

GREEN LANE AGRICULTURAL ASSISTANCE NGO

SIDE BY SIDE WITH THE FARMER



NEWSLETTER #1, 2006



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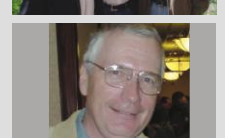
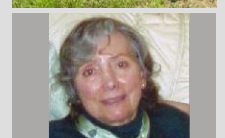
Pasture Improvement as a Priority

Green Lane Providing Practical Knowledge to ATC Students

Valuable Book
"Organic Agriculture"
By Nune Sarukhanyan

Green Lane expresses gratitude to Open Society Institute for support in publication of this first edition of our newsletter

Edited by Sos Avetisyan



Welcome to Green Lane Agricultural Assistance NGO: How to Become a Member?



Nune Sarukhanyan, President of Green Lane Agricultural Assistance NGO

Dear friends,

I am happy to welcome you now. Let me start with expressing my appreciation to all those who have contributed in successfully accomplishing our 2005-2006 programs. We are pleased with the fact that this newsletter is another opportunity to communicate with our collaborators and friends.

I hope this newsletter will be interesting and, more importantly, useful for the audience and there will be feedback from them.

The Green Lane NGO is still young; it is only one and a half years old. We are just starting to turn over the pages of our history; however we already have some success that we would be happy to share with our friends.

“Side by side with the farmer”: this is the motto of Green Lane. This is what leads our routine efforts in helping farmers learn the best farming practices and apply them in their farms. Our success is having successful farmers in the country.

I appreciate the high professionalism of the specialists working with us. I am thankful to all our colleagues; their dedicated work is the key to success.

Green Lane is ready for further cooperation with our Armenian and foreign friends for the benefit of Armenian farmers and consumers.

Success Story ORGANIC FARMER FIELD SCHOOL IN GANDZAQAR VILLAGE

In 2003, through support from the USDA Marketing Assistance Project, an Organic Farmer Field School was established in Gandzaqar village of Tavush region. Since 2005, Green Lane works with this FFS providing technical assistance and consultancy.

Three years ago...

Three years ago, in 2003, specialists of Extension Department of the Armenian State Agrarian University visited Gandzaqar community. They examined some areas under different crops and met farmers, looking for ways to introduce alternative farming systems and establish an organic FFS in the community. It proved that there were farmers taking an active interest in FFS and willing to start using ecological farming techniques on their own plots. On the area of 3,500 sq meters, about two km away from the village, a group of farmers started organic cultivation of the vegetable crops.



Farmer Seno Sarikyan and consultant Dora Rumsey (USA)

The members of the group, Greta and Seno Sarikyan, Azat Hakobyan, Amalia Nerkararyan, Zarmail Mardanyan and his wife Emma Hakobyan, have fund of knowledge and wide experience in farming. Over the last three years, they expanded their knowledge and developed their professional skills taking part in a number of continuous education programs. They always have a good chance to consult with Armenian and foreign experts and advisors. Now the members of this group not only successfully and lucratively use the knowledge and experience they gained during the recent years to cultivate their own plots but also share experience with neighbors partaking in peer-to-peer training and education programs.

Farmers training farmers...

Within the framework of organic agriculture exchange programs cooperatively initiated by Green Lane NGO and Bioterra Organic Farming Association of Romania and funded by the Open Society Institute, the two most active members of the Gandzaqar FFS - Emma Hakobyan and Zarmail Mardanyan - visited Romania to study



Zarmail Mardanyan and Emma Hakobyan with their kids

the experience of the European organic farmers.

It is significant that one of the members of the FFS, Emma Hakobyan, is a certified trainer. She took a special course at World Vision International and now works as a trainer for farmer groups from different regions of the country.

When being asked why she decided to go in for organic farming, which, as compared with the conventional farming systems, requires robust work and results in lower yields, Emma answers, “The main reason for saying no to the chemicals was concern about my own family and kids.”

However, the work done by the Gandzaqar FFS evidences that organic farming can be a profitable business. The members of the group produce high quality organic products that finds its consumer in the domestic market.



Organic basket at the highest price...

In 2004, the members of the Gandzaqar FFS took part in the Harvest Festival in Armavir region.

- It was a proud moment, - they say, - when our 'organic basket' full of fruits was sold by auction at the highest price. This also evidences that people understand the true value of wholesome organic food...



Success Story ORGANIC FARMER FIELD SCHOOL IN GANDZAQAR VILLAGE

@-Mail-box-shopping...

Green Lane NGO is not only an organization supporting the members of the Gandzaqar FFS in their efforts to introduce alternative farming system on their own farms and to promote ecological agriculture throughout Armenia.

Recently, another organization, SHEN NGO, assisted the farmers to sell their produce in the capital city of Yerevan using the advantages of e-marketing.

By e-mail, the organic food produced in Gandzaqar has been offered to potential buyers, mainly embassies, international and national organizations. The amount of the produce sold in this way was not large - about 80 kg of cornelian cherry, bean and cucumber. But the ultimate aim was to study the home market for organic production. And it emerged that in Armenia the production of eco-farms finds its consumer willing to pay even double for organic food.

Conversion and certification...

Some members of the Gandzaqar FFS have already entered an obligatory three-year conversion period to certify their production. On the whole, to the farmers in Armenia, conversion from the conventional farming system to the organic one is a difficult and expensive process to go through, but SHEN NGO assists the Gandzaqar farmers paying for them to ECOGLOBE National Organic Certification Body for inspection services.

Wild gathering...

The organic area cultivated by the members of the FFS is not far from the forest, and there are people in Gandzaqar who gather wild berries, fruits and herbs both for own consumption and to earn a living. Thus the members of the group decided to certify the wild gathering also.

The forest area of about 90 ha is under organic inspection now, and six people have already started familiarizing themselves with the organic standards of wild gathering. They are planning to sell the berries gathered at the SHEN organic shop. In addition, the members of the Gandzaqar FFS, through support from the World Vision International, are going to start growing organic wheat on the area of 10 ha next year.

EFFECTIVE ASSISTANCE TO TOLORS MILK MARKETING COOPERATIVE



In February 2005, the Action Against Hunger International Foundation active in Syunik marz was working with three milk producing farmer groups in the village of Tolors. They marketed their milk through the milk marketing cooperative. The Foundation turned to Green Lane with a request to assist the cooperative in overcoming the tough financial situation at the time.

In early spring, Green Lane started the cooperative's "recuperation" program entitled "Organizational Development of Tolors Cooperative". During the program implementation period, the main efforts were directed to resolving the general and financial management problems of the organization. As a result, within a six-month period, the activities of the cooperative were abruptly improved.

In early 2005, the members of the milk marketing cooperative in Tolors village were in a desperate situation; for a long time, they could not receive the money for the milk they sold to Boti dairy processing factory. The past due debts of the cooperative to be paid to AgroLeasing LLC was Armenian Drams equivalent to \$ 400 and was growing by 40,000 AMD each month. They were warned by the management of AgroLeasing that if they don't pay off the debt, the cooperative will be deprived of the milk cooling tank of 1,600 l capacity. In such event, the cooperative would have to face the resulting insolvency, which happened with two other cooperatives in Ararat region. This was not the sole problem. The cooperative also had accrued tax liabilities to pay to the Government, and its amount was growing.

Following the involvement by Rafael Sarukhanyan, the Green Lane's

cooperative development specialist, in 2005, as compared with the previous year, the volume of milk collection and marketing increased by 2.5 times reaching 170 tonnes. In 2006, despite the drought, the volume of the milk collected by the cooperative members will exceed 200 tonnes. The cooperative ended up by fully paying back the leasing amount 8 months before the specified date. They also paid back all their tax liabilities.

It's worth mentioning that the rapid development of the Tolors cooperative was greatly facilitated by the implementation of open pasture maintenance of cows organized by the cooperative development specialist of the Green Lane and supported by Action Against Hunger. In addition, the CARD Foundation provided the cooperative with a GAZ 66 truck to transport milk from remote pasture places.



TRAILS AND INTRODUCTION OF NEW CHICKPEA VARIETIES

The Action Against Hunger Foundation has been active in Armenia starting from 1994. In 2005, the Foundation found it reasonable and important to support a project presented by the Green Lane related to growing and introduction of legume crops in Sissian area.

Seeds of legumes contain a big amount of proteins and are used as food and feed. These crops, as source of plant protein and soil enrichment, are of great importance for human consumption. In addition, they are considered as the best preceding crops for nearly all crops.



Taking into account that in all marzes of Armenia, including Sissian area of Syunik marz, the yield of cereal crops depend on a number of factors (including the lack of crop rotation), during 2005-2006, through funding by the Action Against Hunger and direct support by the Green Lane, chickpea growing activities were organized.



Chickpea was selected because it is the most drought and cold resistant crop among the legumes. The local Leninakani 313 and another 6 varieties from the range of over 100 world varieties provided by the Agriculture Plant Protection Research Center were used for trials. Four of the tested varieties will be introduced this year. The project has been supported by the Minister of Agriculture and by agricultural specialists.

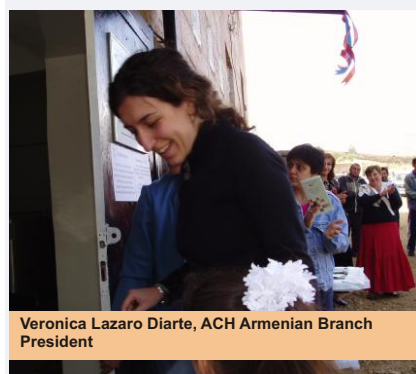
THE FIRST-BORN OF GREEN LANE



Rafik Muradyan (ASHTARAK KAT Dairy Company) and Rafael Sarukhanyan (GREEN LANE NGO)

On September 14, a ceremonial opening of a new milk marketing cooperative took place in the village of Shaghat, Syunik marz.

Excited from the success with the Tolors cooperative, the Action Against Hunger International Foundation suggested the Green Lane to carry out a survey in 9 villages of the Sissian area of Syunik marz during July-August of 2005. As a result of the survey, potential locations for establishing milk marketing cooperatives, Shaghat and the adjacent Balak and Mutsk villages, were selected.



Veronica Lazaro Diarte, ACH Armenian Branch President

Surveys indicated that the marketable milk yield per cow in these three villages can make 400-600kg depending on the heads of cows in farms. With total of 800 cows in three villages, around 400 tonnes of milk can be marketed annually. Taking into consideration that farmers can receive 90 AMD per kg of milk on average, during the year, the overall earnings of farmers in three villages would be 36 million AMD of cash. This money would noticeably increase the living standards and reduce poverty of the population in those villages.

Establishing milk marketing cooperatives in this area was expedient also for the reason that until recently these villages were traditionally collecting and marketing milk. In addition, Shaghat is even closer located to the milk collection center of

Astarak Kat Dairy company in Gorhayk village than Tolors. It is planned to collect 3.5-4 tonnes of milk from 150-200 farmers from Shaghat village during the season of 2007-2008, with Tolors cooperative collecting 1.5-1.6 tonnes at best, meaning the milk transportation cost from Shaghat to Gorhayk will be twice as little than that of from Tolors village.

On July this year, the constituent assembly of the Shaghat milk marketing cooperative was conducted, which was participated by farmers from Shaghat, Balak, and Mutsk communities. The ceremonial opening of the cooperative took place on September 14.



Representatives of different international and national organizations took part in the opening ceremony

Dairy farmers from the village and from neighboring communities, representatives of Action Against Hunger, Syunik Governor's office, Syunik Agricultural Support Center, World Vision, British Springfield Centre, Business Development Center Swiss Development and Cooperation (SDC) Agency were present.



Ruzanna Arzumanyan, Rafik Muradyan, Hovhannes Arzumanyan, Khachik Poghosyan, Rafael Sarukhanyan

Through the financial support by CARD, a 1,400l-capacity milk cooling tank was acquired for the cooperative.

Shaghat is the first farmer organization created by Green Lane. They say the first step is the most difficult.

DAYS OF ORGANIC AGRICULTURE IN ARMENIA AND ROMANIA

ROMANIA, July 2006

One of the visits made by the group of Armenian specialists was to Lucina Herghelia of Cheile Lucavitei....



In this area, there are many plants listed for special protection including bear grapes, little carnations and corner flowers. All can be found here by a spring with sulfur water.

Herghelia was started about 150 years ago by Queen Maria Teresa with an impressive collection of pleasure horses. Currently, supported by the SAPARD project



there are 400 different breeds of horses both for work and pleasure.

The breeds include Hutupan, Romanian ponies, English ponies, Bucovina horses and many other local breeds. Herghelia has a large number of caretakers that live on the site. There is about 1,700 ha. of pasture and 40 ha in woodlands.



Days of Organic Agriculture in Armenia and Romania became one of the most interesting professional events of the summer of 2006, that brought together farmers, researchers, agricultural, extension and information specialists, policy makers from Romania, Armenia, Hungary, Bulgaria and Moldova to share ideas and exchange experience on

developing organic agriculture in developing countries.

The project has been initiated and led by Green Lane Agricultural Assistance NGO (Armenia) and Bioterra Organic Farming Association of Romania, and financially supported by the Open Society Institute under its East-East Program.

ROMANIA, July 2006

In July, the project was hosted by Bioterra Association; a group of Armenian farmers and agricultural specialists visited Romania to acquaint themselves with achievements of their Romanian colleagues in the field of organic agriculture.



Roundtable discussions at the University of Agricultural Science and Veterinary Medicine in Cluj Napoka, and Bistrita County Office for Agricultural Advisory, field trips and visits to organic farms, milk collecting centers and processing enterprises, meetings with repre-

sentatives of farmer associations and ECOINSPECT National Organic Certification Body made it possible to learn the experience of Romania.



Organic agriculture started in Romania in 1997 and has already taken a number of important steps. Total of 75,000 ha of cultivated lands (nearly 0.5% of the total farming lands) are certificated as organic; about 3,500 farmers have already shifted their farming system from conventional to organic one.

A tour was made to the greenhouses of Mircea Burde of Lapusel, Maramures county...

The participants were pleasantly surprised at the novel methods used by a vegetable farmer. The greenhouses were surrounded by nettles, wormwood and other plants utilized firstly for the making of compost and secondly to control pests (the wormwood). In every greenhouse you could find bird nests, which help to control insects. For the control of soil pests, Burde maintains in the soil bonemeal, which has a soil softening effect.



DAYS OF ORGANIC AGRICULTURE IN ARMENIA AND ROMANIA

ARMENIA, AUGUST 2006

During their visit to Armenia, the European experts had a meeting with David Lokyan, Minister of Agriculture of the Republic of Armenia.



“We expect the year of 2007 to be a starting point in developing organic agriculture in Armenia,” Mr. Lokyan said.

He stressed that organic agriculture is being seen as one of the all-important strategic directions of Armenia's agrarian sector.



Minister Lokyan pointed out the importance of introducing organic farming systems for Armenian farmers because of the mainly small and split parcels of land. According to him, organic farming can provide some of the Armenian farmers with an opportunity to be competitive not only in the domestic market but also in the export market.

David Lokyan stressed that organic agriculture will allow Armenia's farmers to add value to their production and receive additional profits from their small landplots.”

The Minister believes that, among other things, it is time for Armenia to consume "wholesome food.”



In August, the project transferred to Armenia where professionals from four East Europe countries – Romania, Hungary, Bulgaria and Moldova – joined with their Armenian colleagues to discuss the challenges faced by their countries in making their first steps in developing organic systems. They also outlined the ways of introducing organic farming systems in developing countries with mainly poor-resource small-scale farming systems like in Armenia.

The group of experts visited mountain and pre-mountain regions of Aragatsotn, Tavush, Lori, Vayots Dzor and Syunik, where, specialists believe, there is natural and economic potential

The results of the field trips were summarized at the final roundtable discussion held in Yerevan on the 15th of August, 2006 by support of Open Society Institute, Green Lane NGO and the Center for Agribusiness and Rural Development



Forty-five representatives of national and international organizations operating in the field of agriculture and rural development, the Ministry of Agriculture, and mass media joined the members of this multinational group to learn more about the project itself and to discuss its outcomes.

The Consul of Romania, Mr. Marius Florescu-Ciobotaru, who also provided significant support to the project, took part in the meeting. The Consul highly appreciated this initiative and stated that the Embassy of Romania in Armenia is pleased to

for developing organic agriculture, and there are organic farmer groups working towards putting this farming system into practice.



Most specialists agree that Armenia has good potential to go forward with development of this particular sector of agriculture; they point out the interest being shown by farmers and processors, on the one hand, and consumers on the other hand, support from national and international organizations and the Armenian Government, some specific economic and social factors, even the fact of having virgin land areas suitable for organic systems in mountain and pre-mountain regions of Armenia.



support cooperation in such an important sphere as organic farming.

Participants from Romania, Hungary, Moldova and Bulgaria shared their opinions on strengths and weaknesses, opportunities and threats of developing organic agriculture in Armenia as well



as presented the situation in their own countries. Amongst strengths, many of them pointed out the importance attached to the issue by the Government of Armenia.

ORGANIC AGRICULTURE IN THE US AND THE WORLD: *THE FUTURE DIRECTION OF AGRICULTURE*



Silvia Ehrhardt, USA
Friend of Green Lane

Sylvia has studied and practiced organic farming and gardening methods for over 30 years. In 1979 she and her husband decided to test their ideas in the marketplace, so they started Ehrhardt Organic Farm to demonstrate that organic farming could be profitable as well as ecological. The farm continues today under the management of their daughter and is a commercial operation, demonstration farm and educational center.

Since 1991, Sylvia Ehrhardt works as a consultant on organic agriculture. She established EcoAg International. Sylvia has been involved in a number of projects in Armenia, Russia, Romania, Bosnia and other Eastern European countries.

The growth of the organic market in the world is now reshaping the face of conventional agriculture. Millions of hectares of land that were once sprayed with chemical pesticides and fertilizers are now being farmed using organic techniques and technology to boost harvests.

Encouraged by unprecedented consumer demand for healthy, environmentally friendly foods, organic agriculture has curved its way into the conventional foods market. This demand for clean food is brought about by the concerns of the consumer who is unhappy with the way most food is grown and worried about diseases “mad cow”, “hoof and mouth”- and foods that contain genetically modified ingredients.

The farmer who is tired of applying expensive, toxic agro-chemicals and the conservationist who is trying to correct agricultural problems that cause soil erosion and water pollution also generate the demand for organic agriculture.

The term “organic” describes a comprehensive approach to farming, encouraging diversity, maintaining optimal plant and animal health, and recycling nutrients through biological interactions. At a minimum, organic standards prohibit the use of synthetic pesticides and artificial fertilizers. But organic farming generally also disallows use of growth hormones and antibiotics in livestock production, as well as genetically engineered seeds.

Instead of using conventional agriculture's vast store of chemicals, organic farmers rely on ecological processes - such as using diverse planting patterns or attracting beneficial insects to raise yields, build soil fertility, and reduce pest pressures. Because organic farming aims to build healthy ecosystem, it provides considerable conservation benefits, including reduced groundwater pollution, fewer greenhouse gas emissions, increased carbon sequestration, improved soil health, enhanced biodiversity and greater wildlife habitat. Organic farming is an essential part of any attempt to reserve declining farmland.

Driven by the global market for organic products and the projected global sales of \$80 billion (USD) by 2008, the organic explosion revolves around Western Europe. Europeans are spending nearly \$12 billion (USD) on organic products each year. Here, organic agriculture has increased roughly 30% yearly.

Large farms are being certified and multinational food conglomerates have unveiled new organic brands. Organic agriculture now accounts for nearly 3% of all the farmland in the European Union (EU). In Sweden, Denmark, Finland, Italy, and Switzerland, it accounts for 7 to 10%. Austria averages 10%, with some provinces approaching 50%.

With a growing number of national drafting organic standards, setting organic acreage goals, and supporting organic agriculture, the prospect for further growth are bright. Denmark has set a 50% organic target by 2012. In the UK the proposed Organic Food and Farming Targets Bill would require that by 2010 30% of agricultural land in England, Wales and Northern Ireland be certified organic or in conversion and 20 percent of the food consumed be organic. With the current projection, as much as 30% of the EU's total acreage could be organic by 2010.

While consumer demand has driven growth in organic products around the world, Europe is outpacing markets everywhere because it has enjoyed broad government support. 80% of the growth in EU organic agriculture has occurred in the last 8 years. This growth has been spurred by the 1993 establishment of a common EU definition of “organic” and EU-wide policies to provide financial support for farmers to convert to organic agriculture. After the first reports of “mad cow” disease in Germany, the agriculture minister pledged to increase organic production from 2.6% of farmland today to 20% by 2010. Agricultural universities across Europe have opened organic farming and research departments, and farm ministries have strengthened organic extension services. 



👉 Organic Agriculture in the US and the World: *the Future Direction of Agriculture* By Silvia Ehrhardt

By contrast, growth in the United States where the total market for organic produce is roughly the same as in Europe has come despite a lack of conversion assistance and little government support in general. Today in the United States there are signs of a more receptive government outlook toward organic agriculture. In the United States and Canada, organic farms in cultivation have grown between 15 and 20% each year during the 1990's and now stands over 1 million hectares. Retail sales of organic produce and products in North America have registered 20% annual growth rates since 1989, and were estimated at \$10 billion per year. Half of the organic food sales in the United States are now made through conventional supermarkets. Research study in the US found all organic systems were more profitable than the conventional ones the result of decreased dependence on costly agricultural chemicals and greater crop stability. High growth is forecast in the US as consumer awareness of organic food continues to rise.

Statistics for the developing world are spotty, although evidence points to rapid growth. Under the green food development plan, Heilongjian Province in China has expanded land cultivated in organic foods to half a million hectares. Most of the production is for export, though domestic markets are emerging as local awareness and demand increase. In Japan the market is now worth over \$3.5 billion.

An on-going collaboration between the US based Rodale Institute and Senegalese agricultural officials and nonprofit groups have helped boost food security through the use of organic techniques and technology for countries in the African Sahel region. The project employs a combination of measures to check erosion and boost the fertility of the soil.



These changes have tripled yields and increased the likelihood that crops will weather severe drought and will alleviate poverty and hunger in the developing world. Organic farming methods place emphasis on the local resource and knowledge that the farmer already has, and puts organic techniques and technology at the service of the farmer.

A perfect example of this is Cuba's successful organic farms. This is the first time any country has made the transition from chemical-intensive farming to sustainable/organic agriculture on a national scale. Cuba's successful switch carried the island nation away from the brink of a national food crisis brought on by 1990 collapse of trade relations with the former socialist bloc. Cuba demonstrates that organic agriculture actually works as the basis for agriculture in an entire nation. Its experience put a lie to the repeated myth that "organic farming could never feed the world".

In every nation for which data exists, farmers are bringing between 10 and 40 % more land under organic cultivation each year, and a recent UN Survey found commercial organic food production in every nation in the world. The United Nations has

been encouraged sustainable/organic agriculture with all its member nations. In June 1992, at UN Earth Summit in Rio de Janeiro Brazil, Agenda 21 was established as the floor plan for sustainable development. It gave Sustainable Agriculture and Rural Development (SARD) a formal status that it had not previously had. It identified sustainable agriculture as a primary concept and the essential component in agricultural development to feed a rapidly increasing world population. The UN Food and Agriculture Organization (FAO) said that organic farming could help reduce hunger.

FAO press release stated, "The United Nation food body urged poor nations yesterday to boost exports of organic produce to take advantage of booming markets in developed countries". In a sudden of a FAO entitled "World market for organic fruit and vegetables", it states, "As demand for organic fresh produce is expected to continue to exceed production in developed countries, improve will be need to meet consumers' demand... Particularly high growth rates have been observed in the United Kingdom and in Italy. In Italy, organic fruit and vegetable retail sales have grown at an annual rate of around 85% since 1998. In the early months of 2001, after detection of the first case of 'mad cow disease' in Italy, consumer demand for all organic products moved even higher".

WHAT IS ORGANIC AGRICULTURE?

Characteristics of successful organic farmers

According to USDA, most successful organic farmers share the following characteristics:

- *A commitment to a safer food supply and protection of the environment
- *Patience and good observation skills
- *An understanding of ecological systems
- *Good marketing skills and motivation to spend time seeking out markets
- *A willingness to share stories of successes and failures and to learn from others
- *Flexibility and eagerness to experiment with new techniques and practices

Developing an organic system plan

A plan of management is essential for successful organic production and handling of crops, livestock and products after it is produced and prepared for market.

The plan should be in writing and have proper documentation. Organic production requires preserved identity from the consumer back to the farm or farms and fields the crops or livestock were produced on.

It is important to first establish what your goals are in farming organically. Ask yourself if the goals and what you plan to do fit with your personal values. You need to evaluate the strengths and weaknesses of the farm. How will you work with the natural system you have and make the change to organic farming?

You need to evaluate:

- *What are your most valuable natural resources?
- *Does the topography of your land work for you or against you?
- *What kind of pest pressure do you experience?
- *How healthy are your soils?

The one basic rule for organic farming in implementing your plan is to get everything in writing including proper documentation of practices and strategies on your farm. This should include field histories, hectares, and maps, all inputs with copies of the labels, lot numbers and field management practices including soil testing, cultural practices and insect and pest controls.

Organic farming is not for everyone

The plan needs to document the following for crops or livestock:

- good records to document each step
- practices used
- materials used
- management
- buffer zones

A **buffer zone** is an area located between a certified production operation and an adjacent land area that is not maintained under organic production. A buffer zone must be sufficient in size or other features such as windbreaks or a diversion ditch to prevent the possibility of unintended contact by prohibited substances applied to adjacent land areas with an area that is par of an organic operation.

Practices, materials and management practices

Organic farming is sometimes viewed as not using any outside materials. ***This is not correct!***

Key practices include:

- crop rotation
- proper manure management: includes composting unless applied to a crop not for human consumption, or incorporated at least 120 days prior to harvest of the edible crops. Manure cannot contain additives or contaminants.
- composting can be used provided that the initial Carbon:Nitrogen ratio is between 25:1 to 40:1, temperature is maintained between 55 C and 76 C and turned at least 5 times
- use of green manure crops
- cultural practices such as weed control-mechanical or physical
- use of only approved materials for insect control
- soil testing for both major nutrients and minor elements
- application of only approved substances for fertilizer

Soil health is extremely important because you will no longer rely on external inputs.

Pest control also becomes extremely important. Biological pest control is complex, involving complicated interactions among crop rotations, intercropping combinations, planting schedules and beneficial habitats. ↘



John Bobbe, USA
Friend of Green Lane

John Bobbe is the Executive Director of the Organic Farmers Agency for Relationship Marketing, Inc. (OFARM). OFARM is a cooperative with 8 organic farmer cooperatives/associations with farmer members in 22 states and Ontario, Canada.

John has worked on policy analysis and agriculture issue development at the state, national and international levels. His work includes economic research, international trade and preparing working papers and delivering testimony before government bodies including the U.S. Congress and United States Department of Agriculture.

The official USDA definition of organic agriculture is "***an ecological production management system that promotes and enhances biodiversity, biological cycles and soil biological activity. It is based on minimal use of off-farm inputs and on management practices that restore, maintain and enhance ecological harmony.***" Usual characteristics defining organic agriculture include: 1) reduced soil erosion; 2) lower fossil fuel consumption; 3) less leaching of nitrate; 4) greater carbon sequestration and 5) little to no pesticide use.

Organic production systems are designed to:

- *maximize biological activity in the soil
- *maintain long-term soil health and minimize soil erosion
- *enhance the genetic and biological system and its surroundings
- *provide livestock with optimal living conditions for health and well-being
- *recycle materials of plant and animal origin, return nutrients to the land and minimize the use of nonrenewable resources
- *promote the environmentally responsible use of soil, water, and air and minimize agricultural pollution.



What Is Organic Agriculture?

By John Bobbe

Another key is obtaining proper seeds

In the US only certified organic seeds must be used unless the producer proves the seed they wish to use is not commercially available. The producer must provide proper documentation that they tried to obtain the seed and could not. Certified organic seeds must be grown according to USDA organic law on organic land using organic inputs only. They cannot be genetically engineered.

Post Harvest Handling and Marketing

Attention to detail after the crop is harvested is critical. There are a number of causes for loss of quality and freshness. They include improper temperature management, drying (wilting, shriveling), mechanical injury (abrasion, puncture, bruising, vibration), attacks by bacteria or fungi.

The four keys to maintain crop quality post harvest are:

1. avoid mechanical injury from impact, puncture, compression vibration, abrasion
2. promptly and thoroughly cool your crop where appropriate
3. maintain the crops optimum storage qualities and conditions such as temperature
4. avoid water loss

Managing the risks of organic farming

There are three major types of risk in transitioning to organic farming.

1) **Personal risk:** This is the result of change and uncertainty within the business. Changing your business goals and farming methods to organic are major risks. These changes can have a significant impact on the long term performance of your business. Your own lack of experience and knowledge can be considered a risk. The business may be exposed to internal risk as you learn to control pests and build soil fertility without use of synthetic chemicals. And it can lead to reductions in crop yields.

2) **Production and marketing risks** that result from weather-related events such as drought, excess rainfall, hail, extreme temperatures, insects and disease. Where and how you market your product represents an external risk. In some cases changes in government policy and regulation can present risks.

3) **Financial risk** can occur as a result of changing production systems to organic and result in financial loss.



Challenges to organic farming

- Information
- Pricing
- Research
- Time Management
- GMO Contamination

Organizations such as Green Lane and farmer to farmer networks can help you get the information you need.

Reliable price information is often difficult to find.

Research on organic farming has lagged behind that of conventional farming. Part of the problem is that most researchers are specialists focusing on a single aspect. Organic farming research requires an integrated whole systems approach.

Time management is another challenge. Record keeping associated with certified organic production is time consuming. Time will be needed to gain new skills, such as managing crop species, controlling weeds mechanically and developing new marketing strategies. Organic farming requires preventative rather than prescriptive strategies and a considerable amount of forward planning.

GMO contamination is always a threat from your neighbors who farm conventionally. Contamination results in decertification of the product as organic. Contamination can result also from sharing equipment and trucks for transporting the crop.

Knowing your customer

Organic agriculture requires producers to be very involved and knowledgeable about not only what they produce, but what they have to sell.

A number of factors contribute to successful marketing.

1. Value-added processing
2. The number one rule of marketing is

to listen to your customer-what do they like or dislike.

3. Price for quality-offering a unique, high-quality product that customers can't get elsewhere.

4. Work closely with retail buyers to promote your product.

5. Attractive packaging helps products, especially in the high end price of the market.

6. Add a personal touch to your marketing. One successful organic dairy cooperative in the US sends farmers and their families to food shows and stores to directly talk with customers.

Who buys organic food?

Organic production is one of the fastest growing segments of the market in the worldwide. Organic farming is practiced in about 100 countries throughout the world, with more than 24 million ha now under organic management. For some consumers buying organic is very important and they are willing to pay a premium for it. For most people, price is a factor in whether they choose to buy organic or not.

Common mistakes farmers make in organic farming

- Use of non-approved inputs such as treated seeds
- Failure to obtain adequate documentation of purchase of approved inputs and failure to document attempts to source organic seeds
- Lack of adequate detail including field maps, not keeping records up to date, not keeping all labels of seeds and other inputs used, records for contracted services, not keeping field numbers on harvest and/or storage records and not using lot numbers or an inconsistent numbering system

Keys to organic farming

Probably the most important single element in organic farming is making contacts with other farmers, books and resources as well as resource people knowledgeable about production and transition strategies.

There is a need to focus on prevention strategies and treating causes of problems rather than specific problems themselves. Farmer to farmer networking to exchange information and ideas is one of the most valuable tools that has made organic farming successful in other parts of the world.

PASTURE IMPROVEMENT AS A PRIORITY

In livestock breeding, feeding of animals is one of the main components of management. However, Armenia has a tough feed base. In such conditions, proper care is critical. The pasture land management is poorly and not viably organized. Over the last 15 years, almost no work in maintenance and rehabilitation of natural meadows has been carried out.

In 70% of the natural meadows, animals were provided with drinking water. Today, the level of water availability is no more than 10%. In the northeast, the meadows were definitely damaged by the earthquake, while in other places, especially in the south - everything was destroyed during the privatization process. Today, we receive only 2 tonnes of grass per one hectare at most, while this amount could be as high as 4-5 tonnes. Undesirable vegetation has grown in these areas, and nothing has been done to prevent it. No doubt, yields have decreased.

Based on the situation, the Green Lane, jointly with the Sissian-based Action Against Hunger foundation, implemented surface improvement works on 10 hectares in the village of Balak, Sissian area. High quality seeds of four types of grass as well as manual seedsowing machines were provided for the farmer of the community. In addition, seminars on pasture improvement topics have been conducted. In this stage, improvement of natural meadows and pastures is a priority. This is the reason why the Green Lane is planning to implement similar projects in other villages of Sissian area in future.



SUPPORTING FARMER UNIONS Successful cooperation between Green Lane and World Vision International

This year, from 10th through 27th of April and from 12th through 29th of June, under the World Vision International Tavush Regional Development Project, Green Lane conducted training courses on Establishment and Management of Farmer Groups and on Increasing Effectiveness of the Activities of Farmer Groups.



From left to right: Nikol Vardumyan (WV Agricultural Projects' Coordinator in Tavush), Curt von Boguslawski (Director of the WV Tavush Agriculture Project), Ashot Babayan (WV Agricultural Projects' Coordinator in Sissian)

Members of eleven farmer groups from Gandzaqar, Ijevan, Achajur, Voskevan, Koti, Noyemberyan, Berdavan, Varagavan, Berd, Artsvaberd and Aygedzor communities partook in the trainings. The participants discussed problems hindering farmer groups and unions from effective management of their activities.

The participants of the training looked for answers to the questions "what are our achievements in the development of farmer groups in Armenia and what we would like to achieve tomorrow?"

The fact is that currently in Armenia we have few farmer unions and groups that are able to develop in sustainable way, the rest of the groups being still at the starting stage. They have long way to go to be able to sustain their activities and secure further development.

The training courses spotlighted the need for increasing the role of the rank-and-file members of the farmer unions, especially when it comes to management, rights and duties, membership fees, and personal contributions.

It was stressed that advisory and educational programs should not be separated from the investment ones. They have to be combined and integrated to make the efficiency and effectiveness of the use of grants and investments clearer.

VALUABLE BOOK

The "Organic Agriculture" by Nune Sarukhanyan, PhD, the President of Green Lane, has been published recently.



The book provides the comparative description of organic and conventional farming to emphasize the vital importance of the first one. The starting point bearing the main base for organic farming is the special attitude towards the soil as an alive organism. Farmers, small land owners, agricultural specialists and students and other stakeholders involved in organic agriculture are provided a work that addresses secrets of safe agricultural products.

"Organic Agriculture" is the first book in the planned series, with two more coming up.

WELCOME TO GREEN LANE! Who We Are and How to Become a Member...

Green Lane Agricultural Assistance NGO was established in 2004 with the assistance of the members of USDA MAP - supported cooperatives, farmer groups, individual farmers and agricultural specialists, scientists and students.

OUR MISSION

Assist in production and marketing of high quality, competitive agricultural products via formation of farmer groups and cooperatives thus improving the income of the member farmers, people cooperating with them, and processors who are buying from the member farmers. Our goal is to provide the population with healthy and safe agricultural products and sustainable development of rural communities.

OUR VISION

To tighten the cooperation with local and international private and public organizations which will help our beneficiaries improve their income.

We provide our members with free information, consultancy, literature on fruit and vegetable growing and marketing, grape growing and wine production, livestock farming and veterinary medicine, organic food production, flower growing, fish farming, etc.

We also insure their participation in training and exchange programs both in Armenia and abroad. We invite our foreign members and sponsors to learn more about our activity and to share their experience.

We implement pilot, educational, investment, and research projects. We assist in establishment and development of cooperatives and farmer groups throughout Armenia and organize conferences, roundtable discussions and trade shows.

We cooperate with over a dozen local and international organizations.

GREEN LANE PROVIDING PRACTICAL KNOWLEDGE TO ATC STUDENTS

Within the collaboration between Green Lane and the Agribusiness Teaching Center (ATC), a joint education project with the Armenian State Agrarian University and the Texas A&M University, USA, three ATC students, Arpineh Arakelyan, Larisa Dadamyanyan, and Andrey Apresov, completed their summer internship program at Green Lane.



Martin in Vayots Dzor region



From left to right: Arpineh, Larisa, Sona, Lusine, Lilit, Haykanush and Olga

They were exposed to practical knowledge and new professional skills by getting familiarized with the routine activities of the Green Lane and working with cooperatives and other farmer groups.

Another group of ATC students, Lusine Atabekyan, Haykanush Mikayelyan, Olga Kudoyan, Sona Babayants, and Lilit Meloyan, have supported the Green Lane by actively participating in different Green Lane - organized events.

They have provided organizational, technical and translation assistance to foreign guests of the Green Lane during their stay in Armenia and during roundtables and seminars on organic agriculture and many other topics for farmer groups and cooperatives.

The ATC also arranged an internship program in the Green Lane for Martin Pidoux, a MsD agribusiness student from the University of Zurich, Switzerland. During July-August, Martin not only studied the Armenian agriculture and the activities of the Green Lane, but also transferred the experience of his family farm to Armenian farmers.



Andrey Apresov in the experimental plot

Importantly, the students demonstrated very positive and responsible approach towards their internships and assistance activities with Green Lane. Green Lane thanked Dr Daniel Dunn, the Director of the International Center for Agribusiness Research and Education (ICARE) Foundation, which incorporates the ATC.

MEMBERSHIP

Citizens of the RA and foreign citizens who are above 18 years of age and accept the by-laws of "Green Lane" NGO can become members of the organization.

The requirements to become a member of our organization are a written application on the name of the president of the organization and annual membership fees as follows:

- ◆ \$ 20 for the citizens of Armenia
- ◆ \$ 60 for foreign citizens
- ◆ \$100 for honorable members
- ◆ \$300-500 for the Friends of Green Lane
- ◆ \$2,000 and up to become a sponsor