

NOFA-NY's 18th Annual Conference  
**Planting Seeds for the Future: Taking Charge of our Seed Supply**

Skills, ideas, and connections for creating a regional seed supply

January 29-30, 2000

Darrens Communications Center

Rensselaer Polytechnic Institute

Troy, New York

**Registration**

Keynote

Saturday Schedule

**Vendor Information**

Sunday Schedule

## **Introduction**

Our hopes to create a sustainable, regional food supply cannot succeed unless we can control the types of plants we grow. We are more dependent than ever before on seed produced by a shrinking number of seed companies with profit motives dictating catalog offerings. The ecological threat posed by genetically engineered plants includes the adulteration of our principal food stocks, which have been nurtured and selected over centuries.

NOFA-NY's annual conference is dedicated to bringing together people in the Northeast to begin the task of creating our own seed supply. There are many excellent people who have been working with this vision in mind, as you will see from the list of presenters. And there are many others we hope will attend as exhibitors and supporters. The ideas, energy and knowledge are within our diverse ranks. We need to get to know each other better, connect with like-minded folks and make this important goal a reality.

Gardeners, seed savers, farmers, seed coops, seed exchanges and seed preservation groups, working together, can produce commercial quantities of seed. The people, the expertise and the energy are here. We can accomplish this task if people work on whatever their particular plant interest happens to be. We don't need a new organization -- but, rather, coordination. Using the incredible number of open-pollinated varieties that are our heritage, we can choose a future that includes them. We can breed our own seed varieties for disease resistance. Our regionally adapted seed can provide us with crops that grow better here than anywhere else. We can work with and support seed companies that supply us with the seed we need. And we can assist seed companies anxious to work with growers, researchers, gardeners and seed preservation groups.

- Preserve the right to save and grow seeds of our choice.
- Fight for labeling laws that let us choose what we eat.
- Support seed companies that sell open-pollinated seeds.
- Learn how to grow and multiply seed.
- Buy locally-grown organic foods.
- Learn how to become seed breeders in our own backyards.
- Share the seed we grow and what we learn through seed exchanges, seed coops and seed companies providing us with excellent, regionally adapted, organic seed.
- Support all our regional agricultural businesses.
- Become even better organic gardeners and farmers.

**Come to the conference that will help us all make the connections we need to make this happen!**

## **Keynote Speaker**

*Working Together to Create a Regional, Sustainable Seed Supply*

Will Bonsall

A tall man with a healthy flowing beard, Will Bonsall seems larger than life. His words and thoughts flow in torrents, powered by a keen mind and unrestrained enthusiasm. He started the Scatterseed Project in Maine, a regional seed exchange for this area. His collection matches his energy, 3,000-4,000 accessions (he doesn't know exactly how many), of which he annually makes 1,500 to 1,700 available through the Winter Yearbooks of the Seed Savers Exchange. Since 1989 he has been curator for a substantial part of the SSE collection, including potatoes and peas. Probably he is more impressed with his 50-60 parsnip varieties ("more than the

USDA") and 50-60 varieties of Jerusalem artichokes ("to my knowledge the largest in the world") than his 1,000-plus varieties of peas.

When he came to rural Industry, Maine (a fitting name for the locus of his work), in 1971, Bonsall's initial focus was self-sufficiency. *"We were growing our own food, let's grow our own seeds, too."* He soon became intrigued by the Cowhorn potato, a northern New England heirloom with a long skinny shape like a cow's horn and purple skin. Orlando Small, a neighbor, gave him a dry horticultural bean (Orlando's) and a white runner bean (Small's Carolina lima).

Through the years, Bonsall has been a fount of knowledge about regionally adapted varieties, such as Boothby's Blonde cucumber and Sheba barley (available from Fedco's catalog), and occasionally has grown seed for Fedco as well. He was giving classes on seed saving when someone told him about Kent Whealy so he gave Whealy a call. The rest, as they say, is history.

Trying to find species that others have neglected, Bonsall concentrates on so-called "minor crops" like beets, rutabagas, turnips, chicorys, radishes and parsnips. Within the last year he has become curator for favas (140-150 varieties) and runner beans (over 200 varieties from all over the world). More recently, Bonsall has turned his attention to global linkages. In the John Innis collection in England, he located Banner wheat, an historic hard red spring wheat going back to 1820 that was once one of the most common varieties grown in Maine, and had been long since extinct in the United States. CR Lawn, Fedco Catalog, 1998.

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## Conference Schedule

Saturday, January 29

**Registration: 8:00 a.m.**

### Session A 9:00-10:15

#### Plant Breeding Techniques

Seed Selection, Hybridization, Mutagenesis, Genetic Engineering -- Seed Breeding Techniques -- what they are, how they work, what they provide in the way of plant material. Just how has the human race manipulated plants to suit us through the years? Selection, the oldest method of plant breeding, may sound fairly simple, but the ramifications can be profound. Hybrids have increased the yields in corn in particular. Newer techniques, like mutagenesis, will be explained. Lastly, genetic engineering will be demystified. **Dr. Margaret Smith** breeds primarily field corn and some sweet corn at Cornell University. She also works on development of insect and disease resistance, plant adaptation to alternative management systems and the genetic improvement of crop plants.

#### Slaughtering and Meatpacking in NYS Today

An overview of the USDA Hazard Analysis Critical Control Point (HACCP) new inspection system for food will be presented. Existing and pending innovations in meat processing infrastructure and NY State and New England organic meat labeling requirements will be discussed. **Martin Broccoli** is a supervisor of the Meats and Fisheries Processing Research Lab at SUNY Cobleskill. He is also a professor of economics, management and meat products, and agriculture marketing. **Jim McLaughlin** is a member of the Pastured Poultry Association of South Central New York and works for USDA's RC, staffing a mobile poultry-processing unit. He will discuss how the mobile unit has operated during the last three years. **Judith Kleinburg** is a member of the NE Pastured Poultry Association and will review the first year of operation of their all-volunteer mobile processing unit, which is available to local farmers upon request.

#### Boyd Soybean -- Plant Breeding on the Farm

**Klaas and Mary-Howell Martens** developed this food-grade soybean for tofu or tempeh making. Klaas and Mary-Howell Martens farm 1100 acres of organic grains and processing vegetables in Yates County. Their operation is certified by OCIA and NOFA-NY.

#### Hardest Cultivars Available for Fruit Production in the Colder Climes of the Northeast

It's not easy to know what will grow best in Zone 5, Zone 4 or Zone 3 or to know if the fruits of your labors will be sweet. **Bill MacKenty** is a plant breeder and owner/operator of St. Lawrence Nursery and will discuss what have been found to be the most appropriate cultivars for the Northeast.

## **The Basics of Organic Gardening and Farming**

Soil components, organic content, biological diversity, rotations and ecological principles will be explained to familiarize participants with the major aspects of organic gardening and farming. **Elizabeth Henderson**, an organic farmer for 20 years, will discuss the basics and touch on new research that points to the benefits and strengths of ecological management in agriculture.

## **Mentoring, Management and Marketing for Small-Scale Processing Start-Ups, Part I**

These two concurrent workshops are for people interested in starting virtually any type of small-scale processing business, including production of jams, dairy products, and baked goods. For details on these special workshops, call **Alison Clarke** at 716-394-0864. Workshop presenters are **Adele and Jim Hayes, Karen Kerney, Amanda Hewitt and Alison Clarke**.

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**Annual Meeting: 10:30 - 10:45**

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**Keynote Address by Will Bonsall 10:45 - 12 :00**

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**Lunch Vendor Visits 12:00-2:00**

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### **Session A.1 1:00-3:30**

#### **Garlic Seed**

Selecting and saving garlic can give a grower a tremendous advantage in the production of garlic. **David Stern**, garlic grower and breeder, will discuss the art of growing and saving garlic for commercial production. David Stern grows garlic at Rose Valley Farm in Rose, NY.

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### **Session B 2:00-3:30**

**Breeding Plants for Disease and Pest Resistance** During the twentieth century, plant breeders have preferred working with "vertical" resistance, which has many advantages but which requires expensive research institutes and teams of specialized scientists. The ephemeral nature of "vertical" resistance has greatly encouraged the use of crop protection chemicals. Farmers have employed horizontal resistance since the dawn of agriculture. We require a new approach to plant breeding in which hundreds of amateur breeder clubs, worldwide, provide effective competition for institutional and corporate plant breeding. These clubs could provide unlimited numbers of new varieties that need little or no crop protection chemicals. **Dr. Raoul Robinson** is a retired Canadian agricultural botanist who has worked mostly in the Third World. Robinson has specialized in breeding crops for durable resistance to their pests and diseases with a view to reducing or eliminating pesticides. He has written a book on this topic and is promoting the idea of plant breeding clubs.

## **The Basics of Becoming a Certified Organic Farmer**

Certification is a self-imposed regulatory system that has been created over time by a hearty band of farmer volunteers. NOFA-NY's standards are contained in a 90-page manual. **Patricia Kane**, NOFA-NY Certification Administrator, will explain the ins and outs of certification requirements.

## **Heritage Rare Breeds Instead of Feedlot Breeds**

We will discuss the advantages of raising heritage breeds over animals bred to fit into an industrial agricultural system. **Tom Gardner**, director of the N.E. Heritage Breeds Conservancy, will discuss the efforts of this organization, as well as others, to create a market for heritage breed meats. As with heirloom vegetables, without a market, preservation efforts are considerably more difficult.

**Flower and Herb Seed Saving Techniques** Hancock Shaker Village, located in Pittsfield, Massachusetts, has a seed saving program, sells seed in their gift shop and conducts an education program on heirloom seeds and seed saving techniques in area schools. **Meredith Kennard** is the Associate Coordinator for the Farm and Garden Program and will touch on the Shakers' medicinal herb industry, and seed saving techniques used for the 100 herbs found in the Museum's herb garden. Techniques for saving open-pollinated flower seed will also be discussed.

## **Mentoring, Management and Marketing for Small-Scale Processing Start-Ups, Part II**

## Session C 3:45-5:00

### Farmer Cooperative Genome Project

This project is administered by Oregon Tilth and seeks to assemble a farmer owned seed company working with the United States' repository of seeds (the National Plant Germplasm System) and other seed resources. The NPGS now contains about 450,000 varieties of plants out of the world's estimated two million plants. Some of the seed and plant resources are well described, while others are not. For example, some have simply been assigned a number and there is no additional information about the plant. The value of a particular variety, whether it's a duplicate accession, whether it has potential as a commercial crop or what any of its attributes might be, is simply unknown. Once a plant is in the system and described or characterized, the plant is locked into the public domain. The more heirloom seeds that are in the repository and characterized, the more plant material that remains available to the public. Volunteers work with the plants of their choice. The project is open to anyone who can grow a plant. **JJ Haapala** is the Project Director, a farmer, seed producer and editor of Oregon Tilth's newsletter, *In Good Tilth*.

### Diversifying Your Operation with Chinese Medicinal Plants

**Jean Giblette**, director of High Falls Gardens, will show slides and discuss several interesting, open-pollinated Asian medicinal plants that grow well in the Northeast. Although the market for Chinese medicinal botanicals has not yet developed, Ms. Giblette will provide an update on research and current events that indicate such opportunities five to ten years ahead. Participants will receive information on cultivation requirements, where to obtain seeds, and how to keep up with this rapidly developing field. Jean Giblette is the Director of High Falls Gardens (HFG), an educational initiative that seeks to advance the practice of traditional Chinese medicine in North America through cultivation and study of Asian medicinal plants. In 1994, HFG established a garden in the Hudson Valley region of New York to propagate plant material received directly from China, and to serve as a teaching and research facility. With over 180 species grown during the 1998 season, the collection affords ample opportunity for study, including comparisons with closely related native medicinal plants.

### Potatoes: Special Problems with Saving the 'Seeds' of Clones

In this workshop, the difficulties that arise when saving clones will be explored, along with strategies for developing one's own stock of seed potatoes. **Will Bonsall**, our keynote speaker, curates the huge potato collection for Seed Savers Exchange.

### Wholesale Marketing Panel

Establishing wholesale accounts at larger stores continue to be problematic for farmers. **Gayle Anderson**, Produce Manager at the Honest Weight Food Coop, has a reputation for buying from as many organic and local farmers as possible. She will discuss what she needs from the farmer. Price Chopper's produce division staff will discuss their wholesale produce purchasing approach. Price Chopper has 25 supermarkets in the Albany-Troy-Schenectady area.

### Small-Scale Multiplication of Vegetable Seed

The techniques for seed production used at the USDA's Geneva Plant Introduction Station are comparable to what a home gardener or small-scale farmer would use to produce and save seed. The presentation will cover multiplication of vegetable seed in the field, controlled pollination, harvest and extraction and seed processing for crops curated at Geneva. Major collections include brassicas, onions, cucurbits. **David Sharman** is the Farm Manager for the USDA Agricultural Research Service, Plant Genetic Resources Unit, in Geneva, NY, and is responsible for regenerating seed in the collection.

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## Cider Social and Vendor Visits 5:00-6:00

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## Dinner 6-7:30

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## Debate 7:30-9:00

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### A Factual Debate: The Benefits and Risks of Genetically Engineered Plants in Agriculture

**Dr. Dennis Gonsalves** -- Cornell University, Dept. of Plant Pathology. Dr. Gonsalves has

developed, tested and commercialized virus resistant transgenic plants. Papaya is a notable example. Dr. Gonsalves is also conducting research on risk assessment.

**Dr. Margaret Mellon** -- Union of Concerned Scientists (UCS). Dr. Mellon is the Director of the Agriculture and Biotechnology Program at USC. She holds both Ph.D. and J.D. degrees from the University of Virginia.

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## Conference Schedule

Sunday, January 30

**Registration 7:30 a.m.**

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## Breakfast 7:00-8:30

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### Session D 8:45-10:15

#### Heirloom Seeds

Two years ago, Burpee came out with a small supplemental catalog on heirloom seeds, a good indicator of the growing interest in heirloom plants. However, others have been at this for a good deal longer. The Garden State Heirloom Seed Society has been in operation for a few decades and is especially proud of their gardeners, who trial hundreds of varieties every year. **Joe Cavanaugh** will discuss how the group shares their findings with gardeners and farmers looking for trial information on heirloom varieties. The Eastern Native Seed Conservancy works with farmers and gardeners with a focus on conservation of plants of native American origination or usage. **Larry Davis-Hollander**, Director, will discuss their organization's work with farmers and heirloom tomatoes, as well as their overall program of seed collection, seed banking and redistribution.

#### Raising Livestock on a Diversified Organic Farm Selling to Retail Stores

This workshop will discuss the thinking needed to incorporate the right livestock into your farm operation. How much time does a meat production component add to operations? What are the equipment and facilities needed? How about slaughtering arrangements? What regulations and inspection requirements apply? These and other questions will be answered at this workshop. **Alton Earnhart** is a NOFA-NY certified farmer who raises grain, beef, lamb, pork and chickens using intensive pasture and crop residue management. **Larry Decker** is Chief Inspector for NYS Ag Mkts. Division of Food Safety Inspection's Upstate District.

#### Starting Herbs from Seed and Growing Herbs in the Garden

Some herbs are tricky while others are quite simple to start from seed. There are some simple rules for starting herbs, along with some helpful references, that will be reviewed. **Sherrie Mickel** has grown herbs in the home garden for many years.

#### Biennials Advanced Seed Saving Techniques

Biennials are neglected in comparison with annuals, yet these crops, including kale, carrots, and cabbage, are important food crops for the Northeast. This workshop will focus on the special problems involved with biennial species and with outcrossing. **Will Bonsall**, our keynote speaker, takes a special interest in these so called "minor" crops.

#### Operating a Farm-based Seed Coop -- 20 Years of Experience

Butterbrooke Farm Seed Co-op began operation in 1979. The nonprofit network of organic growers and seed savers provides its members with chemically untreated, open-pollinated vegetable and flower seeds, including named heirlooms and short-maturity varieties. **Tom Butterworth**, founder and farmer in Connecticut, will explain the structure of the organization and how it has grown over the years.

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### Session E 10:30-11:45

#### Working with Farmers and Gardeners to Build a Sustainable Regional Seed Industry

If we are to truly succeed in creating an alternative agricultural system, we must have alternative sources of seed. Currently, the seed industry is controlled by a handful of behemoth multi-national "life science" conglomerate/clusters. This workshop will explore strategies for building a sustainable regional seed industry which can support our alternative farms and even provide an additional value-added product for some of the

farms. The workshop will explore some of the economics of seed growing and ways to work together for our mutual benefit. **CR Lawn** founded Fedco Seeds in 1978 and continues to work there. He ran a small market garden from 1977-1990 and has been on the MOFGA Board of Directors since 1994, serving as treasurer and later as secretary. He was also the Chairperson of Common Ground Fair Steering Committee for two years.

### **Organizing a Group -- Any Group**

This workshop will feature two organizers with techniques and hands-on suggestions for pulling together and growing a group, no matter what the purpose of the group. This is a hands-on workshop where audience questions and problem solving are encouraged. Presenters will be **Mike Bernhard**, an organizing force for the Susquenango Chapter of NOFA-NY, **Sarah Johnston**, with war stories from organizing local advocacy groups.

### **Growing and Conditioning Certified Organic Cover Crop Seed**

In the winter of 1998, **John Myer** built a seed processing facility on his farm. The equipment and procedures for growing cover crop seed will be discussed. John Myer farms 850 acres of grain in Seneca Co.

### **USDA National Plant Germplasm System**

What it is and how it works and how farmers and gardeners can access the system. The federal system has advantages and limitations, which will also be explored. **Dr. Larry Robertson**, Vegetable Crops Curator at the USDA-Agricultural Research Service, Plant Genetic Resources Unit in Geneva, NY Curator of the national tomato, onion and cole crop collections, housed in Geneva, NY, will explain and discuss the system. Before coming to Geneva last year, Dr. Robertson spent 16 years collecting plant material from around the world for the International Center for Agricultural Research in the Dry Areas.

### **Breeding, Adaptation and Germplasm Preservation in Cucurbits**

Cucurbits or vine crops include a broad range of food crops of worldwide importance. Most economically important cucurbit species are bee pollinated and therefore highly outcrossed. For breeding purposes it is usually necessary to use controlled pollination techniques or isolation to develop uniform strains. Many of the species within the Cucurbitaceae family exhibit a tremendous variability in plant and fruiting habit, so that it is possible for even a "hobby breeder" to develop some unique strains through simple breeding procedures. Species such as Cucurbita pepo and maxima (pumpkins and squash) tend to have wide adaptability to environmental extremes, whereas other species such as melon (Cucumis melo) generally have a narrower range of adaptability, and would not be the ideal choice of crop for an amateur breeding project. Germplasm preservation has taken on greater importance in the 20th century with the replacement of older varieties and landraces by improved commercial varieties. **Dr. Brent Loy**, Professor of Plant Biology Genetics, and plant breeder, University of New Hampshire at Durham.

### **Horses -- Sustainable Energy on the Farm**

Energy use on most organic farms is equivalent to that on conventional farms, which means it's high. **Mike Scannell** will discuss how he uses his team of Belgian draft horses to do nearly half the farm work on his 200 acre farm in Columbia County where he raises certified organic grains, hay, vegetables and pastured pigs. He also raises natural beef.

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### **Lunch 11:45 - 1:00 p.m.**

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### **Session F 1:00 - 2:15 p.m.**

#### **Starting and Running a Farm-Based Seed Company**

High Mowing Organic Seed Farm in Wolcott, Vermont, produces all the seed it sells. We will discuss start-up, equipment needs for seed processing and distribution, and other aspects of a small seed business. **Tom Stearns**, High Mowing owner and operator, also works with the Biodynamic Seed and Plant Association, which is working to make high-quality seed cleaning equipment accessible to a widening community of growers.

#### **Integrated Pest Management**

This presentation is targeted to more experienced vegetable growers. Discussions will include information about a few newer pest management techniques that growers may not be familiar with. There will be a focus on organisms or products that are commercially available and how they work and how to use them. Trichogramma wasps for control of European corn borer in sweet corn will be discussed, along with information about other

pest/crop combos. **Abby Seaman** is an area extension educator with Cornell Cooperative Extension focusing on Integrated Pest Management in vegetable crops. She has a particular interest in biological controls and is familiar with organic production through her previous work with the NOFA-NY certification board. *Pesticide Applicator Recertification Credits awarded for this workshop.*

### **Agriculture in the Classroom**

This program is a collaboration between the State Education Department, the NY Farm Bureau, NYS Ag Markets, and Cornell's Life Sciences and Cooperative Extension departments. **Janet Hawks** has designed classroom curriculum materials for the program and will discuss how this effort has reached up to 7,000 teachers since its inception. She will also discuss how you can help get agriculture into the classroom in your schools.

### **Direct Marketing Panel**

There are three major types of direct marketing operations used by small farmers today. Each panelist will discuss how the major component of his or her market works and ties in with other, smaller components to make ends meet. **Jen and John Bokaer-Smith** sell produce at the Ithaca Farmer's Market and will discuss how the combination of farmer's market and CSA work for them. **Ray McEnroe** will discuss his success in building a major farm stand business in Dutchess County. **Janet Britt** started a CSA in the Albany area years ago and has been the inspiration for new CSAs around the Capital District. She will discuss her CSA, which is her only market.

### **How to Explain Genetic Engineering to your Neighbor**

Simple concepts: crude techniques, problematic results -- that's the essence of genetic engineering. This presentation will focus on presenting the "how" of genetic engineering in terms that you can use to explain it to your not-necessarily-a-scientist neighbor. Topics include: recombinant DNA technology, DNA hybridization, molecular cloning, PCR (polymerase chain reaction), plasmids, transformation, vectors and transgenic organisms. **Laurie Freeman**, Biology Professor, Fulton-Montgomery Community College, clears a bit more garden space each year at her homestead in Mecoo, NY.

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### **Next Steps**

#### **Solidifying Connections Wrap Up 2:30 - 3:00 p.m**

New ideas and activities may need organizational support or simply the opportunity to grow slowly; your thoughts on what you will do and what we can do together to move the Northeast along the path of a sustainable seed and food supply. **Elizabeth Henderson and other Presenters.**

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