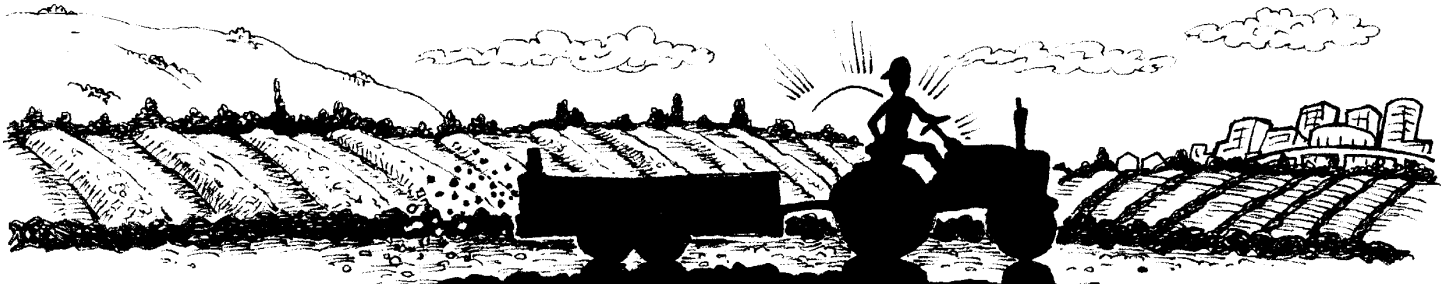
AGRICULTURE IN PARTNERSHIP WITH SAN JOSE

Growers' Newsletter



Newsletter for the Agriculture in Partnership Project, January 1999

Announcing... A Compost Workshop for Growers

Ralph Jurgens and Maria de la Fuente will speak at workshop on compost use

Maria de la Fuente, University of California Cooperative Extension Farm Advisor, and Ralph Jurgens, New Era Farm Service, are the featured speakers at a Compost Workshop for Growers that will take place at U.C. Bay Area Research and Extension Center (UC BAREC) on January 14.

Ralph Jurgens will speak on the role of compost in soil building and plant nutrition. New Era Farm Service specializes in organic matter management and crop nutritional support systems.

Regular compost applications are a cornerstone of the New Era program. Recommendations are based on analyses of each client's soil, water and plant tissue samples. "Of the many thousands of acres that are tested each year, we see maybe 100-150 soil and leaf samples that are truly balanced," says Jurgens. "Usually there is some nutrient that is either in excess or deficient."

photo courtesy New Era Farm Service

Growth of table grapes and cover and crop at mid-season. Two tons of compost were applied per acre.

Years of practical experience have convinced Jurgens that compost enhances conventional cropping systems and conventional fertilizers, making nutrient delivery to the plants more efficient. "Compost should never be used as a nitrogen source, but rather as a stimulant for microbial activity and an activator for soil fertility," he says. "The organic matter in compost is a food source for the organisms we're trying to promote."

In addition to its compost, New Era carries soil and plant stimulants, soil amendments, natural fertilizers, and in-field monitoring tools.

New Era advises 800 growers who control over a million acres of cropland. "In today's marketplace, there is increasing emphasis on pesticide-safe, nutritionally-sound food products," says Jurgens. Our goal is to educate and equip the grower with a cost-effective fertility program which meets the needs of the current crop and improves the quality and productive capacity of that great farming asset, the soil."

An article on New Era Farm Service is available from the Agriculture in Partnership Clearinghouse (see back cover).

The workshop will also include a presentation by Maria de la Fuente on the effect of compost on plant disease suppression. Maria has worked locally and internationally in research and education issues around compost. According to Maria, compost has been used successfully for control of soilborne pathogens, especially in container-grown crops.

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Maria believes compost can be used for disease control in the field if

• the raw organic matter from which it is prepared is of a consistent quality,

• the composting process is carefully controlled and maintained,

• curing is performed in a way so that a uniform product is produced.

Maria says characterization of the microbial population of soil and compost will be key to the development of disease suppressive soil. "We must pay closer attention to the masses of soil microorganisms that can help to suppress disease. Ideally, at some point in the future, commercial compost will be available in different formulations for suppression of specific soilborne diseases," she says. Maria's notes on disease suppression are available from the Agriculture in Partnership Clearinghouse (see back cover).

Maria de la Fuente's and Ralph Jurgens' presentations will be preceded by a two-hour satellite teleconference, "Composting, A Resource for Western Agriculture," presented by Compost Education Resources for Western Agriculture (CERWA), a professional development project of the Western Region Sustainable Agriculture Research and Education (SARE). The interactive broadcast will air simultaneously at over 50 sites in the western U.S. and Canada.

The broadcast is second in a three-part satellite series on composting and compost use. Using a case study approach the program will look at three main aspects of compost use:

• the value of compost and its agricultural uses.

• considerations for choosing a compost product.

• specific ways to maximize the benefits of compost.

Attendees will receive a comprehensive Resource Notebook on compost use.

The first broadcast in the series, "Composting as a Tool for Western Agriculture," was presented at UC BAREC in November and received enthusiastically. The third broadcast is set for Fall 1999, date to be announced. More information on the CERWA program is available at the CERWA website, www2.aste.usu.edu/compost/.

The workshop will take place at U.C. Bay Area Research and Extension Center in Santa Clara on January 14, 1999. Call Delma Sled, U.C. BAREC, (408) 296-1672, for more information or to register for the workshop.

photo courtesy New Era Farm Service

Root development of young seedlings (cotton). Ten tons/acre manure on left; two tons/acre compost on right.

State Board Approves $300,000 for Compost & Mulch Demonstration Projects

On November 5, 1998, the California Integrated Waste Management Board approved the release of a Request for Proposals to solicit projects that will demonstrate beneficial end-uses of compost and mulch products made from yard trimmings.

Acceptable proposals will illustrate the benefits of using mulch and/or compost. Benefits that may be considered include, but are not limited to, pest management, disease suppression, water conservation, soil structure improvement, plant nutrition, and erosion control. In addition to conducting the demonstration project, partnerships will be responsible for disseminating project results to growers and/or other appropriate end-users in their region.

The Board anticipates making several awards with no individual project funded in excess of $100,000.

Partnerships can include, but are not limited to, members from the following groups: farmers, farm advisors, commodity groups, landscapers, compost and/or mulch producers (who use municipal organic materials as a feedstock), universities, state agencies, local governments, and other associated organizations and special districts including Resource Conservation Districts, and Cal Farm Bureau Chapters. The partnership may also include private consultants and their subcontractors. Deadline for proposal submission is January 29, 1999.

If you are interested in receiving a copy of the RFP, fax a request to (916) 255-1107.

Compost as a surface mulch for weed control in transplanted broccoli and lettuce.

Principal investigator Steve Fennimore, Extension Specialist Vegetable Crops, U.C. Davis.

Project statement: Left uncontrolled, weeds can reduce the yield and quality of broccoli and lettuce crops. Combinations of tillage, mechanical cultivation, hand hoeing and chemical herbicides currently provide effective control of weeds in broccoli and lettuce. However, factors are in motion that may require modification in current weed control practices.

In California, 106,000 acres of broccoli and 197,000 acres of lettuce were grown in 1996. Fifty-four percent of the California broccoli acreage was treated with DCPA, an herbicide that will be unavailable after existing supplies have been exhausted. Pronamide, used on 45% of California's lettuce acreage in 1996, may be lost at some point in the future under the provisions of the Food Quality Protection Act of 1996.

Polyethylene mulches are effective at suppressing weeds, but material and labor costs range as high as $420 per acre, limiting use to high value crops. Also, used polyethylene must be disposed in landfills.

Few question the long term benefit of increased soil organic matter from the use of yard trimmings compost. However, short term benefits are important to growers, especially those working on rented ground. The use of compost as a barrier mulch for weed control in vegetables may provide the short-term benefit needed to justify the expense of purchase and application.

Summary of results: The project was designed to determine the depth of yard trimmings compost required for effective season-long weed control in transplanted broccoli and lettuce.

Four treatments were compared:

- 2.5-centimeter depth yard trimmings compost
- 5-centimeter depth yard trimmings compost
- hand weeding
- Prefar, a pre-emergent herbicide at 6.0 lb ai/A

In lettuce, the 2.5 cm. compost treatment provided season-long suppression of common groundsel and shepherdspurse,

photo courtesy UC BAREC

Steve Fennimore and UC BAREC staff transplant seedlings into research plot.

but henbit control was not adequate. The 5 cm. compost treatment provided good-to-excellent season-long control of henbit, common groundsel and shepherdspurse. The Prefar provided poor control of common groundsel and shepherdspurse, and fair control of henbit.

In broccoli, the 2.5 cm. compost treatment provided good to excellent season-long control of common chickweed, common groundsel and shepherdspurse. The 5 cm. compost treatment provided season-long control of common chickweed and common groundsel but control of shepherdspurse did not last for the entire season. Prefar provided poor control of all weeds.

There were no significant differences between the heights of the broccoli plants in any of the treatments. No significant yield differences in broccoli or lettuce heads were found between the treated areas and the untreated areas for either crop. The research may be repeated in order to confirm findings under different environmental conditions.

To get a copy of the complete project report, contact the Agriculture in Partnership Clearinghouse (see back cover).

Research took place at the Bay Area Research and Extension Center (BAREC), under direction of University of California Cooperative Extension (UCCE) for Santa Clara County. Research was sponsored in part by the City of San Jose.

Agriculture in Partnership with San Jose is funded and administered by the City of San Jose Environmental Services Department. The purpose of Agriculture in Partnership is to disseminate information on production and use of compost, compost tea and mulch to agricultural and horticultural professionals. Information submissions and inquiries should be directed to Karin Grobe, Outreach Coordinator and Newsletter Editor, (831) 427-3452, karingrobe@earthlink.net or to Jo Zientek, City of San Jose Environmental Services, 777 N. First St., #450, San Jose, CA 95112.

Agriculture in Partnership Clearinghouse

The purpose of the Agriculture in Partnership Clearinghouse is to collect and disseminate information on production and use of compost, compost tea and mulch. Information is mailed to callers in response to requests for no charge.

We can gather information specific to your needs on request. Contact us at (831) 427-3452 with specific requests.

Below is a list of a few of the documents available from the clearinghouse:

Research at UC BAREC

Organic Mulches for Weed Control in Transplanted Broccoli and Lettuce, Steven A. Fennimore, Veg. Crops, UC Davis, & Stefan J Richard, 1998.

Control of Problem Weeds in Field and Greenhouse Grown Ornamentals, Clyde L. Elmore, Veg. Crops, UC Davis, February 1998 progress report.

Information on Compost for Plant Disease Suppression

Effect of Compost on Plant Disease Suppression (slide presentation notes), Maria de la Fuente, UCCE Farm Advisor, Santa Clara County.

Bioassays for Disease Suppressiveness of Potting Mixes, Marcella Grebus, UC Riverside, May 1997.

Information on Compost Use

It's a New Era for Farm Compost (Profile of Ralph Jurgens and New Era Farm Service), Karin Grobe, *BioCycle* May 1997.

How agricultural end-users can assess compost quality, Jean VanderGheynst, UC Davis, 1998.

Fine-Tuning the Soil Food Web (Profile of Elaine Ingham and Soil Foodweb Incorporated focusing on soil microbiology), Karin Grobe, *BioCycle* January 1998.

Call Karin Grobe/Agriculture in Partnership at (831) 427-3452 to request a document, ask questions, or submit information.

Save the date for the next Agriculture in Partnership event:

Tour of Z-Best Composting Facility in Gilroy, Wednesday, April 14, 1999, 1-3 p.m.

Compost Workshop for Growers

Thursday, January 14, 1999 • See cover story for details

Call Delma Sled, U.C. BAREC, (408) 296-1672, for more information or to register for the workshop

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