

Vegetable Notes

For Vegetable Farmers in Massachusetts

Volume 15, Number 1

January 30, 2004

This issue of Vegetable Notes includes information on Value Added Products, Ethnic Crops, and Perimeter Trap Cropping.

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Producing Value-Added Products for Farmers' Markets

Maria Moreira, an agricultural marketing specialist with UMass Extension, worked with local farmers to develop a value-added product to be sold at farmers' markets in Massachusetts. The growers, Vang Me Lor and Sheng Yang, farm in Lancaster and Fitchburg Mass. and are among several immigrant growers who receive assistance from the New Entry Sustainable Farming Project based at Tufts University. These farmers began selling their value-added product, "Hmong Veggie Rolls", at the Brookline Farmers Markets on July 24, 2003 and by the end of the season Hmong Veggie Rolls were 30% percent of their total sales. Financial support to implement this project was provided by the USDA Risk Management Agency.

Many farmers are interested in value-added products to increase the economic value of the fruits and vegetables they produce. This article outlines some issues to consider when producing a value-added product and the specific steps taken to develop and produce Hmong Veggie Rolls.



Vang Mee Lor (right) and Maria Moriera at the Brookline Farmers' Market in 2003. (Photo by Frank Mangan)

I. Assess market opportunities.

How do you decide if you have a product that will be well received by your

clientele? The idea for the Hmong Veggie Rolls actually came from a customer on opening day at the Brookline Farmers' Market in 2003. This individual had purchased veggie rolls at another farmers' market and she was convinced that Hmong veggie rolls would be equally well received at the Brookline Farmers' Market. She was so emphatic in her support that she almost threatened the Hmong growers to produce them.

Veggie rolls are a mainstay of Hmong cuisine. Having helped the farmers make their veggie rolls for various functions, Maria Moreira concurred with the customer that YES indeed they are delicious! Maria recognized that there was a product that could be easily prepared that would add value to the fresh produce that the Hmong growers sold at the market.

II. Can you produce the product and make money?

Before producing the product it is essential to fully address the following questions: How much will it cost to produce the product? How much will the customer pay for the product? What infrastructure will you need to buy or rent to produce the product? How many units do you need to sell before you start making a profit? What are the, federal, state, and local regulations that will need to be addressed? You should not produce a value-added product until you've answered all these questions.

The Hmong growers were confident that they could produce veggie rolls at a cost that would be well below the sale price. Gauging the quantity to produce for each market day was a bit tricky. The Hmong farmers started out slowly by producing a few for the first market day, and gradually increased the amount they brought to sell at the market and on most days they sold out.



Gus Schumacher, former Massachusetts Commissioner of Agriculture buying Hmong Veggie Rolls from Maria Moriera at the Brookline Farmers' Market. (Photo by Maria Moriera)



Hmong Veggie Rolls for sale at the Brookline Farmers' Market in 2003. (Photograph © 2003, Robert Brummett, The American Family Farm Project)

III. Production of product

Once that you've decided to produce the product, here are some specific steps to consider.

A. Familiarize yourself with all regulations relevant to your product. You'll need to be sure you comply with Federal and State regulations regarding the preparation of food products. Food safety is important regardless of the size of the business.

The regulations that you'll need to use will depend on the specific item(s) you plan on producing. There are definitions for foods that are either hazardous or potentially hazardous foods, the determination based on the pH or water activity.

Acidic foods, with a pH of 4.6 or below, or water activity greater than .85 are non-hazardous foods. Generally, non-hazardous foods include most types of baked goods, including breads, fruit pies, cakes, cookies, candies, jams, jellies, fruit compotes, and other foods with high sugar content. These foods can be prepared in an inspected residential or commercial kitchen. If the product requires refrigeration, and is sold refrigerated, it requires less processing and is potentially less hazardous than canned goods. Review the information reprinted from the Massachusetts Department of Public Health at the end of this section.

The Hmong Veggie Rolls that were produced as part of this project were considered "non-hazardous". The Brookline Public Health Department was contacted to find out the necessary requirements for selling a value-added product in their town. They provided all the food safety regulations that must be followed. As the growers went through the process, the Brookline Department of Health was contacted at every step. The market inspector was very helpful, making sure the farmers were in compliance with all the rules and regulations.

B. Do you need a certified kitchen? Depending upon your product, the health department may not allow you to produce items from your residential or farm kitchen. If you can't afford the expense of setting up a commercial kitchen, you may be able to use a licensed commercial kitchen at a local church or community center.

The Hmong growers used a certified commercial kitchen at a local parochial school because other privately-owned certified kitchens they contacted were prohibitively expensive. During the summer, the kitchen was easily accessible since school was not in session. In September, the growers had to wait until all after school activities had ended before it could be used.



Label Created for Hmong Veggie Rolls showing the ingredients. (Photo by Maria Moriera)

C. Label requirements. The design of your label is every bit as important as the development of the recipe for your product. In some cases, it may be even more important. Without a label, no one but you will know what is inside the package. Your label is your best advertising opportunity and one of your best sales tools. The label helps to convey the personality of the product. Next, consider the consumer. Your market research has identified your target consumer. You need to keep this profile in mind when you design your package and your label. The package should relate to the product. The consumer should be able to tell what the product is, based on the type of package: box, jar, bottle, or plastic jug.

Massachusetts regulations require the common or usual name of the product, ingredients listed in descending order of predominance by weight, and the name and address of the manufacturer, packer or distributor. If the company is not listed in the local area phone book under the name printed on the label, the street address must also be included.

For the Hmong Veggie Rolls, the growers didn't need anything fancy since the growers would be talking with each customer about the product and didn't use the label as a marketing tool. The growers also wanted to have a simple label to emphasize that it was "home-made".

On the last week of the market, the customer who had made the suggestion and was so supportive during the season, wished the Hmong farmers a great winter and looked forward to Hmong Veggie Rolls for sale at the Brookline Farmers' Market the next season.

Resources for producing value-added products:

1. The Massachusetts Food Processors Resource Manual. Contact the Massachusetts Department of Agricultural Resources at 617-626-1753 for a free copy. A condensed version is available on their webpage: http://www.state.ma.us/dfa/markets/specfood/food_processor_resource_manual.htm
2. Northeast Center for Food Entrepreneurship has many resources available for sale and on their webpage: <http://www.nysaes.cornell.edu/necfe/bizmark/busmark.html>. They have an office at the University of Vermont (802-656-8300) and Cornell University (315-787-2274) or send them an email at necfe@nysaes.cornell.edu

-Maria Moreira, Bonita Oehlke, David Webber and Frank Mangan

Worldcrops.org – A New Website with Crop Production Information for the Growing Ethnic Populations in the Northeastern United States

A collaborative project with Rutgers, Cornell and UMass Extension programs has created a webpage with crop production information on crops popular with the growing ethnic populations in the Northeastern United States. This information, funded by the USDA Northeast Region Sustainable Research and Education (SARE) Program, is available at www.worldcrops.org.

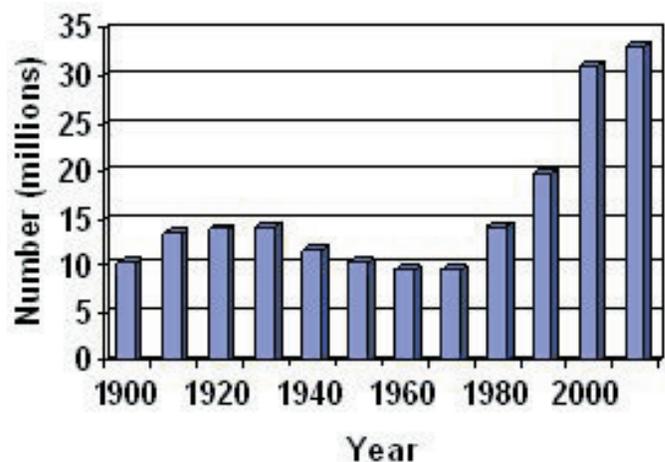


Figure 1. Cumulative number of immigrants in the United States. (Source: Center for immigration studies.)

The immigrant population has increased tremendously in recent years (Figure 1). Asians, Latinos, and Arabs alone represent more than 10% of the population in the

Northeast (US Census 2000). In New York City, approximately 60% of the students in public schools have at least one foreign-born parent. There are over two million people in the Northeast who consider themselves Puerto Rican. For the first time since its foundation, Boston's non-Latino white population is a minority.

This growing population diversity, combined with the increased interest their presence has generated from more traditional restaurant and supermarket buyers previously unfamiliar with the new offerings, is an opportunity for local growers to expand and re-direct production.

This web site provides information on agricultural crops that can be grown in the Northeastern United States. The emphasis is on vegetables and herbs that are popular among ethnic groups living in this region and can be grown in the Northeastern United States.

The crop information at www.worldcrops.org is organized according to the countries where they are popular. One reason for this organizational structure is that many ethnic groups are concentrated in one area or neighborhood. For example, in Holyoke, more than 75% of the customers at the farmers' market are Puerto Rican. In this case, a grower who sells at this market would want to check out the crops listed under Puerto Rico in www.worldcrops.org.

To learn more about how to identify ethnic groups in your markets and the types of crops they use in their cuisine, refer to "Producing and Marketing Vegetable Crops for Ethnic Markets" - originally published by the UMass Extension Vegetable Team in January 2002 edition of Vegetable Notes.

Currently, this site has crops popular in 11 countries in the Americas. The number of crops and counties on this webpage will continue to increase. There is a tremendous advantage in having this information on the Web since it allows us to constantly update and expand the information. If you do not have access to the Web, you can have someone print out the information for you.

How to use the site: Let's say that you sell at a farmers' market in a city or neighborhood with a large Puerto Rican population. Go to www.worldcrops.org and click on "Americas". You will then see a list of countries in the Americas on the left. Any country that is highlighted has a list of crops that are popular among people in that country. When you click on Puerto Rico a page will appear with a map of Puerto Rico and a very brief description of the population. On the bottom is a list of crops that are popular in Puerto Rico. Currently these crops are listed: ají dulce, calabaza, cilantro, cilantro, egg-plant, verdolaga. When you click on a crop you will be

brought to a fact sheet with all the information a commercial grower needs to grow the crop. This includes pictures of the crops, how it is used, and seed sources.

For specific production information, such as pest management and cultural practices, a link is provided to the New England Vegetable Management Guide for those crops listed on the website that are produced in a similar manner to traditional crops we grow in New England. Since ají dulce is a pepper, all the production practices and pest management practices are listed under "peppers" in the Guide. For crops that are not similar to other crops we grow here, like culantro, detailed production information is provided on the website.

With some crops, such as ají dulce, there are recipes produced by the UMass Nutrition Education Program. These recipes are nutritionally balanced and in some cases are available in multiple languages. These recipes can be downloaded and used when direct marketing the crops.

I welcome feedback on the site and any questions or comments you have.

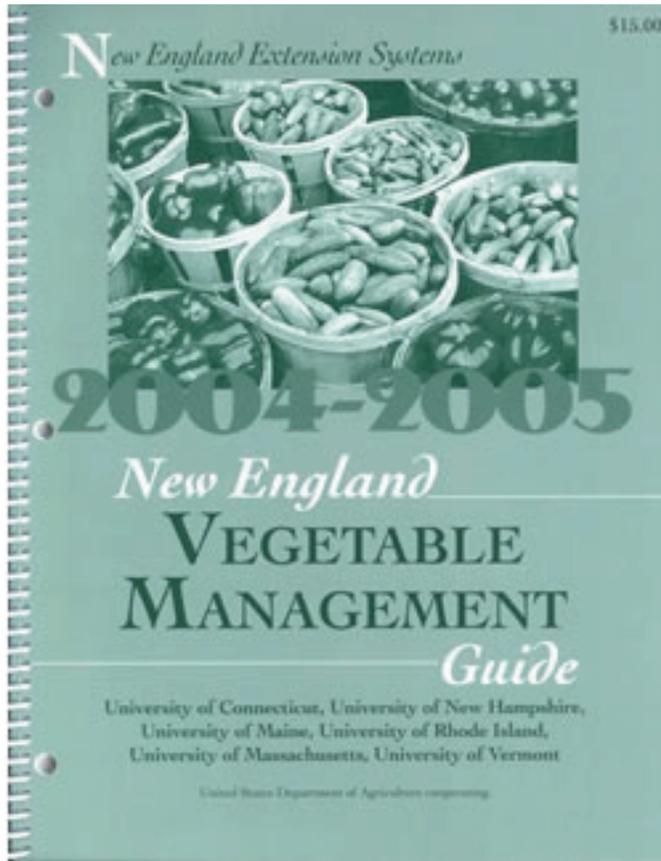
Frank Mangan (978 422-6374; fmangan@umext.umass.edu)

- Frank Mangan and Thomas Bunnell

New England Vegetable Management Guide **2004-2005 Now Available**

The 2004-2005 edition of New England Vegetable Management Guide is now available from the Extension Bookstore. This is a comprehensive guide for commercial vegetable growers with information on current production and pest management techniques. Each crop section discusses cultural, weed, insect and disease management. There is an extensive introduction with sections on soil fertility and nutrients, soil management, weed, insect and disease management, IPM, biorational pesticides, irrigation, greenhouse production and more! For each crop, the Guide lists recommended cultural practices, varieties, fertilization, and information on management of important pests including cultural controls, pesticides, and integrated pest management practices. Each crop has a chart showing how to read and use soil test results for that crop. Pesticide recommendations for each crop and pest have been completely updated. Recommendations include IPM and organic techniques.

This manual is a compilation of input from the members of the New England Vegetable Programs of the Universities of Maine, New Hampshire, Vermont, Connecticut, and Massachusetts. Because this is a publication written by professionals from throughout New England, and re-



Many crops on www.worldcrops.org are linked to the 2004-2005 New England Vegetable Management Guide for specific production and pest management information. The Guide is available for \$15.00 (plus shipping and handling). To order, call (413) 545-5538 or go to the UMass Extension Online Bookstore at www.umassextension.org

written every two years, it reflects the current collective knowledge for vegetable production for this region.

This guide is an invaluable tool for every vegetable grower. The binding and cover are made to be tough – they are ready to spend the next two years in your truck or office. To purchase your copy, contact the University of Massachusetts Extension Bookstore.

Perimeter Trap Cropping Works

Perimeter Trap Cropping is a system of non chemical pest control that functions by concentrating and/or killing the pest in the border area, while reducing pest numbers and disease spread and preserving natural enemies on the unsprayed cash crop in the center. It's based on exploiting the insect's natural preference for some varieties of a plant over others – basically, you just surround the crop you are trying to grow with one that your pests like even better. Many of you may have heard of perimeter trap crop systems, or PTC, either at other conferences and meetings or directly from growers

who are experimenting with them. Many growers have found this system to be an effective way to maximize pest control while minimizing the costs and risks of full field pesticide applications.

PTC systems work for a number of different crop/pest/trap crop combinations. We are currently experimenting with refining the technique for a number of systems in cucurbits, eggplant, tomatoes, brassicas, and peppers. For example, blue hubbard is an effective trap crop for striped cucumber beetle and bacterial wilt in summer squash, cucumber, and butternut squash. Other combinations are cherry bomb pepper for pepper maggot fly where green peppers are the main crop. Japanese eggplant traps Colorado potato beetle and flea beetles where standard eggplant is the main crop. Prizewinner works around pumpkin. Collards trap diamondback moths coming into cabbage.

We would like to invite you to try this system yourself – with support from us - on any trap crop/pest/main crop system that you think it might work for. We can offer many suggestions, but we also encourage you to try anything that you think might work. Many of these ideas originally came from growers who noticed that certain pests seemed to love one variety, while skipping over others. We can offer support in the form of consultation any time before or after planting, and a visit over the summer to see how things are working for you. We are hoping that you will join the growing number of growers for whom PTC has become an indispensable part of their pest management practices.

If you have any questions, or if you think you might be interested in experimenting with this system on one or more crops, please contact Andy Cavanagh at (413) 577-3796 email: acavanagh@pssci.umass.edu or Ruth Hazzard at (413) 545-3696.

Our next newsletter will feature a more in depth introduction to PTC and some of the results we have gotten from our experiments with it, as well as more information about how to get involved in working with this system. More information on PTC can be found on the web at: www.hort.uconn.edu/ipm/veg/htms/ptcworks.htm

- Andy Cavanagh , Extension Research Technician and Ruth Hazzard, Vegetable IPM Specialist

Vegetable Notes is a publication of the University of Massachusetts Extension Vegetable Program which provides research-based information on integrated management of soils, crops, pests, and marketing on Massachusetts farms.

For more information about the Vegetable Team's research and UMass Extension programs, visit our website at www.umassvegetable.org or call Ruth Hazzard at 413-545-3696.

New England Vegetable & Berry Growers Association

All Day Meeting

Friday, February 13, 2004

Commercial Members are invited to set up exhibits of their products and services.

Program

9:30 am	Registration: There is a \$10 registration fee for those who are not members of the NEV&BGA. This <i>does not</i> include lunch.
10:00 am SHARP!	Slide Tour of Farms In Foreign Countries - Frank Mangan, University of Massachusetts - Frank has visited vegetable farms in many countries and has developed a slide show of production practices, many of which may be applicable to New England farms.
10:30 am	Parasitic Wasps for Control of Insect Pests of Corn and Peppers and Perimeter Traps - Ruth Hazzard, University of Massachusetts - As we lose more and more of our chemical pesticides, it becomes more and more crucial to develop and utilize alternative methods of pest control.
11:00 am	Vegetable Variety Trials - Dr. David Handley, University of Maine - NEV&BGA awarded a research grant to David to conduct vegetable variety trials last year and he will report on the results of his trials on sweet corn, strawberries, and thornless blackberries.
11:30 am	Plastic Mulch Removal, Storage, Disposal - Mario Marini, Grower, Ipswich, MA - Removing, storing and disposing of plastic mulch is a problem for all growers. Mario will explain how he does it. Other growers are welcome to explain how they do it, also.
12:00 noon	Lunch - Reservations only! - Chef du Jour John Ayotte will provide us with a sumptuous lunch including banana fritters. Please return the postcard with your name and number of reservations by Friday, February 6th. Phone reservations can be made or changed until noon on Tuesday, February 10th by phoning (508) 378-2546. If you are unable to attend after making reservations, please phone since the Association must pay for all meals reserved. <i>Those who make reservations and do not show up will be billed.</i>
1:00 pm	Business Meeting, Election, Secretary and Treasurer's Reports, Promotion Ideas - The Public Relations and Marketing Committee is seeking suggestions for Promotion projects.
1:30 pm	Cultural Practices for Spinach Production - Ken Fine, Johnny's Selected Seeds - Although it may be considered a minor crop, spinach is an important crop for roadside stands and farm markets. Ken will discuss varieties and cultural practices.
2:00 pm	Update on Labels A review of changes in registration and regulations, new materials and their effectiveness, and changes in recommendations. INSECTS - Best Corn Insecticides, Systemics - Ruth Hazzard, University of Massachusetts DISEASES - New Fungicides, Acrobat on Tomatoes, New Fungicides for Raspberries & Strawberries - Robert Wick, University of Massachusetts WEEDS - Herbicides for corn, Best Herbicides Under Plastic - Rich Bonnano, University of Massachusetts

Note : Certified Pesticide Applicators attending this meeting will receive credits towards recertification.

Note : Logo Signs - The Public Relations and Marketing Committee of the NEV&BGA is conducting a 2 for 1 Sale on the magnetic and stick on "Massachusetts Grown and Fresher" logo signs. We will have some for sale at the meeting.

For more information, contact Dominic Marini, (508) 378-2546