food and Agricultural Sciences

VEGETARIAN

A Vegetable Crops Extension Publication

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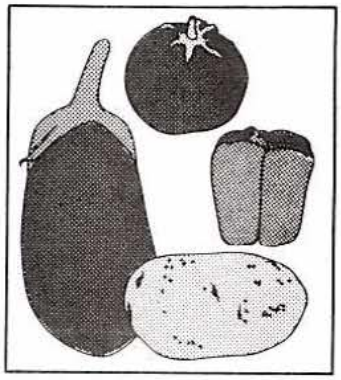
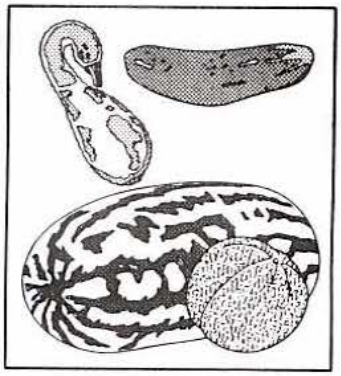
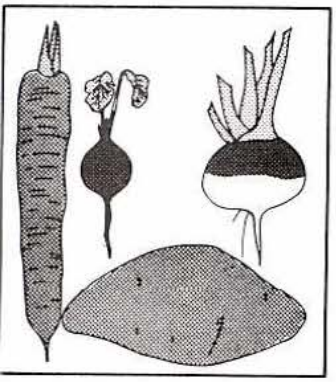
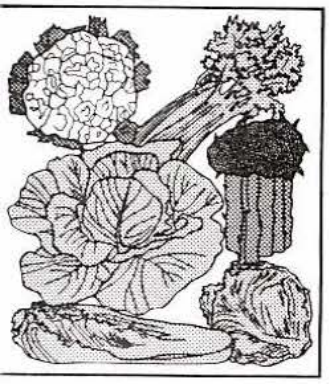


Vegetarian 95-3 **February 17, 1995**

Contents







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I. NOTES OF INTEREST

A. Vegetable Crops Calendar.

May 17, 1995. 41st Vegetable Field Day, 8:15 AM-4:00 PM. Gulf Coast REC, Bradenton, FL. (Contact D. N. Maynard).

May 25, 1995. Organic Gardening Field Day, 10:00 AM - 12 noon. Organic Park, Fifield Park, UF. (Contact J. M. Stephens).

II. COMMERCIAL VEGETABLES

A. Seed Propagated Shallot.

Shallot, *Allium cepa* Aggregatum Group, is traditionally vegetatively propagated by bulbs. A feasibility study conducted here on vegetatively-propagated shallot was unsuccessful because the plants continued to divide without forming bulbs. Recently, seed-propagated shallot have been developed for direct-seeding at high plant populations for single bulb production.

The purpose of this study was to determine the feasibility of seed-propagated shallot production in west-central Florida.

'Creation' and GS-106 shallot seeds (de Groot en Slot) were planted in 080 Todd planter flats (0.8 x 0.8 x 1.75 in.) on 17 November 1993. The transplants were grown by a commercial plant grower. They were set 3 in. apart in the bed in three rows 8 in. apart on 12 January 1994. Each entry was replicated three times in 10-ft. long plots arranged in a randomized complete-block design. Additional fertilizer was sidedressed on 31 January and 17 February at 30 lb N/acre from 6-6-6 (N-P_2O_5-K_2O). Weeds in the bed were hoed or hand pulled and row middles were cultivated.

Time of harvest was judged subjectively when about 50% of the plants had dry tops. The bulbs were lifted on 21 April and allowed to air dry before clipping the tops. The bulb clusters were air dried on wire screens in a greenhouse before weighing and counting. Then, 25 clusters of each entry were selected at random for determination of bulbs/cluster, wt/cluster, and wt/bulb.

Yields of GS 106 (10,386 lb/acre) were almost five times those of 'Creation' (2,237 lb/acre). Likewise, GS 106 had significantly more bulbs/cluster, higher weight per cluster, and higher weight per bulb. GS 106 bulbs had better appearance too, scale color and finish was superior to that of 'Creation'.

There are no published yield data for shallot in Florida. In Louisiana, yields of green bunching shallot range from 1000 to 2000 dozen bunches/acre and yields of shallot sets range from 2000 to 3000 lb/acre (Southern Region Extension Vegetable Specialists, 1994), but these yields cannot be compared with those obtained here. Data are available from France, the major producer of dry shallot bulbs. The average yield of dry bulbs there is about 14,000 lb/acre. Accordingly, the more than 10,000 lb/acre obtained here is close to the average yield obtained in the leading production country. So, there is the possibility of commercial production here based on yield potential.

(Maynard, Vegetarian 95-03)

University of Florida, IFAS
Gulf Coast Research and Education Center
Bradenton, Florida

41st VEGETABLE FIELD DAY

Wednesday, May 17, 1995

Field Day Coordinators: Don N. Maynard and John Paul Jones

Moderator: Don N. Maynard, Extension Vegetable Specialist

AM	8:15	Registration
	9:00	Welcome and Introduction - W. E. Waters
	9:10	IFAS Research Overview - Richard L. Jones, UF-IFAS Dean for Research
	9:30	"Alternatives to Methyl Bromide Fumigation" by Jim Gilreath and John Paul Jones
	9:50	"Management of Silverleaf Whitefly" by David Schuster
	10:10	COFFEE BREAK
	10:30	Tours (Choice of Tour 1, 2, or 3)
PM	12:00	LUNCH
	1:00	Tours (Choice of Tour 1, 2, or 3)
	2:30	Adjourn
	2:30-4:00	Individual Talks with Faculty

Three tours will be available:
(1) Vegetable Crop Improvement
(2) Vegetable Crop Protection
(3) Vegetable Crop Production

III. VEGETABLE GARDENING

A. Vermitechnology

Even as a boy growing up in Hardee County I associated earthworms with moist, rich, organic soil. When grubbing up fish bait, I knew not to search for earthworms in sandy, dry, infertile areas. Instead, I would look for dark, damp, crumbly soil, and there I would drive down my grubbing board or start shoveling for the wiggly crawlers. Little did I know that through that happy endeavor I was treading (ever so lightly) into the science of worm technology known as vermitechnology (vermi [worm] from Latin vermis).

Today, as a horticulturist, I find an occasional dip into mainstream vermi-technology quite refreshing, especially as it relates to earthworms. Therefore, and since many of you county agents and Master Gardeners also receive frequent or infrequent inquiries about earthworms and their importance to gardening and the environment, I will launch into an article or two on that subject.

Vermitechnology may be broken down in to several sub-topics, some of which are:

a) vermiculture: raising earthworms;
b) vermicomposting: making compost with earthworms.
c) vermifarming: farming (and gardening) with earthworms.
d) vermifertilizing: producing nutrient-rich fertilizer from castings or leachate.

It may be helpful to familiarize the reader with certain worm jargon before discussing the above topics at length. First, let's look at some worm-words from Webster.

vermi: worm, from L vermis.
vermicelli: pasta strings slimmer than spaghetti.
vermicide: agent that destroys worms.
vermicular: resembling a worm.
vermiculate: marked with worm-like lines; full of worms; wormy; worm-eaten.
vermiculite: expanded mica into "little worm" particles.
vermiform: worm-like in shape.
vermifuge: to destroy or expel worms.
vermin: a worm-like animal or person.

Now, here is worm jargon, from Larry Martin, vermitechnologist and Marion County Master Gardener of Orange Lake. Larry has been kind enough to teach classes at various Extension sponsored events, such as 4H Horticulture Institute and our organic gardening field day. Much of the following information I have received from him.

Bedding: moisture-retaining medium that provides a suitable environment for worms. Worm beddings are usually compost, leaf mold, or a combination of the compost with cellulose-base material such as shredded newspaper or corrugated cartons.

Breeders: Sexually mature worms (usually 6 weeks old) as identified by a band (clitellum) encircling the body.

Castings: a very fertile worm manure, acts like a sponge to hold water.

Castings tea: a solution of nutrients made from dissolving castings in water.

Egg capsule (cocoon): structure formed by the clitellum which protects embryonic worms until they hatch (usually 4-10 babies per capsule).

Eisenia foetida: scientific name for the redworm used is vermicomposting. It is the only domesticated redworm for earthworm farming. Also called "fishworm".

Lumbricus rubellus: a common redworm not suited for worm farming.

Lime: for worm beds, use calcium carbonate, ground limestone, egg shells, or oyster shells. Avoid caustic, slaked, and hydrated lime. (Dolomite apparently o.k.).

Pit run (bedrun): worms of all sizes, of which 50% should be breeders for organic gardening.

Regenerate: to replace lost parts.

Other jargon (from "The Complete Gardener's Sourcebook" by Duane Newcomb.).

Helodrilus spp.: gray pink worms important in a garden.

Value of earthworms: soil builders and waste converters.

In later articles I will put all these terms together into a detailed discussion of how to do vermicomposting and vermigardening. Vermiculture (raising earthworms for the worms as a product) will not be discussed further as there is quite a lot of information written about it.

(Stephens, Vegetarian 95-03)

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