22nd Annual
Organic Agriculture Conference

Organic Goes Mainstream

Sponsors:

CHFA	Canadian Health Food Association – Organics Committee
COG	Canadian Organic Growers
EFAO	Ecological Farmers Association of Ontario
IOIA	Independent Organic Inspectors Association
NFU	National Farmers Union
	Organic Advocates/Feast of Fields
OACC	Organic Agriculture Centre of Canada
OCIA	Organic Crop Improvement Association (International)
OCPP	Organic Crop Producers & Processors / Pro-Cert Canada
OMAF	Ontario Ministry of Agriculture and Food
OTA	Organic Trade Association
QAI	Quality Assurance International
REAP	Resource Efficient Agricultural Production – Canada
BD	Society for Biodynamic Farming & Gardening
U of G	University of Guelph

Organic Goes Mainstream – 2003 Guelph Organic Conference

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Organic Livestock Panel

Organic/Sustainable Agriculture & Traditional Livestock Genetics

by Marnie Cuff

The issues of "loss of livestock genetic diversity" and "loss of traditional (old) livestock breeds", and their connections to organic/sustainable agriculture, are too great to discuss adequately in this panel discussion format. It is hoped that for a deeper and broader discussion, one will plan to attend the workshop on the topic being delivered by Dr. Tom Hutchinson ("Heritage Breeds – A Natural Choice for Organic Agriculture", Sunday, January 26, @ 09:30 – 11:30 hrs.). One may also gain more information on traditional breeds by contacting "Rare Breeds Canada" (see "Resources" list at end of summary). What I am hoping to share is my (approx. 8 years) experience of working with traditional (old/rare) livestock breeds in an organic/sustainable farming setting. What I have learned can be considered to fall under two general categories: pragmatic lessons (what traditional breeds have to offer organic/sustainable farmers/systems); and ideological lessons (the important role, and responsibility, that organic/sustainable farmers need to play in ensuring livestock genetic diversity, in particular in ensuring the conservation/preservation of traditional livestock breeds).

While I have kept traditional breeds of sheep, turkey, and chickens; most of my experience is with two particular breeds of cattle which are managed entirely as grass-fed (Red Poll, a dual-purpose breed; Canadian Lynch Linebacks, a Canadian heritage dairy breed); and British Large Black swine (being managed on/with pasture; not simply "free-range", nor in an "adapted confinement/ certified organic feed" system).

The Pragmatics – What traditional breeds have to offer organic/sustainable farming systems:
It is important to remember at the outset that these old breeds thrived in times/settings more like those of contemporary organic/sustainable systems – systems of low inputs (in terms of feed, vetting, fertilizers, etc.); systems of diversification (in terms of livestock and crops); and systems where the people, animals, and the land have a close working relationship based on mutual reliance. My own experience, as well as the experience of many others with these breeds, suggests that they are a most pragmatic choice for organic settings; in fact, as far as "honest" organic pork production is concerned, the experts are clear that it is impossible without the involvement of the coloured traditional breeds.

With this in mind I offer the following as some of what traditional breeds have to offer (for further details on these individual traits, contact author – see bio for contact information - or attend panel discussion):

- Very low demands as far as feed inputs; superior feed converters in terms of grass/hay (both bovines and porcines);

- Very low demands as far as vetting inputs;
- Very hardy in terms of environmental tolerance
- Very long-lived;
- Docile temperament;
- Higher general intelligence level;
- Superior maternal traits (in both bovines and porcines) ;
- High quality, unique products – This refers to meat, milk, fiber and leather;
- Apparent resistance to many diseases.

It is important to remember, however, that the reason these breeds fell from favour and are currently at risk of disappearing, is that they did not perform to their abilities in contemporary, intensive agriculture systems – traditional breeds have more to offer organic farmers than conventional breeds if they are managed in a truly low-input, organic (in terms of outdoor access, etc.) setting. If managed in the way they were intended – i.e. to suit their low input, etc, characteristics - these breeds have the ability to significantly lower feed, health care, and labour costs, while providing products that are of exceptional quality. Regarding organic pork production – as I noted above, anyone interested in producing "honest" organic pork needs to include the traditional coloured swine breeds – the experts are clear that the conventional breeds cannot do it. Organic farmers need traditional livestock genetics.

I have come to see that these traditional breeds need organic farmers. The whole system of livestock management promoted by organic standards would ensure that these breeds would continue to thrive as the balanced genetic package that they are – not only because the inputs, environment, etc. would meet their needs, but also because organic farmers would tend to select breeding stock/cull based on the positive traditional genetic traits. It seems that in conventional settings different selection/culling criteria are valued which would result in "human-induced" breed changes; and as research suggests, evolutionary changes can be induced by management practices, so simply being managed in a conventional, intensive manner could result in changes to the breeds.

Taking the "ideology" one step further, and building on the above, I would also suggest that organic farmers – with their concern for the environment and sustainable food production – have a deep responsibility in ensuring the survival of traditional breeds.

Resources

For more information on traditional rare breeds:

Rare Breeds Canada – (705) 748-1634
Trent University – Environmental & Resource Study Program
Box 4800, Peterborough, ON K9J 7B8
www.rarebreedscanada.org; email: rarebreedscanada@trentu.ca

For advice on feeding swine breeds in a more traditional manner:

Morrison, Frank B., 1948 (other editions available)
"Feed's and Feeding: A Handbook for the Student & Stockman",
Ithaca, New York: the Morrison Publishing Company.

For information on "pasture-based" hog production:

"Graze" (bi-monthly newspaper - also good for any grass-based advice, with a focus on dairy being out of Wisconsin; but anything/anywhere written by Jim Van der Pol on the topic of swine is excellent "Graze has done a series on the topic by Jim both in 2001, 2002 – worth getting re-prints/back-issues for many of the articles)

608-455-3311; email: graze@mhtc.net
P.O. Box 48, Belleville, WI, USA 53508

For information on setting up free-range swine – however, as far as feeding, this publication is not so much "pasture-based" as simply free-range; good ideas as far as rotation systems, etc., but Jim Van der Pol, and with Morrison's as an aid, is better in terms of genetics and feeding – in my opinion Jim is managing swine in a more sustainable manner – not simply taking down the building and moving the pigs outside.

Thornton, Keith 1990. "Outdoor Pig Production". Farming Press: UK.

Additional articles concerning pastured swine – anything by Greg & Lei Gunthorp – the following articles by him can be found on the internet:

www.grassfarmer.com/pigs/gun1.html "Pastured Pigs on the Gunthorp Farm";
www.grassfarmer.com/pigs/gun2/html "Pasture Farrowing Hints from the Gunthorps";
www.grassfarmer.com/pigs/gun3/html "Pasture Hog Hints from the Gunthorps".

About Marney Cuff

Marney, her partner Paul Eisenbarth, and son Tim, are taking a "sustainable agriculture" approach on their 150 acre pasture farm in south-west Grey county. The focus of her work is livestock genetics, in particular traditional/rare breeds of cattle and swine. Her experience has led her to believe that traditional (old) breeds are a most pragmatic choice for organic/sustainable agriculture systems; and that those committed to organic/sustainable agriculture have an important role, and responsibility, in the conservation/preservation of traditional livestock genetics.

In an effort to learn more about bovine and porcine behaviour/psychology - so that she may provide the healthiest environment possible for her livestock - she has been putting time and energy into: learning to be an ox drover (training of calves as oxen; yoke carving; uses/abilities of ox teams and implements); and also, learning – through observations of her own animals and the experience of others - the abilities, and potential roles, of swine as pasture animals.
For comments, discussion, or further information contact Marney at: buffalos@wightman.ca.

About Dr. Terry Fisk

I graduated from the Ontario Veterinary College in 1975 and returned to my hometown of Harriston, Ontario where I replaced my father in the practice that he founded in 1949. The practice is a mixed practice that was 80% large animal and 20% companion animal in 1975 and is currently 45% large animal and 55% companion animal. In the fall of 1999, I attended the New England Veterinary Medical Association conference in Burlington, VT. While there, I sat in on a complimentary medicine seminar by Dr. Allan Schoen. I came home with some practical information that gave me excellent results. For many years, I had had concerns about the drug use and therapies used in conventional medicine. This looked like an area where natural products could be used in a safe and gentle manner without further polluting the planet. I then enrolled in Dr. Richard Pitcairn's course in veterinary homeopathy taught by Dr. David Evans of Chester Basin, NS. Over the next 8 months, I attended 5 intensive 4-day sessions in Victoria, BC. I started doing small animal homeopathy cases and then became involved with organic farmers in my area. I began to consult with Dr. Edgar Schaeffer of Pennsylvania. I was invited to attend the Homeopathic Medical Society of the state of Pennsylvania's conference in Lititz, PA in March of 2001. September 2001, I enrolled in Dr. Pitcairn's advanced course of veterinary homeopathy that was divided into 3 sessions held in Guelph, Tiberon, CA and Clearwater, FL. I have also attended this year's 2002 HMSSP conference in Lititz, PA and the Mid-Atlantic Bio-Dynamic

Farming conference in Lovettsville, VA. I have developed an interest in Bio-Dynamic Farming and hope to establish a Bio-Dynamic Market Garden in the future. I am currently a member of the Academy of Veterinary Homeopathy and I plan to become a certified homeopath in the near future. My goal is to provide homeopathic veterinary services to the organic farming community of Ontario.

Dr. Terry Fisk can be reached at:
P.O. 490, Harriston, ON N0G 1Z0
519-338-3502 email: DocTerFisk@aol.com

About Mike Beretta

Mike Beretta and his wife Cynthia farm 850 acres north of Toronto in King Township. They primarily raise beef and pork (cow/calf to finish and farrow to finish) as well as sheep and rabbit. The farm practices intensive grazing and almost 300 acres are used in the pasture rotation. Mike is a butcher as well and the couple run a mid-sized meat processing plant handling only certified organic meats. For the last ten years Mike has been very active in marketing organic meat and building producer networks across the province.

Beretta Organic Farms
4400 15th Sideroad King City, ON L7B 1K4
(416) 674-5609 email thefarm@berettaorganics.com

About Chris Boettcher,

I was born and raised on a small crop and mixed livestock farm in Northern Germany. After immigration to Ontario (Huron County) I finished high school education and enrolled in the Agricultural Diploma program at the University of Guelph. Besides the crops farming we always kept livestock on the farm and during high school we added a flock of sheep in addition to horses.

We always had a keen interest in alternative and sustainable agriculture and I have been attending the Guelph Organic Conferences since its early student run beginnings. After graduation from the University of Guelph in 1982 I worked in New Zealand on a large sheep farm as a farm hand. After returning home to Ontario I became a partner in running the family farm. When we got married in 1986, we took possession of the home farm. Initially we experimented with “low input” conventional farming. We started the certification process with the first two fields in 1995. Contacts through the “Ecological Farmers Association of Ontario” and our friendship with the late Bernhard Hack have been important factors in reaching our goal. Presently we run a 160 ha “Demeter Canada” certified mixed crop/livestock operation. Besides goats and a family dairy cow, a flock of 250 ewes and their offspring provide the Ruminant Forage Converting Factor on the farm. We operate as a fully functional family farm, with my wife and I as equal partners and three generations of family members available to manage the day to day operations.

My family and I farm 400 acres in Huron County, Ontario. After graduating with a diploma in agriculture in 1982, we farmed conventionally for a few years. After food-caused allergies in our children were cleared up by adhering to an organic and home-made diet, we switched the entire farm over to organic practices (BioDynamic). We have achieved Demeter certification since 1996. We do run what is termed a 'mixed farm' : livestock (sheep) and crops, complimenting each other very nicely.
The dictum that 'The whole is greater than the sum of the parts" is actually very true. The farm is entirely self-sufficient except for some salt and certified mineral supplements. We produce approx. 500 lambs/year of our 250 ewe flock (one lambing per year in spring). The farm is run as a true family farm with 3 generations on the family involved in the operation.

Chris Boettcher, RR2, Brussels, ON, N0G 1H0

(519) 887-9673

About Gayl Creutzberg

Gayl Creutzberg is realizing her dream as an organic sheep producer in Bruce County, Ontario. She markets organic lamb from field to fork, building relationships with customers, fellow producers and those that assist with her business. Her greatest interest is finding out what potential customers want and then delivering; and that is, being attentive to the different needs of different people, providing convenient, high quality, healthy and great tasting products, and sharing the farm experience.
See also Gayle's presentation on Beginning Farmer Q&A, later in the proceedings of this conference.
She welcomes your additional inquiries by email.
www.saugeencountrylamb.com farm@saugeencountrylamb.com
Saugeen River Farm PO Box 39, Paisley, ON N0G 2N0
Phone 519-363-LAMB Fax: 519.363.9411

About Tom Manley

Tom Manley is owner and president of Homestead Organics, Eastern Ontario's organic farm service company. It provides several grain services including elevating, drying, storage, cleaning, and packaging. The operation also grinds and mixes complete livestock grain rations for organic dairy, poultry and hog farmers in Ontario, Québec, and northern New England. Farmers can obtain organic seed, soil amendments, livestock supplements, books, and education.

Organic Dairy Production: Product Development and Marketing

Summary of Advanced Dairy Production - Theory and Application

by Ric Llewellyn-

I will divide this presentation into 5 parts and can summarize or expand at will dependant on forum interest:

1. Animal Welfare and Organics
2. Whole Farm Certification
3. Developing Domestic Market Share Loyalties
4. On Farm Processing- pros and cons
5. Getting Consumers back to traditional products

1. Animal Welfare and Organics

At Jerseyland we have been involved in on farm processing for 20 years. Some of this was very small farm gate to present being national distribution. Throughout this growth and learning curve, a constant has been the consumers interest in animal welfare issues. This was the driving force behind our total transition to organic production. Upwardly mobile young to middle aged consumers are the target organic consumers these days. They are well educated and equally well funded. They are prepared to express their priorities and prepared to pay for it when it comes to health, the environment and their food. The number one question (FAQ) at consumer driven trade shows is not about organic soils, not about antibiotics, not about CCA posts- it is "How do you

treat your animals?" "What do you do with the baby calves?" "Where do the old cows go?" "How long do you milk a cow?" "How old are your cows?"

Is the average dairy farmer- organic or conventional able to face these people- his loyal consumers and tell them that the cows are shipped to McDonalds if they fall below a certain production criteria… I hope not… but that's what the consumer wants to know. This is a lively discussion usually and Ric can impart their experience and their unique solutions.

2. Whole Farm Certification (Organic Certification)

In B.C. this is a growing dilemma for many certified organic farmers. B.C. organic production is not livestock oriented for the most part. Primarily market garden crops are largest, fruit production possibly second, processed products (cereals, juices etc.) third and livestock- teats and feathers way down the line.

In all the commodity groups the biggest threat to the organic market place is "scam" organic products. We've all seen it- the organic bread at the Big Box stores, only the organic inputs are restricted to the wheat only, or the juice smoothie that uses 34 input ingredients but only 2 are organic, or how about the favourite garden or orchard with one or two crops organic but others conventionally produced- does the sign on the road say that?

The organic market place is based on trust, we all rely heavily on certification far too much. The big box stores are bringing in organic products with dubious organic standards every day, this is eroding the good will the pioneers in organics have developed.

Its called growth! The modern organic producer will sub contract, sub process and sub distribute and never see a carrot in the ground, a chicken lay an egg or talk to a consumer at a market. We need to do a better job of educating the consumer about what we do…

This is a very emotional topic and involved organic principals beyond market development.

3. Developing Market Loyalty

We are under attack!! Yes, the organic market place that was formerly restricted to Fred and Wilma down at the farmers market on Tuesday and Saturday is soon to be gone.

Costco/Price Club, Presidents Choice, Safeway, Whole Foods, Loblaws, we all know the names- guess what they're all into organics now. What's next a "McOrganic Nuggets"??

While conventional products have either negative growth or minuscule projections- organics have been double-digit growth now for several years and more to come…

I know- its all relative- 20% growth is great, but 20% of 0.03% of the market share is nothing. So why all the hype? Because the big guys have been fighting over the same piece of the pie for so long now they are down to the crumbs in conventional products. Along comes a new pie- An organic pie and guess what? We make good press- ask General Mills, Nestles or Heinz. Hey- you're all doing it right! How many of you processors are 100% organic- not many. Most just co-pack organics, have an organic line or maybe just a single organic product. Now if your

customers start to associate your name with organic- maybe the conventional product develops the same loyalty- and a little cheaper too. BUT is this ethical!!

I really enjoy this one…

4. On Farm Processing Pros and Cons

There isn't enough space provided for even a summary of this one!

Lets see some of the issues; Licensing, environmental requirements, CFIA bureaucracy, Marketing Boards (my personal favourite), financing, marketing, manpower (staff), need I say more? This is a topic I leave open to the floor- I speak at ease with this and off the cuff. Lets have this driven by the forum that attends, there's no sense me expounding upon dealing with CFIA if there are no Federally licensed processors interested, etc. etc.

5. Getting Consumers back to traditional products

My personal "pet peeve"

We in "organics" are all relying on the image of "organics"

For example, everyone shows on their label "a farm scene with chickens scratching and cows with calves playing on green pastures nestled beside a babbling brook a weedless garden plot with Heidi holding a basket of plenty all framed within an idealistic valley surrounded by snow capped pristine mountains"

Bah! Most products today- organic included- come from metro Toronto, Saskatoon or Vancouver and the workers in the plant would faint if they had to walk amongst live animals, smell fresh hay or handle dirty carrots. Industrialized organics, for example in dairy you can now get in the U.S. those disgusting "squeezy tubes" of yogurt in organic! Now how traditional organic is that? Is that what the label portrays?

Again how many organic yogurt brands are most concerned with "creamy mouth feel" and make yogurt like pudding not traditional yogurt that is coagulated milk nothing more. Lets give the public what they think they're getting not con them with glitzy marketing and cartoon figures on ever-increasing excess packaging.

Can be interesting with the right crowd…

About Ric Llewellyn

Ric and Vickie Llewellyn are the owners of Jerseyland Organics, an all Jersey organic producer/processor farm located in Grand Forks, B.C. They have been farming Jerseys since 1983 and organically since 1994.

Ric has a varied background for an organic farmer, having completed 24 years with the RCMP and the past 19 years farming literally from the ground up or in their case, 1 cow in 1983 to 200 head organic dairy and beef in 2002. They farm 225 acres hay/pasture and contract 260 acres hay only, all certified.

Ric's background in speaking can be both formal and hands on. His experience that he will relate is predominately led by their priorities, for example, animal welfare and organics, whole farm certification, developing domestic marketing loyalties, on-farm processing pros and cons and getting consumers back to traditional products.

by Martin DeGroot

A. **Management**

1. The animals are an integral part of the whole farm. Contrary to the general conventional approach, the organic approach is to strive for a balance between the land base and the animal population. Too many animals and too much manure cause fertility problems.
Not enough animals and not enough manure, can lead to low soil-fertility.
We have four acres per animal unit.

2.a Nutrition.
Two distinct seasons: pasture (five months), in-barn feeding (seven months)
In-barn feeding:- quality roughage
- grains fed and why
- balancing the ration
- protein levels, energy and minerals
- MUN
- COP per litre of milk

2.b From new born calf to milk cow

- How we do it.
- Calf hutches, group housing, pasture, rations, minerals, breeding age

3. Stress management and disease prevention.

- Stress reduction: quality feed, mold, protein levels, ventilation, cow-comfort, exercise, handling, hydrogen-peroxide in drinking water.
- Problems on our farm and what we do about it: mastitis, cystic ovaries, pneumonia, calf scours, vaccination

4. Records

- production records (milk, fat protein, SCC)
- fertility records
- calving interval
- age at first calving
- number of lactations, longevity

5. Breeding

- what kind of cow do we want?
- short-comings of pure-breds
- cross-breeding: Jersey, Dutch belted, Brown Swiss, Simmental, Monte Bellaird? Two/three-way?
- What we do.

6. Crop rotation and intensive rotational grazing.

- Our rotation

7. Marketing - Short history of organic milk marketing in Ontario

- philosophy and reality; where do we want to go from here; our experience; pro's and con's of on farm processing; how does it fit in our philosophy

About Martin de Groot and Ineke Booy

Martin de Groot and Ineke Booy emigrated in 1980 from Holland to Canada, after having worked for the Dutch government in developing countries. They took over a 250 acre conventional dairy farm in Wellington county. In 1989 they started to make the switch to organic farming for the following reasons:
1. Personal health
2. Concern about the environment
3. Power and control issues
4. Consumer relations

In 1994 they were able to produce and market organic milk. As members of OntarBio, (Ineke as first manager of the Dairy Pool) they were instrumental in developing the Organic Meadow milk line.

After a number of years, they left the Co-op and started a small on-farm ice cream and frozen yogurt processing plant called Mapleton Organic Dairy, Inc. Mapleton's Organic(R) products are sold across Canada in health food and food-specialty stores, as well as in supermarkets and in their little on-farm ice cream parlour. Recently, a new line of fresh yogurts (made with the skim milk) has been added.

At present the 600 acre farm consists of sixty milking cows, young stock, some chickens and a few pigs. Crops grown are hay, pasture, corn, soybeans, spelt, oats+peas, potatoes and at times other specialty crops like sweet corn, carrots, squash.

Dairy Breeding

by Paola Rozzi

The objective of selection defines where we want to go, and in turn which traits we want to select for and how. In most conventional selection indices (such as LPI in Canada) the emphasis on production relative to other traits is around 70%. However, different production systems often require different objectives. Compared to conventional, organic production may put more emphasis on traits such as disease resistance, fertility, good production on low energy rations, grazing ability, longevity and mobility. Organic indices developed in other countries show a lower emphasis on production (50% to 40%), while many include beef traits. Based on a survey, Ontario organic farmers put fitness traits ahead of production, with udder, feet and legs, longevity and fertility, followed by protein. Milk came distant last. A clearly defined breeding goal is necessary for any effective selection program and presently research is needed to identify breeding goals for the organic dairy sector.

Another big question for a farmer is to decide which breed or breeds to use. Dairy production has been dominated by pure breeding, but there is an increasing interest in crossbreeding even within conventional producers to offset reproduction, health and inbreeding problems. A large crossbreeding experiment in the USA has just started, involving seven state research herds and, beside Holstein and Jersey, also two promising breeds from France: Normande and Montbeliarde.

From a Dutch survey, 63% of organic dairy farms used pure Holstein, but many (40%) were dissatisfied with conventional selection. The rest either chose crossbreeding, by using Montbeliarde (13%) and Brown Swiss (11%), or relied on traditional breeds (MRIJ, Dutch Friesian or Blaarkop). Also in Ontario crossbreeding is far more frequent in organic dairy farms than in conventional. More than half of organic farmers surveyed cross Holstein with Brown Swiss, Jersey, Dutch Belted and Simmental, while only 30% had pure Holstein.

However, crossbreeding can be more complex, since one must identify the best breed combination, choose the best animals from different breeds and decide the crossing strategy (two or three way crossing).

About Paola Rozzi

With a Ph.D. in Animal Breeding from the University of Guelph, I have had extensive experience in different countries, working for the dairy industry in Italy and in Canada, mostly on selection indices, international genetic evaluations and extension. As a member of the steering committee of Interbull, now running genetic evaluations across 28 countries, I worked in cooperation with the dairy industry of many countries. Coming from a conventional background, I became involved with organic dairy about two years ago and I am convinced that the tools of conventional selection can greatly benefit organic dairy producers.

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Organic Market Garden Tillage and Equipment

by Michael Docter

1) "Organic market garden tillage and equipment"
2) "Organic vegetable production and enterprise development"

This workshop will cover a variety of efficient weed management and harvest systems that are well suited for a highly diversified vegetable operation. "From seed bed preparation to harvest", the workshop will demonstrate a variety of techniques that enable a relatively large vegetable operation to function with a staff of only 6-8 field workers.

The Food Bank Farm is one of the larger CSA's (Community Supported Agriculture) farms in the US and serves over 610 shareholders. Approximately one half of the produce raised on the farm is donated to the Food Bank and the other half is purchased by shareholders who pre-purchase "shares" in the harvest. The farm is financially self-sustaining. Income from shareholders pays for the entire operation of the farm including the donated food.

Mechanical Weed Control in the Context of Diversity…*five acres and up*

by Michael Docter, Food Bank Farm, Hadley, MA

I. Introduction to Food Bank Farm
    A) Large Scale CSA (Community Supported Agriculture)….610 Members

1) Highly Diversified Vegetable Operation.
50 acres, 40 crops, 6-8 employees.
2) Need for good cultivation systems.

II. Definition of terms: "In-Row Cultivation"
"Between Row Cultivation"

III. Selecting the right cultivating Tractor

IV. Between Row Cultivation

A) Minimizing crop band margins to 1 inch.

1) Belly mounted tractors vs. 3 PH
a) Offset for high visibility
b) Clearance for cultivation implements and seeders
c) Crop clearance

2) Buddingh Basket Weeder—minimizing the gap
a) Versatility and set-up options
b) When you can't use a Buddingh
-Wet soil
- Hot/Dry soil
- Rocky soil
- After crop reaches 4-5 inches
- Weeds larger than ¼"

3) Cultivation of Crops over 4"
a) Hilling
b) Farm-all Cub
c) Other implements and when to use them:
- sweeps
- duck feet
- straight shanks
- spring tooth
d) Floating gang cultivators
d) Other systems, 3 PH, Guidance systems

4) Hilling larger crops (corn beans, brassicas, peppers, tomatoes etc)
a) Disk Coulters
b) Shovels
c) Furrowers
d) For in row weeds, crop must be larger than weeds
Speed = effectiveness
Avoid root pruning
5) Timing is everything. Soil type will affect ability to operate in timely fashion.

V. In-Row Cultivation---Myths vs. Reality

1) Inherent difficulty of In-Row Weeding
a) Bezzerides
b) Budddingh rubber fingers weeders, limitations, crop specific (peppers)
c) Lely for pre and post emergence
2) Stale Bed Preparation
a) Flame weeding
b) Bed Preparation
3) Managing plastic mulch edges

VI. Finishing Up
1) Hand Weeding
2) Hoeing,
3) Roto-tilling

VII. Over-all strategy: Zero Weed Seed Tolerance
1) Reduce Weed seed population over time
- Minimize use of manure
- Cover Crops
- Mowing
- Intervals between Tillage

2) Rotating around Weed Pressure
a) Placing "easy" crops in high weed seed population areas
- transplants
- corn
- late carrots, late beets and other crops going into very stale beds

VII. Seeding techniques and strategies
1) Seed bed preparation
2) Proper soil moisture---getting to know your land
3) Equipment selection

Equipment Summary

Food Bank Farm

T1) **Massey Ferguson 50**. (gas) 35 HP (center to center dimension: 72") tire tread: 17"
T2) **Farm-all Cub** 18 HP (center to center dimension: 40") tire tread: 7"
T3) **Allis Chalmers "G"** 16 HP (center to center dimension: 40) tire tread: 7"

- 6 Ft 3 point hitch harrow used for secondary tillage, bed making (with heavy metal drag pipe) **T1**
- 6 Ft. Flail Chopper for incorporating cover crops and residue. **T1**
- 7 Ft. John Deer Drop Fertilizer for spreading granular organic fertilizer**. T1**
- 40" Belly mounted Buddingh Basket Weeder for stale seedbed preparation and 2-row cultivation(with 18" between rows in 40" bed). **T2**
- 40" Belly -mounted Buddingh Basket Weeder for one row and three row cultivation (with 9" between rows--- beds are 40"). **T3**
- 3 Planet Jr. Seeders @ 9" mounted semi-permanently on belly mounted tool bar. **T3**
- 3 Row Bezzerides Brothers Torsion Hoe Weeder **T3**
- 3 Row floating individual gang cultivator on belly mounted bar **T3** (minimally used)
- 1 Row Standard Cultivators for Farmall Cub **T2**
- 1 Row Rubber Finger Buddingh Weeder **T2** (minimally used)
- Side dresser for Cub for top dressing **T2**
- 7 Ft. Lely Weeder (never used---wanna buy it?)
- Plastic Mulch Layer. **T1** (and **T2** for early tomatoes w/3ph after market attachment)
- 3 point hitch after market attachment for Farmall Cub. **(T2**)
- 55 gallon home made PTO barrel sprayer used for foliar feeding. **T2** (minimally used)
- 6 Ft. 3 point hitch standard cultivator used for final corn cultivation. **T1**
- 2 Row International Harvester Corn Planter W/ fertilizer hopper set on 36". **T1**

- Single disk on tool bar for cultivation on edge of plastic. **T2**
- Potato Scratcher for pre-emergence cultivation on large seeded crops (corn, squash) **T3**
- 3 point hitch fork for removing pallets, bins from field **T1**
- 6' Brillion seeder for seeding cover crops **T2**
- Back-pack flame weeder w/torch mounted on wheels from old push cultivator.
- Felins Carrot /and root Washer 3-4 bushel capacity
- Pallet Jack
- 15" truck box cooler (used minimally, recently hooked up. We ship most everything the day picked.)
- Potato Setter (used not for spuds but for fertilizer incorporation/bed former
- Troy Bilt rototiller used 1-2 times per yr. for tomato cultivation after tomato stakes in.
- Miscellaneous hoes and hand tools.

Note: Total equipment cost less than $25,000. Virtually all equipment purchased used. Much of the equipment that is compatible with small scale diversified vegetable production is obsolete by today's standards and very inexpensive.

General over-all comments on cultivation and seeding system. All beds are flat and are demarcated with the tractor tread. Given the trend toward, hotter, dryer summers, we have stayed away from raised bed systems. Beds are formed with a harrow and a heavy drag pipe chained behind the harrow. This creates a very smooth, even surface, not unlike a rototiller might produce but with less soil destruction.

We have found it more profitable to direct seed all of our brassicas, and lettuce except the first 2-3 plantings of each which are transplanted to get broccoli/lettuce ready by beginning of June. We use remay for these plantings and for all subsequent greens plantings that are susceptible to flea beetles. Lettuce and greens are seeded every week from Mid-April until Mid-Sept.

Weed control is of paramount importance for the efficient operation, production and harvesting of all our crops. Weed toleration is minimal to non-existent. The equipment listed above helps us eliminate over 95% of our hand weeding on the farm. The weed control system consists of a variety of components and techniques:

1) **Stale bed preparation**: a series of shallow cultivations prior to seeding crop which cause the weed seeds to germinate and be killed. Cultivation must be kept to 1-2" in depth only. Deeper than this will bring up more weed seeds. (weed seeds will not germinate from below 2") The efficacy of stale bed preparation is determined by the amount of time available prior to crop seeding. A minimum of 2-3 wks. of wet and then warm weather, is usually required to get weed seeds to germinate. This means that for early carrots, beets, lettuce etc. we do end up hand weeding or "crawling" a fair amount and so we try to put these crops in ground that has been clean for 2-3 years. As the season progresses to later crops, the need for crawling decreases. The last few carrot plantings, require almost no hand weeding (approximately 20 minutes per 600 row feet). For this reason, we grow a whole lot of carrots in the late season. Note: for early carrots we have tried soil solarization for 1-2 wks before planting. This worked well sometimes and failed miserably at other times. To work, you need wet soil, sunny, clear days and minimal wind.

2) **Extremely close cultivation with-in 1" of each side of row**. This close cultivation is facilitated by the belly mounted tractor design, which enables the operator to see the cultivation in front of him/her. For beds of more than one row, rows must be perfectly parallel and should

be planted with tractor belly-mounted seeders. A walk behind push seeder would only work on a one row per bed system.

3) **Hilling crops** where crops will tolerate or benefit from hilling (tomatoes, peppers, brassicas, corn, squash etc.). The Farm-all Cub is very well suited for this task. It is small, light-weight, off-set and was designed before they invented herbicides.

4) **Hoeing**: On the crops listed in #3 above, a quick hoeing at slightly below walking speed is usually required to get the few weeds left behind before they produce viable seeds for the following season.

5**) Locating weed sensitive crops in clean fields**: Weed seed population is of paramount importance and determines our rotation. Onions are grown on land that has been weed seed free for 3 consecutive seasons. The first few carrot, beet and lettuce plantings are also planted in areas of low weed seed population.

6) We still lose a battle or two to the weeds every year. When we do, we try to **keep the seeds on the soil surface** all winter long to let the birds and the weather assault the weeds. We do cover crop this land but it is done without disturbing the soil. We just roll the seed over the top with the Brillion seeder.

7) We also make minimal use of **plastic mulches**. A good mechanical weed control system is much more effective at controlling weeds than plastic. (our plastic use is limited to melon , eggplant , and early tomato production.)

8**) Flame weeding**: Most effective on Carrots and other slow to germinate crops.(i.e. cilantro, parsley and dill). We currently flame weed only the crop band but are considering a full bed flame weeder to minimize soil disruption through mechanical stale bed preparation

Efficient Harvest Systems for the Highly Diversified Operation

Getting it out of the field… Maximizing Quality

The Food Bank Farm is one of the larger CSA's (Community Supported Agriculture) in the US and serves over 610 shareholders. Approximately one half of the produce raised on the farm is donated to the Food Bank and the other half is purchased by shareholders who pre-purchase "shares" in the harvest. The farm is financially self sustaining. Income from shareholders pays for the entire operation of the farm including the donated food.

The farm employs a number of mechanical cultivation systems and harvest techniques that are simple, effective and uniquely suited for a diversified vegetable operation. We manage 45 acres of organic vegetables with a staff of 6. Our focus is on efficient production for direct retail, and on maintaining excellent eating quality through harvest management.

I. Overview

In today's wholesale market, little attention is paid to the eating quality of produce. Crops are selected for their ability to be mechanically harvested, packed and shipped. Taste is usually not a factor. Unlike wholesale growers, farms that retail direct to their consumers can assert more control over freshness and eating quality. We utilize a number of labor based harvesting systems

that proximate the efficiency of the mechanical systems, but are gentler on the crop and allow for a high degree of quality control.

A. Harvest Management

Optimizing time of day for harvesting each crop

1) early AM: Lettuce greens broccoli and corn
2) Mid AM: Cabbage, larger more durable greens (kale, chard, collards)
3) Late AM: When leaves are dry, it's time to harvest vine crops:
cukes, squash, tomatoes and other disease prone crops.

B. When "Quality" means flavor

1) Succession Planting
a) Higher quality over longer time period
b) Increased labor efficiency
2) Managing row covers for greens production

C. Field Lay-out: Dividing up fields into harvest days

1) Dividing fields into manageable lengths.
2) Planning for harvest removal from field
a) heavy crops near a road (cabbage, melons etc) *or*
b) by "cutting" a road into crop via the first harvest

D. Selecting the right Harvest Container

1) Ergonomics and human size
2) Not too heavy, not too light
--5 gallon white buckets for heavy roots, summer squash and cukes
--2 bushel barrel lugs for bulkier crops, corn greens, lettuce broc. cabbage
--Tractor Bins for watermelon, cabbage and winter squash

E. Preparation: know before you go.

Even if you are not selling to someone off farm, it is useful to make up a harvest order sheet so the crew will know how much of each crop is needed.

F. Over-all labor management: Everybody gets down and dirty:

Efficiency does not happen unless you are on the crew
Assign same person to same task each day to develop skill, proficiency
They still need to know what else is going on
--Specialize
--Develop Skill
--Crew knows what is next with-out asking harvest manager.
--Enable responsibility and ownership.

Harvest Time Required for certain crops:

Lettuce ("adolescent")	2 minutes per bushel to harvest, 1 minute to wash
Sweet Corn	2 minutes per bushel to harvest (crew of 3)
Carrots	10 minutes per 100 LB to top and harvest
Tomatoes:	15 minutes per 100 LB to harvest, 12 minutes to sort/pack
Summer Squash	24 minutes per 100 LB to harvest

Docter is a founding partner of CSA *Works*, which provides technical, and equipment procurement assistance to CSA farmers and other growers. A number of his articles have been published in **Growing For Market in Lawrence, Kansas.**

HarvestVideoAvailable: A Video that demonstrates many of the harvest techniques described in this workshop is available. For information, please call or write CSA Works 121 Bay Rd. Hadley, MA USA 01035 Phone: 413-582-0013 ****OUT OF PRINT****

MECHANIZATION

Recommendions for Year One -Equipment List

For Start-up CSA

- Medium Tractor* 35-40 HP $4-6,000
  3 point hitch, PTO, Narrow tires
- Disc Harrow
  With heavy drag bar for seed bed $5-700
- Buddingh Basket weeder $5-600
  For stale bed preparation, single row cultivation
  For two row cultivation in future years.
- Planet Junior Seeder $250-350
  With standard shoe and scatter shoe
- Drop Fertilizer Spreader (lime spreader) 7-10' $2-300
  For granular fertilizer
- Flame Weeder $150
- Farm Pick-up truck $300-1,000
- Hand tools, hoes $150
- Irrigation pipe (site specific) $2-4,000
- Irrigation Pump $2-4,000
- Allis "G" tractor with one row, hilling shoes, rear sweeps $2-3,000
  and/or
- Farm-All Cub tractor with one row cultivator
- Potato equipment:****
  - Planter $400
  - Digger $300
  - Spray Rig $700

Note: Prices assume used equipment. Much of this equipment is obsolete by today's farming standards, is perfectly suited for diversified CSA vegetable production. Due to its obsolescence, it is inexpensive

* In most agricultural communities such as ours, it is possible to hire in custom plowing work at between $10-15 per acre. This is more economical than purchasing a tractor larger than the one recommended above.

**This equipment list is designed for a single row cultivation system on a 40" bed. While for some crops, a single row system uses space inefficiently, it enables significant labor savings in weed control--especially during the first year when the farmer is still learning the land, equipment and cultivation techniques.

***Organic potato production is a challenge. At the Food Bank Farm, we buy our potatoes from an organic potato grower.

A greenhouse is not included in this budget. Starts cost 7-10 cents per plant if available.

About Michael Docter

Michael Docter started the Food Bank Farm in 1989. Before that, he worked in the field of community economic development in Philadelphia, PA and Trenton, NJ.
Michael Docter manages the Food Bank Farm in Hadley, MA. They manage over 50 acres of organic vegetables in a highly diversified operation. The farm is one of the largest CSA's (Community Supported Agriculture) in the US and serves over 600 shareholders. In addition to the CSA, one half of the produce raised on the farm is donated to The Food Bank. The farm is financially self-sustaining. Income from shareholders pays for the entire operations of the farm including the donated food.

The Food Bank Farm, employs a number of mechanical cultivation systems that are simple, effective and well suited for the diversified vegetable operation.

Docter is also a founding partner in CSA*Works* which provides technical assistance to CSA farmers and other growers who are trying to convert their operation to CSA. A number of articles written by Docter have been published in ***Growing for Market*** in Lawrence, Kansas.

by Eric Eberhardt
In 1994, after 20 years of using a Troy-Bilt rototiller for my 3-acre market garden, I was given an old wooden frame high wheel hoe. That year I spaced the garden rows fore the Troy Bilt but tried to use the wheel hoe as much as possible.

Intrigued by the stark contrast of using a high wheel hoe compared to a rototiller I decided my next garden would be a high hoe garden. In the spring of 1995 I bought an Earthway high wheel hoe and have been cultivating 1 acre with it ever since.

The advantages of my high wheel hoe are many: it is time efficient, space efficient, quiet, maintenance free, inexpensive, non-polluting, worm friendly, versatile and moisture conserving.

Through a series of slides, various stages of tillage using the high wheel hoe will be shown and discussed.

About Eric Eberhardt

Eric Eberhardt has been involved with organic foods since the mid 1970's as a food coop manager, retail owner, wholesaler, product consultant and grower. Eric has grown organic vegetables and grains on 30 acres of organically certified land in Perth County since 1984. All of the vegetable production on the farm is sold through his store, The Gentle Rain in Stratford Ontario .

About Cathy McGregor-Smith

Cathy McGregor-Smith along with husband Gary Smith, daughters Janis and Lisa Smith have operated McSmith's Organic Farm near St Thomas Ontario since 1984. Their farm is very diversified ranging from greenhouse crops, market gardening for wholesale and retail, organic processing vegetables, organic grains, livestock, poultry and eggs, on farm market thus making the farm a full time business. Cathy worked for Agriculture Canada (Entomology Department) for 13 years in the late 70's and early 80's when the research was geared to Biological Control of Insects.

Organic Foods and Human Nutrition: A Scientific Look

Dr. Thomas Cowan, Holistic MD

Introduction to work of the Weston A. Price Foundation. A modern take on traditional diets. Illustrated with cases from his practice using whole food and organic nutrition in healing.

About Dr. Thomas Cowan MD

Thomas Cowan was born in Detroit, MI (his father was Canadian) and spent many summers in Canada. Tom is a graduate of Duke University and a graduate of the medical school at Michigan State University. He taught gardening with the Peace Corps in S Africa, is a past VP of Physician's Association for Anthroposophical Medicine. and a board member for the Weston A. Price Foundation. Dr. Cowan has been in private practice for 20 years.

Organic Entrepreneurs: Obstacles, Processing Challenges and Marketing Mistakes to Avoid

by David Reibling

Here are some of the topics to be covered in this seminar. These topics will be from the perspective of the small business:

- Some of the history of the industry – looking back to the initial days right through to the growth of the 90's;
- The role of small business in today's industry – find your niche in the era of big business;
- Overcoming some obstacles that are common to small business. (from the school of 'hard knocks')
- Understanding your strength and market it;
- the future of small business in the face of nutrition labelling, HACCP, certification, SOPs, etc., etc.
- The challenges of processing in small quantities from producers (suppliers)

About David Reibling

Dave Reibling is owner of Oak manor Farms (est. 1975), a small family operated organic milling company nestled in the fertile farmland of Oxford County. Although he no longer farms, he has extensive farming, milling and marketing experience dealing with strictly organic products. Today Oak Manor has a line of about 35 certified organic products that they process, package and market to the natural food industry. Dave has also been involved in organic certification. Since his initial "in house" program in the late 70's he helped establish OCIA (Organic Crop Improvement Association) and OFPANA (Organic Food Production Association of North America) in the 80's and is also a founding member of OCPP (Organic Crop Producers and Processors). His latest input has been with COAB (Canadian Organic Advisory Board). In May 2002 Dave received an Organic Leadership Award from the Organic Trade Association.

Organic Apple and Tender Fruit Processing and Production

by Bruce Marcovich

One of the core values of The Apple Valley Juice Corporation is to produce a range of Organic juice products that are all natural, without the use of preservatives, GMO's, press aids or additives.

As organics are relatively new to Ontario as a main stream consumer product, many challenges are faced to remain competitive, profitable and successful. Today organics represent a very small percentage of Apple Valley's total production, and it is our goal to grow the business to 10% by increasing both volume and product offerings. Today there is a limited supply of Organic fruit, which makes it very difficult to supply retail with a year round supply. Also yield both at crop and processing level is below conventional fruit, which adds to increasing the costs. Currently we are finding that the cost of fruit for processing is between 50 – 80 % higher than that of conventional fruit.

Production costs are increased and will remain a challenge due to short production runs and increased standard operating procedures for Organic. Certification audits also generally result in added costs, Organic products tend to have a higher micro load as compared to conventional processing fruit. Tests have shown that in apple production, patulin tends to be higher than conventional fruit and is a cause for concern.

The Market Challenges for main stream Organic products tends to be the seasonal and year round availability of both quality and quantity of fruit and vegetables, and retail is not prepared to pay significantly higher prices for Organic products.

Product shelf life varies depending on both process and packaging. During research at health and consumer shows, we have found that the avid Organic consumer will only purchase organic products that are packed in glass containers, whereas the main stream consumers are satisfied with most containers, but is concerned about preservatives and recycling. Juice processing can be achieved in various forms, for example Pasteurized, Aseptic, Hot Fill and frozen, resulting in many different stages of shelf life, and flavor profiles.

With retails drive to offer organic products for the main stream consumers, from a supply and price parity prospective, both growers and processors will be challenged to reduce costs and supply within the near future.

About Bruce Marcovich

Bruce Marcovich has worked in the Juice and Dairy industry for more than 20 years, with such companies as Tetra Pak and Minute Maid. Bruce started his career as a field service technician at Tetra Pak and he worked his way to senior management holding the positions of Vice President Technical Services, Vice President Engineering and General Manager. His passion for manufacturing led him to the Minute Maid Company of Canada as Director of Operations and Engineering Manager. Presently he is the President of The Apple Valley Juice Corporation. Bruce's expertise is the processing and packaging of Aseptic and Pasteurized, high and low acid liquid foods. One of Bruce's current roles is to develop the Organic juice portfolio of Apple Valley and a major retailer.

Designing 300+ Acres with Retail Product Development in Mind

by Martin Degroot

About Martin de Groot and Ineke Booy

Martin de Groot and Ineke Booy emigrated in 1980 from Holland to Canada, after having worked for the Dutch government in developing countries. They took over a 250 acre conventional dairy farm in Wellington County. In 1989 they started to make the switch to organic farming for the following reasons:
1. Personal health
2. Concern about the environment
3. Power and control issues
4. Consumer relations

In 1994 they were able to produce and market organic milk. As members of OntarBio, (Ineke as first manager of the Dairy Pool) they were instrumental in developing the Organic Meadow milk line.

After a number of years, they left the Co-op and started a small on-farm ice cream and frozen yogurt processing plant called Mapleton Organic Dairy, Inc. Mapleton's Organic(R) products are sold across Canada in health food and food-specialty stores, as well as in supermarkets and in their little on-farm ice cream parlour. Recently, a new line of fresh yogurts (made with the skim milk) has been added.

At present the 600 acre farm consists of sixty milking cows, young stock, some chickens and a few pigs. Crops grown are hay, pasture, corn, soybeans, spelt, oats+peas, potatoes and at times other specialty crops like sweet corn, carrots, squash.

Developing Organic Private Label Products for Canadian Retailers

by Jon Cloud

Workshop will consist of:

- Product Quality
- Processing Criteria
- Provincial, Federal and HACCP Requirements
- Packaging
- Costs
- Exclusivity
- Warehousing
- Shipping

About Jon Cloud

Jon Cloud is President of Organic Kitchen and Cloud Mountain. Cloud Mountain Inc. was a well established company that has been involved in the organic agricultural industry for over 32 years.

CMI was not merely a merchant of organic products, but has spearheaded the development of the organic industry in Canada, US Eastern Europe, Argentina and China. Jon Cloud, a founder of the company, moved to Ontario from Vermont, where he and his father had owned and managed a farm that had never seen chemicals. It was there that he developed a deep understanding of the agronomy, specifically in crop rotations and maintaining natural fertility. Jon moved to Toronto in 1980 and built an organic tofu company. In order to ensure a supply of organic soybeans, Jon started training farmers to grow organically.

Organic Kitchen was founded in 1994 in response to increasing consumer demand for packaged organic products and continues to manufacture, market and sell such certified organic products as broiler chickens, turkeys, pork, as well as organic package goods – spelt and pasta, to retailers.

In 2002 Stake Technology purchased Cloud Mountain Inc. and Organic Kitchen and they continue to operate the Food Group division of Stake Technology Inc. For more information see www.staketech.com

Intensive Grazing Strategies and Techniques for Large Acreage

Ann Clark and Rick Llewellyn

Why consider intensive grazing techniques?

By: Ric Llewellyn

Possibly to utilize small acreage fully. Possibly to manage limited feed in stressed circumstances. Possibly to manage parasites better. Possibly to regulate specific feeds for specific livestock.

These are all good examples of why many livestock farms are turning to extensive pasture management. There are many more reasons and they are as varied as is the climate and conditions that we farm in across Canada.

Ric and Vickie Llewellyn own Jerseyland Organics, western Canada's 1st certified organic dairy and processor. They manage a herd of 200 head of organic cattle, comprised of 60 Jersey cows and 140 +/- organic beef. This is all done on three farms in the Grand Forks valley in south western B.C. Grand Forks is a semi desert climate with average rainfall of under 20" per year. Given the low rainfall, of which 75% comes in winter, irrigation is mandatory on pasture. With this comes the high cost of land, production and high maintenance/labour.
Ric will demonstrate their adaptation of irrigation and pasture management.
Ric will qualify why he believes- "As far as I'm concerned you can't intensively graze without an electric fencing system."

Jerseyland's experience varies from strip grazing 1 acre plots to rotational pasturing 30 to 40 acre paddocks. Ric extensively uses state of the art electric fencing systems with portable fencing that walks, remote control shutoff units, system failure alarms, troubleshooting and repair controls that work!
Their acreage control systems vary from 12 volt/solar fencers through to 110 and 220 volt hard wired units. They make use of all high tensile smooth wire for perimeter fences and variations of smooth galvanized and portable nylon/stainless wire on interior fences.

They also have developed riparian shelter belts for erosion prevention of creeks and river banks and wildlife enhancement, in particular waterfowl.

They have developed harvesting techniques (hay/pasture combinations) and re-seeding techniques, they have a good deal of experience with manure management and applications and alternate nutrient inputs.

Utilizing all of this takes time and Ric is prepared to share his experience on how you can successfully double or triple your stocking rates of conventionally pastured lands. Ric says that he doesn't own a horse or lasso and doesn't chase cows- as none get out. There is no sicker feeling in a farmer's stomach than getting that call at midnight- "You've got cows out on the highway" or "Your cows are in my garden!" Lets prevent this and realize that with proper management, pastures are a real benefit, not just somewhere to put cows until their TMR is ready.

"Remember, nature provided cows with automatic harvesting and manure spreading built in- use it!"

About Ric Llewellyn

Ric and Vickie Llewellyn are the owners of Jerseyland Organics, an all Jersey organic producer/processor farm located in Grand Forks, B.C. They have been farming Jerseys since 1983 and organically since 1994.
Ric has a varied background for an organic farmer, having completed 24 years with the RCMP and the past 19 years farming literally from the ground up or in their case, 1 cow in 1983 to 200 head organic dairy and beef in 2002. They farm 225 acres hay/pasture and contract 260 acres hay only, all certified.
Ric's background in speaking can be both formal and hands on. His experience that he will relate is predominately led by their priorities, for example, animal welfare and organics, whole farm certification, developing domestic marketing loyalties, on-farm processing pros and cons and getting consumers back to traditional products.

Time and Timing: the forgotten 'keys' to effective grazing management

By: E. Ann Clark

Dairy producers making the transition from depending on conserved feeds year-around to re-integrating pasture into their annual system have to juggle a lot of new issues. If it isn't questions about supplementation and fencing, then its decisions on crossbreeding for heat tolerance and reseeding to maintain sward performance.

But one thing that all dairy graziers have in common is the pivotal role of *time and timing* in making the system work smoothly and well. Five examples will be used to profile the rewards of paying due attention to 'time':

1. *Time of spring turnout*: influences everything from fence performance and utilization efficiency to midseason growth and species composition
2. *Timing of the hay cut* used to conserve spring excess and prepare the sward for regrowth: exerts a dominant effect on midseason growth, particularly in a continental climate, as well as weed encroachment
3. *Time duration of regrowth* between successive grazings: determines not just the amount and quality of herbage on-offer when the sward is re-entered but also affects the rate of subsequent regrowth, total seasonal yield, and ultimate species persistence
4. *Timing (and method) of reseeding*, within and among years: affects everything from establishment year weediness to long term profitability

5. *Time of onset of fall withholding*, to allow for fall accumulation to support later fall/winter grazing: affects not just the amount of herbage that can grow that fall, but also the pattern of growth the following spring

Managing grass in a timely way doesn't need to cost any more - but it sure makes everything else run more efficiently, with less fuss and bother. Mastering the use of time is what distinguishes a novice from a seasoned grazier, so let's get cracking!

About E. Ann Clark

E. Ann Clark is an Associate Professor in the Department of Plant Agriculture at the University of Guelph. She teaches several undergraduate courses, including CROP*3400 Introduction to Organic Agriculture, and conducts research in both pasture and grazing management and in organic agriculture. She is a frequent invited speaker at both scholarly and producer conferences both nationally and internationally. Recent talks on the risks of genetic modification of crops can be found at http://www.plant.uoguelph.ca/faculty/eclark

Soil Fertility: A View from 20 Years of Inspections

by Garry Lean P.Ag., Independent Organic Inspector and Ecosystems
Soil Fertility On Organic Farms – 30 Years Of Experience And Observation

This presentation/workshop will focus on the possibilities and challenges of managing soil fertility on organic farms in Ontario. The material will be most useful for those who have a basic understanding of soil and plant nutrition and are actively managing a farm or garden – either as transitional or certified growers.

Drawing on his extensive experience as an organic–farm inspector, Garry will present strategies and useful resources for improving soil fertility.

The soil ecosystem has three main categories/characteristics – physical, chemical and biological. The physical component – geological origin, texture and structure, air/water relations - has a direct effect on the tillage and successful cropping systems that can be managed. Examples will be presented and discussed and include aspects of drainage and irrigation.

The chemical aspects have traditionally been managed with the addition of NPK fertilizers and lime. Alternative fertilizer materials will be outlined. The rationale for their use and their effectiveness will be discussed.

The soil biology and plant micro-organisms have had less attention. Recent developments, with compost and compost tea, are providing additional strategies for soil fertility and plant disease management. Managing manure and crop residues are key components of this component.

The presentation will include examples of farming systems – from small intensive operations to farms in excess of 400 hectares. Participants will be encouraged to share some of their experiences and soil fertility questions. Workshop participants will be provided with a resource brochure.

About Garry Lean

Garry Lean graduated with a Soil Science degree from Guelph in 1970 and continued with further study in plant nutrition at the University of Adelaide. He has farming experience since 1973 with both organic and conventional farming, from small gardens to a 500 acre dairy operation. Garry and his wife Margaret operate a small certified organic garden south of Fenelon Falls, Ontario. From 1976 to the present he has been a college professor at Sir Sandford Fleming College. Lindsay, Ontario teaching courses that included Soil and Water Management. Agroecology, Permaculture Design, Agricultural Genetics and Dairy Management. He has been an organic inspector since 1987 and has conducted over 1400 inspections. Education, training and consulting for organic producers and processors is the focus for his consulting business - ***Ecosystems etc***. Further information can be obtained from garrylean@sympatico.ca. or www.ecosystemsetc.ca

Opportunities for City-Based Organic Food Production A-Z

by Eli Sanchez: Power Grains - Mashka and
Vera Top: Field to Table Sprouts and Seedlings - a project of FoodShare Toronto

Power Grains and FoodShare Toronto's Field to Table Sprouts and Seedlings are two young companies producing organic products. The presentation will focus on the challenges facing such companies in the start-up phases, including product development, quality control, marketing, costs of equipment, facilities, packaging, etc.

Power Grains - Mashka

Power Grains is a small company which produces MASHKA, an organic, ready to eat grain and seed cereal that contains all the nutrients of whole foods. Eli Sanchez started Power Grains in Toronto in 1998 as an alternative to the processed foods consumed by many Canadians. In 1999, he researched various manufacturing facilities in the GTA but they didn't want to deal with Power Grains since it had no sales record or production history. He had no choice but to begin producing out of his home, setting up in early 2000 with a small grinder, gas stove and vacuum. The quantities he could produce, however, were too small and time consuming to continue in this way.

In May of 2000 Sanchez' partner contacted FoodShare Toronto, which operates the Toronto Kitchen Incubator (TKI). They found TKI to be the perfect place for a new entrepreneur, allowing Sanchez to expand Power Grains at a lower cost with flexible hours and generous working facilities where he could set up a semi-industrial roaster and grinder. From networking to shipping, TKI's mandate of supporting micro-businesses allowed Power Grains to bloom.

In the winter of 2001, Power Grains had the opportunity to sell MASHKA to FoodShare's organic Good Food Box. Through this, along with in-store demos, trade shows, and presentations, MASHKA became better known. Power Grains also participated in the Riverdale Organic Market in summer 2001, which in turn led to other opportunities and boosted sales. By early 2002, Power Grains was ready to approach a distributor and it was time to move to a new location. Sanchez and his partner found a 5-acre property in Millbrook Ontario, with manufacturing facilities and room for expansion. Their distributor, the Ontario Natural Food Co-op, agreed to pick up shipments from Millbrook. Power Grains is working with local farmers for their raw materials and continuing to work with their distributor. They are grateful to TKI the Toronto Kitchen Incubator for their nurturing support.

Field to Table Sprouts and Seedlings

Field to Table Sprouts and Seedlings is a small, organically certified company operated by foodshare Toronto, a non-profit organization whose mission is to work with communities to improve access to affordable and healthy food. The sprouting operation began in 1996 when three young people came together to investigate possibilities for growing food in the city. The company they formed, Annex Organics, became part of foodshare in late 1999 when two of the original three founding members moved on to other projects.

Field to Table Sprouts and Seedlings produces five sprout products. Three of these products, alfalfa, mixed legume crunch and spicy lentil radish, are grown hydroponically. The two remaining products are sunflower and pea seedling sprouts which are grown on a bed of soil. Participants in FoodShare's youth employment programs assist in production of the hydroponic sprouts and the seedling sprouts are tended by clients from the Centre for Addiction and Mental Health through a partnership program called Growing Green Jobs. The sprout products are sold primarily to two customers, FoodShare's Good Food Box program and Front Door Organics. The focus of the Field to Table Sprouts and Seedlings portion of the conference presentation will be on product development, job creation and quality control issues.

About Eli Sanchez

Eli Sanchez was born and raised in the Andes of Peru. His diet of unprocessed organic food made him aware of the importance of whole foods nutrition. On arrival in Canada in 1989 he saw how many people ate, and realized he didn't want to eat McDonald's for the rest of his life. Thus began his commitment to producing "real food". In 1998 he developed Power Grains, to manufacture an organic cereal, MASHKA. Currently, MASHKA is sold in stores throughout Ontario, as well as in Quebec and the Maritimes.

About Vera Top

Vera Top is FoodShare Toronto's Urban Agriculture Coordinator. She has worked with FoodShare for the past three years coordinating food production projects, working with youth and people with mental health issues and conducting research. Vera is from a farming background and has agricultural degrees in environmental biology and soil science. She has experience working in various agricultural fields and has also been involved in human rights work in Guatemala and Mexico.

Edible Wild Species

An Introduction to Edible Native Plants
by Ken Parker

Are you looking to increase your kitchen herbs, seasonings, fruits or greens? There are a number of foods suitable to be grown on small properties or harvested from the wild. Through this basic introduction to edible Native plants, learn to identify and enjoy the natural treasures Mother Earth has to offer. Topics covered include habitat sites, season of availability, food usage categories, edible plant parts, and plant identification.

Sustaining a healthy lifestyle in today's fast paced, high technology environment requires a significant level of self-control and daily planning. The convenience of fast food combined with busy schedules makes healthy eating difficult for many. The ability to harvest freshly grown foods from the garden is becoming increasingly more important.

Native plants of North America provide many ecological benefits including:

- a reduction in the use of chemicals and water in the garden
- higher resistance to local pests and disease
- source of food for local wildlife
- low maintenance gardening and
- drought tolerant landscaping.

Native plants sustained the diets of Native people and early settlers for hundreds of years. We invite you to take a step back in time and reap the dietary benefits of edible wild species.

There is much to learn about the edible wild species located in a local forest or a nearby rural community. Through this introduction to edible Native plants, a number of important concepts will be discussed:

- Dangers of POISONOUS plants
- HABITAT sites
  - wet to moist: streams, ponds, wet meadows, bogs & swamps
  - shade to part shade: moist woods, dry woodlands, thickets & savannah
  - full sun: prairie, meadow & open fields
- PLANT PARTS for consumption
- Season of AVAILABILITY: spring, summer, fall
- Food USAGE Categories: greens, roots & tubers, seasonings, beverages, syrups, grains, fruits
- Harvesting & Conservation

Identification of a variety of edible wild herbaceous and woody species Native to North America will conclude this educational workshop.

About Ken Parker

Founder and co-owner of SWEET GRASS GARDENS
SWEET GRASS GARDENS located on the Six Nations of the Grand River Reserve, is North America's first Native owned & operated nursery. Ken literally has 'roots' in the indigenous plant market. The Seneca Native has taken it upon himself to preserve a part of Native North American culture.

Ken has proactively participated in various environmental and landscape projects throughout the province over the past ten years.

Through SWEET GRASS GARDENS, Ken has developed and hosted a number of slide presentations, lectures and workshops on "Growing Native Plants from a Native Perspective" (including photography). Audiences have ranged from gardeners to elementary schools and school boards, horticulture chapters, environmental groups, and post secondary institutions. During peak gardening periods, Ken can is still found giving tours by the busload at his unique nursery.

Attracting Beneficial Insects and Repelling Harmful Ones

by Cathy McGregor-Smith

This workshop will consist of many insect and habitat slides in order to become familiar with possible friends and foes in the garden.

- A healthy, well-balanced growing system is the basis of all pest control.
- Weak and deficient plants give off ethanol or ammonia, which allow pests to locate the sickly plant easily.
- Every living organism has a place in the web of life. As organic farmers we are not trying to eradicate the pest but to control by allowing some of the pest to be tolerated.

Some Reasons for Organic Control rather than using Chemical
- Developing resistance to applied chemicals
- Killing of non-target insects
- Pest resurgence

Their own particular pest and/or disease as well as environmental factors control all insects. This is referred to as Natural control. .

Types of Beneficial Insects to be discussed in this workshop:

- Predators...these insects are fairly well known and recognizable
    - They consume a large number of preys
    - They are often non-specific
    - Common examples Ladybird Beetles and Mantids
    - Learn to distinguish the predators from their impostors

- Parasitoids.... specific to the choice of hosts
    - Immature stage develops on or within insect host
      ultimately weakening and killing host
    - Have a short life cycle and can increase in numbers rapidly
      thus giving more pest control
    - Most wasps and some flies species are parasites
    - Common example Trichogamma Wasps and Tachinid Fly
    - Hyper Parasitoids... parasites of the parasites

Attracting Beneficials and Controlling Pests
- Maintaining a refuge and providing for their needs of food, water and shelter such as “the old fashioned hedgerow “.
- Planting “flowering borders” and cover crops
- Selecting cultivars of vegetables
- Planting Trap Crops and Mulching
- Timing of plantings noting pest insect’s life cycle
- Unlimited Diversity

Remember to include most spiders as beneficial . There are very few species that are plant eaters. Be curious; try to identify the insect life in your garden or on your farm.

A list of web sites and book titles will be handed out at this workshop

About Cathy McGregor-Smith

Cathy McGregor-Smith along with husband Gary Smith, daughters Janis and Lisa Smith have operated McSmith's Organic Farm near St Thomas Ontario since 1984. Their farm is very diversified ranging from greenhouse crops, market gardening for wholesale and retail, organic processing vegetables, organic grains, livestock, poultry and eggs, on farm market thus making the farm a full time business. Cathy worked for Agriculture Canada (Entomology Department) for 13 years in the late 70's and early 80's when the research was geared to Biological Control of Insects.

Organic Strawberry Production - Q&A Session

by John Wise

The very first thing you must determine before getting into any crop is the market potential and your ability to realize that potential. You may be able to grow beautiful berries, but unless there are customers in sufficient number, you won't be in business long. This may seem too obvious to mention, but it is particularly true in the case of pick your own berries. People seem to have less time than ever in spite of the great labour saving technologies that were supposed to give us more leisure. Many of the people who are interested in organic produce are urban professionals, married, both working and with kids. They don't have time to pick and they may not even have time to drive out to pick up an order. And many of your rural neighbours may be quite comfortable with conventional farming practices and will make their buying decisions based on price, convenience and quality. Or you may be surrounded by hundreds of people desperate to pick organic berries. Do your homework and make sure you've got a market.

Soil: The ideal is of course the famous deep, friable, well-drained sandy loam. Got any? If not, don't despair. Strawberries will grow in clay loam and loam as well, though heavy clay or sand won't support commercial crops of berries. Good drainage is critical as roots rot if too wet. Soil can be improved with green manure crops and compost. Do a soil test first.

Rotation: Depending on weed, pest and disease pressure and winter kill, you can keep a planting going for up to 3 crops. I find that there is usually some factor that limits me to 1 or 2 crop years. So you have an establishment year, then 1 or 2 crop years. After plowing down the last crop, I fallow for a month or two to get rid of weeds, then plant fall rye. The following May I disc in the rye, fallow a bit, then plant buckwheat. I disc the buckwheat in late summer and plant another winter cover of rye (or oats if I don't want to fight the rye in the spring) and plant a vegetable crop the next spring. Don't plant anything that might harbour diseases that affect strawberries such as verticillium wilt (i.e. avoid tomatoes, potatoes, peppers etc.) . Then you can return to strawberries the following spring.

Plants: Always plant virus tested plants. There are only a few growers who supply them. You can get their names from OMAF. Choose varieties that are resistant to diseases. Try as many varieties as is practical in trial plots before you commit to a large acreage.

Planting: As early in spring as you can spread your compost and work the ground. Strawberry plants are quite frost hardy. Various row and plant spacings can be used. I plant 2 feet apart and 4 feet between rows. Some varieties that don't produce a lot of runners might better be planted 18 inches apart. Your plant supplier can advise you.

Care of New Plantings: A few weeks after planting you should remove the flowers. You want your plants to get busy producing daughter plants for next year's crop and not waste their resources producing a few berries. It is seldom necessary to water new plantings, but extreme drought may necessitate irrigation. Once the runners are well under way, but before they root, train them to fill the row space evenly. This can be done while hoeing. Don't let the rows get wider than one and a half to two feet.

Weed Control: Cultivation and hand hoeing in new patches and mulch and hand weeding in established patches are the standard means of weed control, but if you want to cut labour costs and get a little entertainment as well, consider using geese for weeding. This was a common practice before herbicides came along. Choose a light breed such as White Chinese that won't trample the plants too much. Fence them in-I use electrified sheep netting-and provide a sun shelter and water. They will eat all grasses (including volunteer grain plants from the straw mulch),dandelions, and a number of annual weeds including pigweed. There are weeds they will eat reluctantly such as lamb's quarters and clover, and some they won't eat at all such as purslane, thistles and goldenrod. And of course they won't eat strawberry plants. I use them in new and established plantings. In the latter case, remove them before the berries start to ripen to avoid trampling fruit and to allow their droppings to decompose. If weeds become scarce, give them a little grain.

Irrigation: Berry plants need the equivalent of an inch of rain per week, more if it's really hot and windy. Trickle irrigation conserves water and doesn't wet the plants (wet leaves and fruit are more prone to disease).

Renovation: If you decide to keep a patch for a second or third crop year, you must "renovate" after harvest to counteract the plant's tendency to go dormant for the summer. First spread compost over the patch, then mow the leaves off (avoid scalping the crowns). Then irrigate and narrow the rows to about a foot wide.
Mulching: After a few nights of minus 7 or so, cover the plants with straw. Wheat or spelt straw are the best, but any grain straw will do. A pound or more of straw per foot of row will cover the plants sufficiently. Remove mulch in spring before much growth occurs under the mulch.
Insects and Diseases: Too big a subject to deal with in detail. When I first started growing organically, I had a few outbreaks of tarnished plant bug, but haven't had any insect problems for years. Some kind of balance seems to have been established. I rarely spray for anything-organically acceptable materials include Bourdeaux mixture for fungus diseases and insecticidal soaps. Some varieties are more prone to disease than others.
Information: OMAF has several useful publications on strawberry growing and they have berry experts on staff. I have found them to be very helpful in dealing with cultural questions and they don't try to push chemical use. Other growers, both conventional and organic are a wealth of practical info. Keep your eyes peeled for grower information meetings and tours.

About John Wise

John Wise grew up in cities, but caught the back-to-the-land bug in 1970. He received a Diploma in Horticulture from the U of Guelph in 1972 and has been farming at Centreville (north west of Kingston, Ont.) since 1978. The operation ("Wiseacres") consists of about 200 acres (owned and rented) comprising 6 acres of berries and vegetables,150 acres of cash grain and forage seed, and the balance in hay/pasture for a small beef herd. Laying hens, meat chickens, turkeys and pigs are also raised. The crops are certified organic and the animals are raised organically but are not certified yet.

Biodynamic Grape Growing Techniques on 25 Acres

by Laura Sabourin

In 1996, Laura's two-year search for the perfect "place" ended with the purchase of 50 acres on the Niagara Escarpment bench near the village of Jordan. The farm was placed into Biodynamic certification as soon as land leveling and tile drainage had been completed. During 1996 cover crops were planted, incorporated and replanted. The first 14 acres of grapes were planted in 1997 with a further 6 acres following in 1998. Permanent cover crops including clovers, alfalfa, flowers, vetch, peas, oil seed radish … were planted also. The gently sloping farm is now approximately half vineyard with the balance in pasture, hay fields, mixed bush , pond and wetlands.

The Biodynamic ideology of the enclosed farm system has always been a driving force on the farm. In the first years, preps were stirred by hand which surely forms a connection between the farmer and the preps. A bad back and increasing workload led to the addition of a flowform from Waterworks/Jennifer Greene. Especially designed to form a series of double vortices, the flowform has the added bonus of creating gentle music while it stirs.

Soon fences and animals followed to help complete the fertility circle. Like any farm land, labour and capital are limiting resources here. While manure for compost could be purchased it proved unsatisfactory. Our Dexter cattle, Belgian horses, Llamas and poultry now contribute all of the manure component for our compost. To preserve the diversity of this place the pond, wetland and bush are important so it soon became clear that 50 acres could not support 25 acres of vineyard and enough animals to provide fertility.

The answer was found through this conference. Dr. Elaine Ingham of Soil Foodweb Inc. gave a fascinating lecture about the other critters who share are farm - the microbes. While we have always welcomed WWOOFers, here were trillions of unpaid workers willing to help build soil fertility and disease resistance with few purchased inputs! During the 2002 growing season we worked with Dr. Ingham as part of her research project and saw real results. Increased crop yield, reduced draught stress, improved fruit quality , a significant reduction in the use of sulfur and the complete elimination of copper products. These results came in a year which started with frost damage and suffered from insurable draught losses. We were so impressed with aerobic compost tea sprays that we are showing a prototype of our brewer at this conference and accepting orders for spring delivery.

To ensure that the influence of the BD preps would always be present a Field Broadcaster from Union Agricultural Institute was installed in 2002. The broadcaster is also being used as an adjunct insect control device through the broadcasting of BD insect peppers.

The original grape vine plantings consisted of ; Chardonnay, Geishenheim 318-57, Vidal, Niagara, Himrod, Cabernet Franc, Baco Noir, Zweigeltrebe, DeChaunac, Chambourcin and Sovereign Coronation. Since that time the Himrods and Niagaras have been replaced with Cabernet Sauvignon, Merlot and Pinot Noir. The Chardonnay block has been expanded to include Chardonnay Muscadet and next spring the Chambourcins will be replaced by Riesling.

Farming is a daily learning experience. We are always looking to incorporate new knowledge with tried and true cultural practices to preserve our ecosystem and make our farm truly sustainable.

Reference Material spreadsheet

About Laura Sabourin

Laura Sabourin grows 25 acres of Demeter certified wine and table grapes in the Niagara region of Ontario. Her wine grapes are sold directly to two Organic Wineries & amateur winemakers. Tables grapes and cold pressed unpasturized grape juice are sold seasonally at the Riverdale Farmers Market, Tuesdays in Toronto and at the Waldorf School Village Market , Saturdays in Thornhill. In 2003 together with her partner Bill Baranick , she will offer fresh brewed aerobic compost tea, tea brewers and supplies.

Selecting Heritage Fruit Varieties for Taste and Regional Adaptability

by Shelley Paulocik

Do You Have A Suitable Site On Your Property? (Quick Review of considerations)
Good Drainage:
Air flow - a case where 'down and out' is what you want
- good flow through important (spacing is a factor), reduces time foliage is wet
Soil - a well-drained sandy loam (2 to 6' depth) is ideal
- if not ideal, consider green manures, sub-soiling, or tile drainage
Snow Load - consider the depth of snow that falls, or is blown by wind or machine
- deep snow can cause breakage or critter-access to unprotected areas of the tree
Viewable Site - in sight is more likely to be in mind, probably results in more grower visits too

What Exactly **Am I Growing?**
Most varieties of fruit grown for fruit production are vegetatively propagated. With fruit trees this means that the variety is grafted unto a selected rootstock. Both the named varieties and the rootstocks have specific characteristics.

Varieties
This is the named selection, e.g. Spartan or Bosc. This determines basic fruit characteristics.

Rootstocks
The rootstock provides the foundation for your orchard. While there's interplay between variety and rootstock, it is the rootstock that largely determines tree size, time to come into bearing, hardiness, tree longevity, and to some degree, disease and pest resistance. Thus it's important not to overlook this part of the tree. Michael Phillips mentions it's something of an organic myth to imply that smaller trees are somehow genetically less healthy. Drought intolerance is directly connected though.

Apple Rootstocks
There are numerous rootstocks available for apples. (OMAF has a good factsheet on them.)

- If hardiness for Zones 4 and colder is you first criterion, the selection of rootstocks narrows drastically to hardy clonal stocks like Ottawa 3 and Bud 9, or seedling stocks like Beautiful Arcade and Malus antanovka.
- If controlling the size of the tree is critical, then you need to decide on dwarf (M.9, Ottawa 3, Bud 9, M.26), semi dwarf (M.7), semi vigorous (M.M.106, M.M.111, Beautiful arcade), or standard (M. antanovka).
- If a difficult soil condition is a limiting factor, you need to consider which rootstocks are suitable, then work with other criteria. For instance, M.M.111 is excellent for gravely or sandy soils, while M.7 or M.M.106 are better for heavy, poorly drained soils.

Pear Rootstocks

There are far fewer commercial options on pear rootstocks.

- Pyrus communis, often Bartlett, is the seedling stock most often used for trees to be grown in Zone 5. This creates a large tree that well suited to heavy soils, but comes into bearing slowly (5 to 7 years) and is susceptible to fire blight.
- Quince, A and C, are used to dwarf pears. They are questionably hardy in Zone 5, are incompatible with many named varieties (interstems are used to overcome this), are susceptible to fire blight and are not suited to heavy soils.
- Old Home x Farmingdale selections have been on trial for several years. As yet, only two or three selections look promising and are in commercial use, like #87.

Several related species could also be used: Saskatoon, Peking cotoneaster and mountain ash.

What Varieties Should I Grow?

It is important that you view this question from two different directions, and then marry the answers as best you can.

The market niche you wish to fill

- Direct retail sales – This offers the highest potential return and the best showcase for your quality and varietal selection. It is also the best chance to promote organic production, encourage the consumer to try new and different tastes while providing people with locally grown, real food with a spiritual connection. This can be done at the farm gate (be sure to determine what 'public-serving' hours are sustainable), or at a farmers' market in a local city or town.
- Local wholesale – While this brings lower returns, it can be a good option if your farm location is restrictive. By keeping your name in front of the customer you develop a more 'solid' market presence.
- Catalogue –Not something we normally think of with regard to farm produce, but *it is* an option. One cooperative venture in the United States "Applesource" pooled the production of several small orchards to create various gift packs of dessert apples that are mailed around the country. Value-added products are well suited to this option. You can promote items on the basis of 'organic', or for customers a distance from the farm, promote the 'rural roots' connection. Use a free draw to build a customer list, or purchase mailing lists from a closely aligned business.

Characteristics Of Varieties

- Climatic suitability – Select varieties that are suitably hardy for both the coldest temperatures and fluctuations experienced at your site. Also, some varieties do best in certain locations, i.e. Cox's Orange is best near a body of water, while Esopus Spitzenburg is best in warm, sandy soil.
- Season – When can you deal with the orchard, particularly when it comes to picking and selling the fruit? Consumer interest tends to peak at prime fall foliage time. If you want to extend the season long past picking time, cold storage of some type is needed. Some varieties like Ashmead's Kernel actually require storage before they're ready to eat. In storage, fruit should be separated from things like potatoes, or flavours can go off.
- Intended use – Identify this as clearly as you can. Late apples for cider (Baldwin or Roxbury Russet) are very different from apples for applesauce early in the season (Duchess or Red Astrachan); pears for early eating (Gifford) are distinct from late pears for cooking (Bosc). If you have, or intend to develop a particular market, i.e. apple pies for a church fundraiser, you

may want lots of suitable varieties like Spy, Sandow, Cranberry Pippin or Northwest Greening.

- Amount of Care Required - In organic production there's a need to minimize control measures (scab control in apples), or a definite limitation as to how to do certain jobs. For instance thinning fruit set is a difficult task without chemicals (horn silica is used), and this limits Phillip's number of Macoun trees. Many of the new varieties have been bred for scab, mildew and rust resistance (Nova Mac, Nova Spy, Priscilla, Freedom, Liberty, William's Pride) and make organic production easier. Breeding efforts are now aimed at developing insect resistance, but what make fruit appealing to us (few allelochemicals) also make it appealing to insects. Tough skin helps though! (Note, organic devotees may not feel comfortable with the technology used in the past, e.g. laser guns which transfer a specific resistant gene into an existing sequence of DNA. And now, current breeding efforts are working with transgenic material.)

The Varieties
We'll view, consider specific varieties and their merits in the major portion of the workshop.

About Shelley Paulocik

For eighteen years Shelly Paulocik has been locating and propagating rare varieties of apples and pears at Woodwinds Nursery. She has tracked down new and old, connoisseur, cider and extra hardy varieties. Two years ago many of these were passed on to the Canadian Genebank at Harrow. At this time she is considering new directions for her efforts, including giving workshops, writing, and using her recent training in historic landscape design.

Moving Beyond Organic to Whole Farm Sustainability

by Jillian Hovey

Seeing Organic Agriculture as an Integral Part of a Wholistic Approach to Sustainability

Organic farming is an essential and integral aspect of sustainability but there are many other aspects of a holistic view of sustainability that we, as people involved with and committed to organic growing could consider as practices/life style choices that we could embrace. This would not only enrich our lives, but also strengthen the web work of relationships that grow out of holistic personal and community paths of those committed to moving towards sustainability.

Permaculture is the contraction of **permanent *agriculture***, as well as **permanent *culture***

We need to look beyond organic farming to WHOLE FARM SUSTAINABILITY

Biodynamic farmers take pride in the point of view of looking at their farm as a whole organism, yet in my experience this point of view is not as comprehensive as it could be. For example, where is the electricity to power your lights and electric motors coming from? What about the fuel that you burn in your fossil fuel engines? Are you making best use of harvesting water at a height on your property and using it? Is your grey and black water polluting the groundwater table and/or could you put those nutrients to better use?

Areas of holistic sustainability to consider:

Water, energy, housing, "waste", food, transportation, landscape ecosystems

Use sustainable systems design principles, e.g.:

Capture/harvest energy on site and use it before/as it degrades
Use natural renewable biological resources

Let us focus on a few practical/pragmatic solutions:

Water Harvesting: Capturing and storing water on your site, at a height, allows you to store its potential energy and use it for your benefit. You can do this both in the landscape in ponds or cisterns, as well as in your home.

Use natural, renewable resources as your power source: To extend and enrich the water examples, using appropriate technology, you can set up a system to use the sun's and/or the wind's energy to power a pump that can pull water up out of a well to a storage and situated at a high point on your property. This active use of abundant natural resource then gives sufficient "head" to supply an irrigation system, which can be quite farm from your existing water system infrastructure.

Hydronic Heating: Another example of using the naturally abundant energy from the sun, is to use its rays to heat water for your use in home and on-farm.

Combustion of Sustainably Grown and Harvested Biomass: Alternatively, you can burn biomass that grows on your property, such as trees, in a high mass, efficient combustion stove. Masonry heaters require a much smaller amount of wood than conventional wood-burning stoves, but they radiate heat to their surroundings for several hours. These stoves normally only need firing once or twice per day, and cooking ovens can be integrated into the mass to give wonderful cooking opportunities.

Passive Solar Design: Other ways of designing your systems to use the rays of the sun are to passively capture or deflect its benefits (depending on the time of year). You can design a house such that without an internal furnace/heater, that dwelling can stay well above freezing even in very low winter temperatures.

Greenhouses are great examples of capturing the sun's energy and using it to create a protected ecosystem for our use. May of these benefits can be used if green houses are built adjacent to houses. You then need to design for distributing the heat and humidity, which can also be undesirable, so design carefully!

Natural building materials: For new structures and/or additions to existing buildings, consider using materials that come from your local area. Your choices are: the bedrock (e.g. limestone in southern Ontario, granite of the Canadian shield) can produce building stone, and slate for example; the soil that has developed from the weathering of the bedrock, mixed with organic matter (e.g. cob, adobe, rammed earth, earth plasters and floors); and the biomass that grows out of the soil (.g. wood, straw, hemp, thatch). These materials are naturally renewable, local and bioregionally available, and can weather back into the earth rather than becoming toxic waste. They also require less energy to "produce/manufacture" and do not have to be transported long distances. They can stimulate community business in their harvesting, as well as re-invigorate craftsmanship.

Organic "Waste": We all know that animal waste on a farm can be both a bane and a boon. Some farms, e.g. biodynamic farmers, are often in a situation of having a deficit of good animal manure. How we store and compost this animal product can determine whether it is a wonderful resource, or an environmental pollutant. What the animals are consuming is being concentrated in their waste. "Closing the loop" through the use of manure in your farm systems is a wonderful way for folks to have to deal with the consequences of what they are doing "upstream." As organic farmers do not feed their animals chemicals, their manure is recognized as very valuable and desirable.

Similarly, instead of considering your personal bi-products as a waste, think of them as a resource. They are a rich source of nitrogen which, when properly composted, can be returned to the earth as a fertilizer. This humanure (Human Manure) can be produced cheaply and safely in your own backyard. By removing these bi-products from the water system you stop the transport of pathogenic organisms and prevent the need for toxic chemicals to treat a "waste". A dry composting system can drastically cut costs and reduce the risk of extremely dangerous and highly expensive groundwater contamination. (www.jenkinspublishing.com)

Transportation: Your best efforts to trim your household and building energy budgets can be foiled as soon as you put your foot on the gas pedal. The intensity and density of the energy required for our conventional modes of transportation are unsustainable. We need to look at moving towards relying on renewable fuels, not fossil fuels. Besides harvesting the sun's energy and storing it for use in batteries, a technology that is much more readily available is the anaerobic digestion of waste, which produces a methane gas fuel. This does not necessarily require sophisticated equipment. Another example is biodiesel which can be "cooked" right in your own barnyard from used fryer oil and lye. (www.biodiesel.com).

Landscape Ecosystem Planning: Although it is always enriching to bring the wild into our domesticated lives and spaces, it is wise to consider how our home places sit in the bioregional landscape. A great aid is to get a local map and air photos, preferably ones from different times as old images can tell us tremendous amounts about he land used to be, not so very long ago. In most areas, we live within the fabric of the highly disturbed remnants of the original natural ecosystems. The environment naturally wants to regenerate. We can aid and abet this process towards healthy ecosystems, through intervention (e.g. species eradication and planting) and through protection (letting areas regenerate). The transition zones between ecosystems are the most biologically diverse, yet some species require interior habitats to thrive. A comprehensive landscape plan that is developed with your place in your bioregion, with a minimum of a 250-year time line is an excellent start.

Edible Landscaping: We can diversify how we think of productive agricultural ecosystems to include edible landscaping, both for ourselves and the other critters with whom we chare the planet. Healthy, robust, rich ecosystems are what we need to help to happen.

Whole farm plans: Beyond environmental farm plans to whole farm plans for local and bioregional sustainability.

Movement both backwards and forwards to sustainability is a path, and we are leaders. Let's look to ways in which we can make our organic farming and consuming practices more sustainable, and other things we can do to move the sustainability agenda forward. Please feel free to be in touch for support on your path.

About Jillian Hovey

Jillian Hovey is a facilitator of sustainable systems planning and design. Her formal education includes a B.Sc. in Agriculture and a Masters in Environmental Studies; her informal education includes many years living close to the land and being observant. Jillian has been working creatively with people and communities across North and Central America and the Caribbean. Her teaching and consulting is holistic, landscape-based, community-oriented, and driven by the principles of sustainability. Ms. Hovey founded and runs the Sustainable Living Network, based in Toronto, and is the mainstay of the Sustainable Living books project.
416-410-7581, jillian@permaculture.net , www.sustainablelivingbooks.com .

Essence Of The Perfect Eco-Home Including Safe Lawns And Landscapes

By Brad Peterson and Nick Dalton

The eco-home with its solar landscape forms a unified expression in siting, design, and ongoing function. These elements improve energy efficiency and air quality, reduce home operating cost, manage wastes effectively, and protect ecological function – thus enriching the quality of life of both the homeowner and surrounding community.

Siting requires careful consideration of many interrelated factors. The design and location of structures, driveways and gardens should incorporate consideration of orientation, slope and aspect in order to utilize appropriate solar gain. The capture or shielding of sun, wind and precipitation are often influenced by local topography, wind patterns and vegetation. Soil types also influence building design, location of septic fields and organic production. Overall environmental impact, including actual location of the home, size of the building envelope and erosion and sedimentation control measures are additional considerations.

Design of the home melds lifestyle, life cycle stage, mobility, and energy efficiency expectations with rational use of resources at hand. Simplicity often places function over form. Use of thermal mass, super insulation, passive/active solar design, and vegetative shading and buffering are important considerations. Degree of expected self sufficiency can influence the design and extent of food, fiber and fuel production areas. Low maintenance landscapes can contribute to biomass production, storm water management, as well as protection of indigenous biodiversity.

Implementation involves the careful choice and use of materials that reduce construction waste and the ‘ecological footprint’ of the end product. Using fewer and less toxic materials creates a healthier living environment. The use of more renewable rather than non-renewable resources for the actual construction and alternatives to traditional building methods are important. Minimizing the construction area footprint and saving topsoil for reuse can also reduce site restoration requirements. Scheduling the removal vegetation or planting hedgerows in advance of construction can increase the initial energy efficiency of the home and reduce impact on the environment.

Figure: The Solar Landscape

Function relates to how well the home and landscape works to meet one's expectations - for energy and cost efficiency, living in a healthy (non toxic/non allergenic) environment, managing wastes, and providing opportunity for some self-sufficiency. Net benefits to the environment include reduced long term use of non renewable resources and perpetuation of ecological functions such as ground water recharge, carbon sequestration, improvement of air quality and protection of wildlands. Function also relates to reducing the energy and material demands typically needed for higher-maintenance cosmetic landscapes and conventional crops.

True integration occurs when critical functions - home space heating and cooling, water heating, waste processing, land-based production, improved air quality and soil fertility, protection of indigenous biodiversity, and awareness of cultural place identity and aesthetics - mutually support each other for a net positive gain. Use of space can flex with changes in life cycle. Much rests on making appropriate lifestyle choices. This is the true meaning of permaculture and design for the perfect eco-home and solar landscape.

Nick Dalton is a passive solar home builder who can be reached at 519 856-9306. Brad Peterson is an environmental landscape architect and can be reached at 519 763-5260.

About C. Brad Peterson M.L.A., B.Sc., OALA, CSLA - Environmental Landscape Architect

Mr. Brad Peterson has extensive experience in land management and landscape architecture, with specializations in protection, restoration and management of rural and country properties, preparation of Stewardship Master Plans for working farms, and integration of sustainable landscapes with all forms of conservation development including solar homes and eco-tech communities. Brad has over 20 years of experience and has completed more than 80 planning and design projects since 1990. Mr. Peterson can be contacted at tel. 519 763-5260 or by e-mail at edc@sentex.net.

Strategies and Concepts for Establishing A Successful Land Trust

By Kathryn Dean, Coordinator, Ontario Farmland Conservation Forum[1]
and panelist-presenters Ian Attridge, LL.B. (Land Trust Lawyer)
and Scott Armstrong, Circle Sun Farms

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Farmland preservation in Ontario is at once both simple and complex. It's simple because farms need to be stewarded well for this and future generations, and many farms are currently under threat of being converted to damaging non-farm uses or less-than-desirable farming methods. However, different groups have different views as to how much farmland should be preserved and where - and what mechanisms should be used to preserve it.

[1] Note that this summary reflects the research and opinions of Kathryn Dean, not necessarily those of presenter-panelists Ian Attridge or Scott Armstrong. For more information, please contact Kathryn Dean (416) 486-6192 (ph) or kaydean@sympatico.ca OR Scott Armstrong (519) 364-6908 (ph) or csf@bmts.com.
DISCLAIMER: Note that none of the information in these notes constitutes legal or financial or any other type of professional advice. For such advice, obtain legal and financial and/or other professional counsel from professionals specializing in land trust issues.
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Current Governments Do Not Fully Support Organic Agriculture

Given the prevalence of many factors militating against farms and farming in Ontario, policy changes are urgently needed at the municipal, provincial, and federal levels. However, government policy cannot alone protect farmland for organic uses in the years to come. For one thing, even the best government policy can be rescinded or diluted by a subsequent government. For another, all governments are subject to multiple pressures, including voices that are not supportive of organic agriculture. Hence, any government support of organic agriculture may lose focus or be weakened at any point. For instance, after many years of sustained study, labour, and lobbying, the Preservation of Agricultural Lands Society (PALS) in Niagara succeeded in convincing the Ontario government to set up the Niagara Tender Fruit Lands Program. The program was designed to provide direct per-acre financial compensation to farmers who agreed to add an "easement" or "covenant" to their deed of land, which prohibited urban development on those lands in perpetuity. However, in the summer of 1995, the Harris government wiped the program out and it has not yet been revived.

Enter: The Organic Farmland Trust

Where governments cannot (or will not) establish stronger policies to support organic farming, a separate not-for-profit, nongovernment organization with charitable status, such as an Organic Farm Trust, can zero in on permanently protecting land for organic or transition-to-organic use. The majority of its board of directors can be organic farmers, land trust professionals with knowledge of organic farming issues, or knowledgeable supporters of organic farming, and they can support (and require) participating farmers to adhere to organic and other sustainable farming practices in perpetuity.

Special Relevance of a Farmland Trust to Organic Farming

The farmland trust concept (providing protection, support, and funding for organic operations) is perhaps especially relevant to organic farming methods, since (1) organic farming requires much longer-term planning and therefore, potentially, an even more stable land base than large-scale, chemically dependent farming operations, and (2) mainstream and wide-scale government support of organic farming is still likely a long way off.

* How an Organic Farmland Trust Would Work

1. Preserving Organic Farmland

- An organic farmland trust would "hold" easements (or covenants) that are incorporated into the deed of land, requiring the farm owner never to sell the land except for organic farming purposes. (The land is still owned by the farmer and it can be sold freely, but not for any use other than organic farming.)
- The organic farmer could receive an income tax break for donating the value of the easement to the land trust (i.e., the difference between the land's value without the easement and its likely lower value with the restrictive (organic-farming-only) easement). However, some legislative reform is required to make this tax incentive more attractive, and any income tax break may be no incentive to farmers who do not have sufficient income to benefit from it. Therefore, direct financial compensation of a certain amount per acre may be required to make up for some of the loss in real estate value of the land. (In the U.S., farms in urban-sprawl zones have been saved through the purchase of "development rights." We do not have development rights in Canada, but delivering financial compensation in return for a restrictive easement achieves the same result: saving the farmland from urban-sprawl development or from some other deleterious non-farm use.)

2. Supporting Organic Farming Practices

(a) The articles of Incorporation of the Farmland Trust would specify what types of farming are allowed and what types are prohibited on the farm property (e.g., best environmental practices, transition-to-organic, integrated pest management, or full, certified organic).

(b) Education programs: When well established, the trust could run education programs encouraging public support of organic farming and of the farmland trust.

(c) Running Marketing Programs / Cultivating Distribution Networks: An organic farmland trust could also encourage the establishment of farmers' markets and cultivate local distribution networks, for instance, as an antidote to current fossil-fuel-eating distribution networks. (The average food item now travels "1,300 miles from farm to table.[2])

(d) Intergenerational Transfer Programs: A farmland trust could run a program that matched retiring organic farmers whose children did not want to take over the farm with a new farmer trying to enter the business. Alternatively, the program could match a new farmer who could not afford to purchase a farm with investors who would buy shares in the farm or who would purchase land and rent it to the new farmer.

* Some Farmland Trust Types

A government-run trust (provincial) or an independent arms-length nonprofit organization, with charitable status. A government-run trust could be well funded through taxation, but it could be wiped out entirely by any government. A nonprofit organization could exist in perpetuity, but it might have to seek government funding. It would definitely have to do fundraising from private sources (as do charitable organizations like the Nature Conservancy of Canada, World Wildlife Fund, etc.).

The independent nonprofit option is likely wiser and more durable. Governments come and governments go, but an organic farmland trust is more likely to be forever if you write that into the articles of incorporation!

If the trust was an independent nonprofit, it could be:

- locally based - and rooted in strong, local community support and tailored to individual needs and particular farming approaches/ideologies

OR

- .regional or province-wide with local chapters: individual farms within the wider organization could be protected by easements reflecting local or other particular ideologies; a broader organization would likely have a broader base of financial support.

* Farmland Trust: Volunteer-Run or Staffed?

Many land trusts are volunteer-initiated and volunteer-run, but it would be wise to hire effective staff as soon as possible in order to provide focus and sustained, efficient support, including fundraising. As one handbook on land trusts points out, "only 30% of American Land Trusts have full-time staff, but this minority protects 90% of the total acreage handled by Trusts" and "many Land Trusts point to hiring of their first staff person as a critical turning point in their success."[3]

* Methods of Preserving Land

[2] Rebecca Spector, "Regaining Connections between Farmers and Consumers," reprinted from *Fatal Harvest: The Tragedy of Industrial Agriculture* (Island Press). Coypright 2002, Foundation for Deep Ecology, distributed on Toronto Food Policy Council e-list, 31 October 2002.

[3] Stewart Hilts and Ron Reid, "People Management" in *Creative Conservation: A Handbook for Ontario Land Trusts* (Don Mills, ON: Federation of Ontario Naturalists, 1993), p. 47.

- outright purchase: expensive, and many farmers do not want to be tenants on farmland owned by others.
- donations of farms from landowners who would benefit from the tax break.
- donations of easements or financial compensation for an easement (i.e., farmer keeps owning the land as before and has the right to sell it, but only for the purpose of organic farming).

* How to Finance a Farmland Trust

As for any organization, cash flow and sufficient capitalization are vital to long-term, sustainable success.

* Private sources: Because the farmland trust would have a charitable number, individuals and organizations would receive a tax deduction for donations of land or money.

* Municipal sources: As a rule, farms (organic or conventional) are a net financial benefit to local municipalities because they require fewer services (roads, police, sewers) - while urban-sprawl residential developments are a net drain on local-government finances. Therefore, municipalities could provide financial compensation, consisting of at least part of the difference, to support a local organic farmland trust.[4]

- Organic farms bring other benefits to municipalities - not polluting local waterways with chemical effluents, etc., and this could be recognized through financing of an organic farmland trust.
- A surtax on greenfield developers in urban-sprawl areas and on deleterious non-farm uses in any area could be paid into an "Organic Farming Fund," which would finance the Organic Farm Trust.

Provincial sources: All farmers are potentially adding to air quality by retaining carbon sinks, and organic farmers are protecting good water quality as well, by NOT polluting bodies of water with chemical effluents. The concomitant reduction in medical costs[5] should be recognized by the province and fair compensation could be funneled to farmers through a farmland trust.

By agreeing to save farmland from urban sprawl in the GTA, farmers (organic and non-organic) are creating huge savings for local and provincial taxpayers, by alleviating the costs of urban sprawl and its accompanying highways and traffic congestion. Hence, the province should give financial support to farmers who participate in any farmland trust which helps reduce sprawl and traffic congestion.[6]

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[4] American statistics indicate that for "residential uses, for each dollar collected in taxes, an average of $4.14 was spent on services." Conversely, a municipality spends only 21 to 77 cents on services for farmland properties. Similar statistics for Ontario have supported these American figures. (GTA Federations of Agriculture Project Management Committee, *Greater Toronto Area Agricultural Economic Impact Study* (Toronto: Walton & Hunter Planning Associates), 29 November 1999, p. 7.3.)

[5] For instance, by reducing smog in Ontario to healthier levels, we will realize a saving of between $394 million and $1.2 billion in medical costs by the year 2015. (Ontario Medical Association, "Illness Costs of Air Pollution: Findings Report," June 2000 (www.oma.org).

[6] In a study prepared initially for the Office of the Greater Toronto Area, a provincial Ministry, and updated by her in 1995, Dr. Pamela Blais writes that "Continued greenfield developments will require $90 billion of capital investments [on the part of governments] in new infrastructure over the next 25 years." Also, an "urban form that relies to a greater degree on re-urbanization, more compact development and mixed land uses would decrease the capital investment required for roads, transit, water and sewer services by an estimated $10 billion to $16 billion and decrease operating and maintenance costs by … [up to] $4 billion." (Dr. Pamela Blais,*The Economics of Urban Form*, December 1995, pp. 1 & 2. Prepared under the auspices of Berridge, Lewinberg, Greenberg, Dark, Gabor ltd. as an update of IBI Group, "The Urban Structure Concepts Study 1990" prepared for the Office of the Greater Toronto Area, an Ontario ministry.)

* Federal sources: Grants from Agriculture and Agri-Food Canada (AAFC) to the farmland trust to support organic farmers and organic farming in recognition of the health and environmental benefits this type of farming brings to current and future generations.
* A few American funding examples: (1) In Pennsylvania, a tax on cigarettes is used to finance farmland preservation; (2) In a number of states, PACE (Purchase of Agricultural Conservation Easements) programs are funded through bond financing and "property transfer taxes," allowing states to compensate farmers for putting easements on their farms.

About Kathryn Dean

Kathryn Dean coordinated a seminar on farmland conservation in April 2002, sponsored by the Centre for Land and Water Stewardship, University of Guelph, and Carolinian Canada. She grew up on a farm in Niagara and is working to establish a farmland trust or trusts in Ontario.

About Ian Attridge

Ian Attridge is an Aggie and Peterborough lawyer who works with land trusts, agencies, landowners, and conservation techniques across Ontario. He helped local groups apply "agricultural easements" to protect prime provincial lands in the Pickering Agricultural Preserve. He has written numerous conservation easements that allow farming, and advises and writes extensively on stewardship, conservation incentives and land trusts. Ian is a Research Associate and teaches at Trent University in Peterborough and is exploring farmland conservation options through his local Kawartha Heritage Conservancy land trust.

About Scott Armstrong

Scott Armstrong is a father of two, living with his partner Elisa at Circle Sun Farm. They keep pigs, chickens, and dairy cattle; grow a variety of storage/fresh market crops, and produce maple syrup. Circle Sun has been certified organic for 15 years, and it welcomes apprentices and encourages international agri/cultural exchanges. Scott has been involved as a council member with the newly accredited provincial farm organization, the National Farmers Union - Ontario. He has helped to organize the Organic & Biodynamic Farmland Trust of Ontario, and more recently has been working on the Canada-Colombia solidarity campaign.

Stewardship Session: Balancing Spiritual Belief with an Organic Lifestyle

About Bernie Fox

My maternal grandparents farmed from the end of World War I until the 60's on land that is now a suburb of Calgary. The main production was eggs; when free range was a standard practice. They weren't particularly religious folk, but they were people of faith. They farmed in the pre-Medicare, pre-oil based economy, pre-agricultural subsidy era. Having endured the dust bowl of the 30's, harvest was a time of spiritual awareness and renewal. One of several harvest hymns frequently sung was in the old hymn book that was always on top of the piano in the 'parlor'.

"We plough the fields and scatter, the good seed on the land,
But it is fed and watered By God's almighty hand:
He sends the snow in winter, The warmth to swell the grain,
The breezes, and the sunshine, And soft refreshing rain."

(Book of Common Praise, Oxford University Press, Toronto, revised 1938).

Nana and Grandpop Jim and great uncle Abee had a clear understanding of their place in the grand scheme of things. They sought to be in, and acknowledged a right relationship with their God. My sense as a youngster was that they felt they had lived full and purposeful lives.

Are the spiritual needs of our time so radically different? The objective this session is to explore how as individuals doing business in the larger secular community we can maintain our holistic values and not have to place them in a separate 'compartment' in order to participate in the organic market place. Are we able to offer hope when we see so much despair in the secular world – farmers leaving the land, the world still hungry?

As a community, can we remain true to our organic principles yet demonstrate a faith that will be perceived as authentic, one that cannot be simply dismissed as blind faith or idealism?

The many spiritual paths practiced by the organic community members provide fertile common ground. The Bhuddist ideals of serving others (grace and compassion); *"Ashima* or non-killing", a foundation of Jainism; Jesus' teaching of love of neighbour and enemy are possible foundations for our discussions.

Is it possible then, having shared our common and diverse, rich spiritual principles, we can go back to our smaller organic communities – our families and places of business – and sing new hymns and poems and prayers and offerings of thanksgiving?

I invite you to come, participate and enrich our community.

Organic Video Room

Moderated by Robert Barron

- **Organic Prophecies** - about Dr Ken Taylor, a chemistry professor, who operates an organic farm, in Quebec. There's been a few emails flying about on this video. It's new, 2002

- **GE Foods and Labelling**, put out by CHFA in 2002

- **High-Value Marketing**, an older video but still has good ideas from actual farmers in the US

- **Field of Greens, Vol. I**, using the excerpt, "Feeding the new consumer"
- **Field of Greens, Vol. II**, using the excerpt about rare breeds.

Beginner Organic Farmer Q&A: No Question Is Too Simple

by Gayl Creutzberg

'No question to simple'

“Most questions will be challenging! I am no expert, and hopefully never will be, but I have recently started organic farming from scratch and my experiences are fresh in my memory! I will share some of these experiences and address many of your questions and concerns."

About Gayl Creutzberg

Gayl Creutzberg is realizing her dream as an organic sheep producer in Bruce County, Ontario. She markets organic lamb from field to fork, building relationships with customers, fellow producers and those that assist with her business. Her greatest interest is finding out what potential customers want and then delivering; and that is, being attentive to the different needs of different people, providing convenient, high quality, healthy and great tasting products, and sharing the farm experience.

She welcomes your additional inquiries by email.
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Forum for Students in Sustainable Agriculture: Job Fair, Lobbying, Activism, Petitioning and Promoting

by Les Eccles

The workshop will focus on employment opportunities in the organic sector. Three presentations will be made:

- **Jacinda Fairholm** of CRAFT will discuss opportunities for interns on CSA's;
- **Ralph Martin**, the director of the Organic Agriculture Centre of Canada and Les Eccles of the organic program at the U. of G. will discuss research opportunities; and
- OCPP's **Larry Lenhardt** will discuss opportunities in certification and regulation of the organic sector.

About Leslie Eccles

Leslie Eccles was raised on a dairy/beef farm in Egremont Township of Grey County. Presently he is studying at the University of Guelph, for a B.Sc.(Agr.) majoring in Agronomy. He is also a member of the Sustainable Agriculture Forum at the U. of G., which advocates for education/instruction in organic agriculture.

Heritage Breeds: A Natural Choice for Organic Agriculture

by Tom Hutchinson

Why Heritage Breeds?

1. Originated when agriculture was naturally organic

2. Adapted to non-intensive systems

3. Good conversion from poor pastures

4. Natural disease resistance

5. Adapted to local climate and unheated housing

6. Selected for livability, longevity, maternal instincts, taste (flavour)

7. Dual purpose

8. Suitable for mixed farming

9. Selected for rotational systems

10. Docile and easy to handle

Recently Marney Cuff and I gave lectures in a new Organic Agriculture course organized by Ann Clark at the University of Guelph. I already run two courses on Ecological Agriculture at Trent University, while a new organic agricultural program is being developed in Nova Scotia. Sustainable agriculture, organic farming and ecological approaches to farming are being widely adopted by family farms. The opportunities for a major role for heritage breeds in this new 'old' agriculture are gradually being realized. A role for livestock and for crop rotation is central to these new directions. Heritage breeds are a natural choice for the organic approach and here's why.

1.) Originated when agriculture was naturally organic The first and most obvious reason is that is when and where the heritage breeds began. The watershed between older mixed farming and modern intensive specialized agriculture came in the 1950s. This chemical revolution brought inorganic fertilizers and pesticides, thus allowing specialization, intensification and selection of just a few breeds and lines suitable for intensive conditions. Our Dorset Horn, Cotswold, and Shropshire sheep were all pasture animals, their manure and grazing fitting into the mixed farm rotation with grain, hay and legumes. The earlier revolution of the 1930`s was in the introduction of tractor power which largely eliminated the heavy horses to a minor role on the farms.

2.) Adapted to non-intensive systems: By definition the heritage breeds were not selected for intensive systems but for non-intensive systems. Most selection over the past 50 years has been for increased productivity and has focused on growth rates and feed conversion efficiency. Features such as natural disease resistance, maternal instincts, tolerance of

harsh climates, longevity etc are not important when moving to indoor controlled environments, high energy feeds and to antibiotics supplements to allow unnaturally high densities of animals to be housed in close quarters.

3.) Good conversion from poor pastures: The old breeds such as the Canadienne, Lineback, Kerry cows and the Tamworth pig or Dorking chickens were good converters of poor pasture. The large amount of marginal land in Canada, including abandoned agricultural land should allow the heritage breeds we are concerned about to have a niche in organic, low impact farming.

4.) Natural disease resistance has been a neglected area of modern agriculture as we rely on chemical drug solutions to treat disease. Older sheep breeds such as Southdowns and Border Cheviots have fewer mastitis problems. The huge udders of the modern Holstein cow are a potential site for mastitis unless excellent dairy management is in place. Some sheep breeds such as Cotswolds are reputed to be scrapie-resistant, and Shetlands and Soays said to be resistant to foot rot.

5.) Adapted to local climate and to unheated housing: This is especially true of the three endangered pigs that are well suited to the outdoors: Tamworth, Berkshire and English Large Black, while the Chantecler was deliberately selected for Canadian winters, and bred with a small, compact comb to avoid frost damage.

6.) Selected for livability, longevity, maternal instincts, taste (flavour): Replacement costs are a major factor for any livestock operation. Robert Lynch's Lineback cattle are calving annually at 17 and 18 years of age. Many Cotswold and Shropshire sheep lamb at 12 and 13 years of age. Modern Holstein dairy operations generally only plan on 5 or 6 lactations, sometimes only 3 before replacements are needed. The maternal instinct of chickens to lay eggs and brood them has no place in either the egg or broiler business. Chickens used to replace themselves naturally on farms. Large Black and Tamworth pigs are very good mothers, with lots of milk, weaning naturally at about 50 days, whereas the modern weiner pig operation weans at 16 days and are trying to reduce to 10 days because the sows don't have enough milk or have poor maternal instincts.

7.) Dual purpose Most of the livestock breeds raised for human consumption were dual purpose. The Shorthorn and Red Poll were good milk and cream producers, while they also had a decent meat carcass. The Rhode Island Red, Plymouth Rock and Sussex chickens are good meat birds and laid many large eggs. The Shropshire sheep provides good quality wool and excellent meat.

8.) Suitability for mixed farming Fitted into rotational grazing systems, unheated housing, provided various products (dual purpose) and did well on rotational grazing systems with low fertilizer inputs

9.) Selected for rotational systems Organic farmers today will tell you the secret to success is a good rotational system and that livestock, with their organic manure and grazing, are a natural part of this. Sheep breeds such as the Wiltshire Horn were specifically bred to add organic manure to the lower slope fields around the farm where crops were grown and were pastured on the high hills by day and pastured (in sheep folds) on the low lands at night. Chickens, ducks and geese were used in rotational grazing systems, as were combinations of cattle, sheep and goats.

10.) Docile and easy to handle: Individual management and husbandry is a major factor here, as outdoor livestock should still be handled to remain tame. Some of the heritage breeds have great reputations for friendly dispositions and docility, as in the English Large Black pigs, Shropshires, Cotswolds and Dorkings. The Irish Kerry cow and the Ancient White Park can become quite wild if raised without sufficient human contact.

It seems a natural union between heritage breeds and organic farming, and with sustainable agriculture and rotationally grazing systems. We should make sure this fast growing organic market becomes aware of this when they are thinking of buying breeding stock.

About Tom Hutchinson

Tom Hutchinson is a professor in Environmental and Resource studies at Trent University, Peterborough Ontario. He teaches two courses in Ecological Agriculture as well as courses on Climate Change. He also has a farm nearby on which he raises heritage livestock. Presently, he raises four breeds of sheep, as well as English Large Black pigs and several dual purpose breeds of chickens. For the past ten years, he's been a director of Rare Breeds Canada who's National Office is located at Trent University. He is interested in the preservation of genetic recourses of livestock for future use. He feels that Organic Farming is a natural marriage for conservation of these heritage breeds.

Permaculture Principle: Forest/Garden/Intercropping to Produce at Several Vertical Levels

by Richard Griffith

Forest Gardening

A forest garden is a domestic garden grown in imitation of a natural forest. In a forest, food is produced at many levels because the plants themselves occupy space at many different levels, including, but not limited to, the canopy, substorey, shrub layer, ground surface and subsoil. Wherever you are on earth, the most sustainable way to grow food is the way which most resembles the natural vegetation of that area. In Canada and the US, a quick look at our cultivated land would suggest that nearly all of our natural vegetation consists of that mixture of perennial grasses and herbs called "prairie". Perhaps our cornfields and wheatfields are workable in Iowa or Saskatchewan, but they look truly out-of-place in many huge stretches of North American farmland. Just as in Britain, where forest gardening began, our natural vegetation is woodland. If we want to maintain vegetative monocultures in Pennsylvania and Ontario, it is no wonder that we are obliged to pump in huge quantities of water, herbicides and pesticides. The land is forever trying to heal itself, to return to woodland.

In marked contrast to our energy and chemical-hungry methods of farming, the inputs in a forest garden are minimal, once the garden is established. A forest garden is:

a) Self-perpetuating. Almost all of the plants are perennial.

b) Self-fertilizing. Deep-rooted trees, bushes and herbs bring minerals from the subsoil.

c) Self-watering. Those same deep roots bring water to the surface.

d) Self-mulching and self-weed suppressing. Rapidly spreading herbs soon cover most of the ground between the trees, creating a "living mulch".

e) Self-pollinating. The trees are selected to be mutually compatible or self-fertile. Flowering herbs attract pollinating insects.

f) Self-healing. Aromatic herbs deter pests and disease.

g) Resistant to pests and disease. Any complex which includes a wide spectrum of different plants does not allow a build-up of diseases which affect monocultures.

In short, in the words of Robert Hart, English practitioner of forest gardening, "plants enjoy each other's company".
"People sometimes assume that forest gardening and permaculture are the same thing, but this is not so. Permaculture is an approach to food growing - and many other aspects of life - which takes natural ecosystems as its model. Permaculture is not modelled on the outward forms of ecosystems, but on the underlying principle which makes them work. What makes them work is a web of beneficial relationships between the different plants and animals, and between them and the rock, soil water and climate of their habitat." (from How to Make a Forest Garden)

Reference books

- Hart, Robert A. de J., Forest Gardening; c1991, Permaculture Resources, 611 Siegriedale Rd., Kutztown, PA, 19530, USA 800-832-6285
- Whitefield, Patrick, How to Make a Forest Garden; c1998, Permanent Publications, Hampshire, UK.

Or contact:

- The Permaculture Activist, PO Box 1209, Black Mtn, NC 28711 USA 828-669-6336 earthaven@mindspring.com

About *Richard Griffith*

Richard Griffith is an environmental activist, carpenter and poet. He has been exploring the ideas of permaculture (permanent culture) for ten years, and has been teaching since 1999. He is now completing the construction of his strawbale home, southwest of Collingwood, and has begun to will establish a forest garden in the yard. Most of the slides he uses will be from the collection of Gregoire Lamoureux, who lives in the Kootenay district of British Columbia.

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Export Marketing and Product Development

Moderator: Hugh Martin, Ontario Ministry of Agriculture and Food, Agriculture and Rural Division

This seminar will give participants an opportunity to learn how the various branches and divisions of the Ministry of Agriculture and Food (OMAFD) assist organic (and traditional) food companies grow their business, market their business and export their organic products. There is more information on OMAF programs and services at www.gov.on.ca/omaf

OMAF is one of many sources of information for Organic producers and processors. When looking for information on a commodity look at our website, publications or contact our Contact Centre for answers on a multitude of issues:

Agricultural Information Contact Centre: 1-877-424-1300

Frequently the issues on how to grow organic crops or livestock are similar to conventional except that organic producers choose not to use some chemical inputs and instead have a greater reliance on cultural methods of fertility and pest control. Some answers are readily available but some are more difficult and require more looking for answers.

OMAF has a wide range of commodity and discipline specialists to help put you in touch with the information you need. Specialists/program leads in the ministry collect, interpret and deliver

research, technology and information through seminars, workshops, internet, research, demonstration trials, and commodity association meetings. Specialists/leads are located in 13 Resource Centres across Ontario.

About Hugh Martin

Hugh Martin is the Organic Crop Production Program Lead with the Ontario Ministry of Agriculture and Food (OMAF), a position he has held for about 18 months. Prior to that he has worked with OMAF as a weeds specialist and as a soils and crops specialist. His involvement with organic agriculture extends back to the mid 80's and has worked with the organic sector in Ontario in various ways as part of his OMAF role. More recently he has participated with the National committee on Organic standards, and in 2002 established an Ontario Organic Research Advisory Committee. He has also spoken at many meetings, written several OMAF factsheets, articles and maintains the organic page on the OMAF website at http://www.gov.on.ca/OMAFRA/english/crops/organic/organic.html

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Export Marketing

by Michael Wolfson, Export Marketing Officer

The Export Marketing Unit of the Ontario Ministry of Agriculture and Food offers a wide range of export services geared to assisting Ontario's agriculture and food producers and processors with their export marketing efforts. These services are designed to help industry to develop and respond to international marketing opportunities. In addition to the Export Marketing Unit's own programs and services, the Unit co-operates with other government departments, both federal and provincial, co-ordinating programs promoting Ontario's agri-food exports. Come and learn how the EMU helps Ontario grow its international agri-food markets.

About Michael Wolfson

Michael Wolfson, Export Marketing Officer, Specialty, Gourmet, Health, Pet Food, Deli, Dairy Products
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Trade Shows web site - http://www.gov.on.ca/OMAFRA/english/food/events/index.html

Foodland Ontario

by Denise Zaborowski, Foodland Client Services Officer

The mandate of Foodland Ontario is to increase the sales of fresh fruits and vegetables within the Ontario marketplace The Foodland Ontario program which has been in existence for over 25 years, and is part of the provincial government's Market Development branch at the Ontario Ministry of Agriculture and Food. They work in conjunction with Ontario's producers, associations, and retailers to increase the year round awareness and sales of fresh Ontario produce. This program has provided brand leverage for Ontario's growers by providing a common brand image for over 60 fresh produce commodities.

About Denise Zaborowski

Denise Zaborowski is the Client Services Officer at Foodland Ontario who is responsible for working directly with grower and grower groups to facilitate promotional planning and execution.

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Foodland Ontario web site -
http://www.gov.on.ca/OMAFRA/english/food/domestic/index.html

Organic Marketing in Canada

by Helen Prinold, Client Account Officer

Helen Prinold will provide examples of how the Ontario Ministry of Agriculture and Food assists Ontario food companies develop their domestic markets for organic products. Marketing organic products to existing natural products and mainstream marketers will be reviewed, as will the statistics on the size of organic market. Topics covered will include targets in the organic market, currently available data on the Canadian consumer and understanding the category management practices of large retailers.

About Helen Prinold

A Bachelor of Commerce degree from the University of Guelph's School of Hotel and Food Administration combined with Helen's over twenty years of progressively responsible "hands on" experience in the management of hospitality operations has helped her develop a strong understanding of the Ontario, Canadian and global food industries.

Helen has held management positions in a mix of restaurant and retail food operations – from volume feeding operations in northern Ontario to fine dining establishments in Toronto. She also understands the unique operations of trade associations and co-operatives, having worked with and for both on business development topics.

Focusing since 1992 on helping government work with food companies, Helen began working with the ministry to increase exports of Ontario agri-food products. Since 1994 Helen has worked to assist domestic food companies in growing their Ontario investments.

She is currently the provincial liaison and key account manager with the Ontario government for Ontario's foodservice, food retailing and food distribution firms. Her speciality is understanding the marketing strategies of Ontario's food sellers and providing information to government and the Ontario food industry on how to best thrive in these challenging markets.

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Web site - http://www.gov.on.ca/OMAFRA/english/food/industry/index.html

Life Choices Natural Foods

by Mattthew van Teichman,

Life Choices is a Canadian based company that manufactures and distributes Organic and Natural foods for the North American consumer. Matthew von Teichman founded life Choices in January

2002. Matthew started Life Choices in response to a growing need for prepared foods that offered a healthy alternative. Life Choices was therefore setup to provide easy, nutritious, tasty and HEALTHY frozen foods for discerning consumers. Life Choices is the creator of the OrganiCuisine line of frozen organic entrees that become available in major retail stores in September 2002. All products are certified Organic and conform to USDA and Canadian government organic legislation.

Matthew will talk about the stages of product development and business start-up issues he went through to get his business off the ground as well as the assistance he received from the Ministry of Agriculture and Food.

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web site - http://www.lifechoicesfoods.com

National Organic Strategy Session

by Rod Macrae and Paddy Doherty

Last year at this conference we explored many facets of the Canadian Organic landscape. It is largely acknowledged that in the fast changing organic food sector Canada runs the risk of falling behind the rest of the world when it comes to organic food policy development. Furthermore, the recent implementation of the U.S. Organic Rule puts that much more onus on the development of clearer direction for the Canadian organic sector.

At the centre of last year's seminar we reviewed Rod MacRae's National Strategy paper that provides a draft blueprint for the Canadian organic sector. That paper called for the assembly of a "coalition" of Canadian organic stakeholders that could represent the organic community to further develop a national strategy, bringing more adherents into the discussion.

After last year's meeting a group of producers commenced discussion on key issues within the strategic policy paper. Now funding has been garnered to further develop the beginnings of a coalition that will start to address the multifaceted issues that are before the Canadian organic community. Key national organic organizations and associations have signed on to this process and will participate in a consultative forum to give direction to the coalition.

The Canadian National Organic Coalition (CNOC), now in its infancy, will present its current direction, seeking support from the organic community towards a representative process that will deliver a National Strategy.

Some of the work of CNOC will include:

1) Formation of a national organization
2) Mandatory vs Voluntary organic regulations
3) Affordable,Cost-effective Accreditation
4) Revision of Standards:
5) National Symbol.
6) Leverage Funds for Next Steps

Paddy Doherty will bring forward the intentions of CNOC. Rod MacRae will moderate.

About Rod MacRae

Rod MacRae - '90 Ph.D. (Agr.) - McGill University. Rod coordinated the Toronto Food Policy Council for 9 years and now consults on food policy for many organizations, including the World Wildlife Fund Canada, the Ryerson Centre for Studies in Food Security, and the Canadian Institute for Environmental Law and Policy. Since 1986, he's worked with the organic sector on policy and program development. He is co-author of *Real Food for a Change* (1999) and co-editor of *For Hunger - Proof Cities* (1999) and has written more than 90 popular and academic articles and reports on how to change the food and agriculture system so it promotes health and environmental sustainability

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About Randy Whitteker

Randy Whitteker – ’79 B.Sc. (Agr.) – University of Guelph

After 8 years in agribusiness in the field of feed and seed Randy entered into natural and organic food distribution at Ontario Natural Food Co-op in 1988. As General Manager for the ONFC Randy has stayed closely connected to the organic sector. He sat on the Board of Directors of the Canadian Health Food Association for 1997 to 2001, initially chairing the organic caucus, then as Treasurer.

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About Paddy Doherty

Along with three partners, Paddy Doherty owns and manages Dragon Mtn Farm, (established 1979) a 500-acre sheep ranch and market garden on the bank of the Quesnel River, in the Cariboo, British Columbia. For the past two years Paddy has been working for the Certified Organic Associations of British Columbia as Director, Certification Services. Paddy is currently under contract as co-ordinator of the Canadian Organic Initiative - an Organic Sector Development Fund Project under the BC Agri-Food Futures Fund (60% AAFC 40% BCMAFF).

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Using Biodynamic Planting Calendars for the Beginning Grower…The Science behind Biodynamic Planting Calendars

by Corey Eichman

Planting in relation to the planets and stars was practiced in ancient times, using calendars that were highly revered. Science, as we know it, did not exist at that time. Knowledge of the natural world came, instead, as divine revelation. As the consciousness of our individuality changed, we became more involved in what our senses had to offer, which overshadowed the knowledge derived from spiritual sources. We gradually had to reorient ourselves to the world, and through this, a science based on our sense experiences developed.

Just over 200 years ago, astronomical planting calendars were still widely utilized, mostly by “uneducated” farmers. These were vestiges of traditions, preserved in sayings and proverbs; a

tenuous link to the ancient revelations, but a link none the less. Some research in the developing field of botany came at that time from poet/naturalist Wolfgang von Goethe. He deduced and understood, from keen and inspired observation, what he called the archetypal plant. This archetypal plant is not physically perceivable, but it is that which gives direction to the physical forms and physiology that we see manifest in every plant. In describing it, Goethe said, “If the archetypal plant did not exist, we would not know a plant if we saw it.”

Goethe’s scientific work went largely unnoticed until Austrian scientist/philosopher Rudolf Steiner did extensive commentary on his ideas a hundred years later. Steiner was unique in his time for having, at an early age, developed the ability to experience and perceive directly the spiritual laws behind the natural world, combined with a schooling in the scientific and technical studies Europe had to offer. This background convinced Steiner of the validity of Goethe’s work, but he also saw why it was ignored by the science of the day. The prevailing philosophy, and the science that followed it, saw thinking as only an abstraction of our sense experiences. Steiner went to great lengths, at the end of the nineteenth century, to show how, through what he called intuitive thinking, one could come to knowledge of the spirit that exists behind the world we perceive with our senses.

This laid the foundation for the Spiritual Science movement. Rudolf Steiner gave exercises and meditations that could help anyone develop their own intuitive thinking. He taught that it was essential for any spiritual scientific investigation to begin, that one develop a deep and penetrating self-knowledge. Prejudices and biases of all kinds need to be discovered within oneself in order for true knowledge to reveal itself. Whether one wants something to be true, or does not want something to be true, should not interfere with a search for truth. Science, then, has as much to do with inner development as it does with accumulating knowledge.

For the first quarter of the twentieth century, people from many practical fields of life sought Steiner’s advice for their work. In 1924, Rudolf Steiner gave a series of lectures to farmers called, “The Spiritual Foundations for a Renewal of Agriculture.” Insight were given to, among other things, composting, nutrition, orchard and field management, animal husbandry, covercropping and overall farm health. Indications were also given about the relationship between the movement of heavenly bodies and plant life.
The Biodynamic Agriculture movement was born out of these inspirations. The Biodynamic planting calendars have been developed, based on the research that has been done in the 78 years since. This research is in its infancy, however, as we all try to develop in ourselves the capacity for intuitive thinking. The fruits that were given to ancient humanity as divine revelation have planted the “seed” of thinking in us. It is our own responsibility to cultivate this thinking into a knowledge of the world we live in.

About Cory Eichman

Cory Eichman has farmed Biodynamically for 11 years. He spent five years training in Kimberton, Pennsylvania and up-state New York in Biodynamic farming, gardening, orchard care and seed saving. He now co-manages, with Holly MacKay, the Saugeen River CSA in Durham, Ontario, which supplies about 150 households in Durham, Guelph, Caledon and Richmond Hill with fresh, in season Demeter certified vegetables, herbs, flowers and soft fruit. They also have a training program in which three apprentices each year learn how to farm and garden Biodynamically.

Figure: Geo-Centric (Earth Centred) Charts of the Planets

Preparing Your Home-Grown Raw Organic Foods for Good Health and Longevity

by Maida Broughton

Our food chain and our health are both in trouble. Our foods are deficient in the vital elements needed to fuel our bodies. Because our soils are partially depleted, chemical fertilizers have been used to help provide missing elements and still certain vitamins and minerals are lacking in our diet. These fertilizers are toxic to the body. Toxicity caused disease and symptoms of distress. The fuel needed by the cells of the body to repair, rebuild and maintain good health comes from organic substances such as fruits and vegetables. All of life depends on the plant kingdom. Organic means a live growing plant with an electrical charge.. Our physical bodies are electrical. The same as physical bodies have certain requirements to thrive, so do plants have the need for specific growing conditions. Scientists have found that disease has increased in direct proportion to the production of chemicals. What we eat is directly related to these illnesses. What are bodies require is pure foods and live emzymes, preferably from RAW ORGANIC FOODS. When we make food, our medicine then most of the battle over disease will be won. Our foods can provide our traditional needs, when grown the way nature intended with - composting materials, crop rotation, companion planting, planting and harvesting for the highest nutrition, highest yields, drought resistance, etc.
Topics covered will be:

1. ORGANIC/CHEMICAL the detrimental defects of toxic and deficient foods and diseases directly related to them.
2. POISON CHEMICAL IN PROCESSED FOODS AND PACKAGING
3. GM=GENETICALLY MODIFIED
4. IRRADIATED FOODS
5. NUTRITIONAL REQUIREMENTS-LIVE foods and LIVE enzymes
6. THE STRUGGLE TO FINE SUPPLEMENTS to make up for what is lacking in our diets and how organically grown foods are superior to these supplements.
7. CHOOSING YOUR SEEDS the seed giants equals GM seeds.
8. KNOW THE SOIL CONDITIONS by the weeds that grow there.
9. PLANTING, HARVESTING, STORING, for the highest nutrition possible.
10. PREPARATION OF YOUR ORGANIC FOODS for a maximum digestion and assimilation into the cells for renewal of life.

It is possible to live a long energetic life when you eat right so choose organic.

About Maida Broughton

Maida Broughton is a HERBALIST AND A NUTRITIONIST RESEARCHER, she grew up on a farm in Essex County, Ontario, Canada. Where her family grew food crops and raised animals and composting was a way of life.. During her adult life, her health began to suffer, with out her garden foods. Her studies as a herbalist revealed many self help opportunities, from which she developed a CERTIFICATE COURSE in WILD FOODS AND MEDICINES. This lead her to research foods as medicines, which developed into a course called REVERSING DISEASE through NUTRITION which she teaches for her local Board of Education in both Simcoe and Brantford. This also lead to becoming a public speaker, as she relates her own experiences on her way back to health. If you have any concerns feel free to call me directly at 519 582 1947.

Organic Trade Show - Map #1 - Main Floor Level

Organic Trade Show – Maps #2 & 3 – Lower Floor level

2003 Guelph Organic Conference – Trade Exhibitors

Audio Order Form - 2003 Organic Conference & Trade Show

Questionaire – Guelph 2003 Conference – Your comments please