

Northeast Sustainable Agriculture Research and Education Program Farmer/Grower Grant Final Report

1. Project name and contact information

Project Title: *Remedies for Common Health Problems of the Organic Laying Flock*

Project Leader: Karma Glos

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2. Goals

We have kept organic laying hens for the last five years. Although our flock health has been good we have had trouble finding information on how to solve our health problems when they occur. There are many good resources on diagnosis and conventional treatment but very little on organic solutions. Our objective is to gather information on organic remedies for common layer health problems. We will put all the information in a short easy to use handbook for fellow producers.

3. Farm profile

We are a diverse farm that raises a mixture of crops and meat. With free range poultry we raise, process and direct-market 800 broiler chickens and 50 turkeys. We also raise 400 layers (for eggs) on pasture. We pasture pigs for meat and aiding in our production of high quality compost for field and greenhouse use. We just added 6 sows and a boar for certified organic piglets and pork production. In addition we also raise a small number of beef cattle. We have a heated greenhouse for propagation and two high tunnels for season extension and over wintering some crops. We intensively cultivate about an acre and a half of vegetable, herbs, berries, and flowers. These are sold fresh, dried, and as valued added products on farm, at a local farmers market, and at select seasonal festivals. All our crops, poultry and pork are certified organic. All fieldwork is done with our team of draft horses and ponies. Karma is on the farm full time and Michael additionally works half time for NOFA-NY. We own 100 acres of open land, pasture, and woods. This includes approximately 20 acres of pasture, an acre of cultivated land, and 75+ acres of managed woodland.

4. Participants

Other Organic poultry producers of the Northeast (and other parts of the US) Participants are too numerous To list

We surveyed them for information on what the remedies they have used to treat their layers.

Dr. Sarah Ober, DVM- Veterinarian

Reviewed draft of Layer Remedy Compendium and provided input

5. Project activities

1) We put together a poultry layer healthcare survey to ask layer producers how they raise their birds and how they prevent and treat health problems. Our focus will be on what methods are used to manage the health care of their flock. We obtained lists of organic layer producers from organic organizations and certifiers in Maine, Vermont, Pennsylvania, New York, and New Hampshire.

2) We looked at what research has been done on health care that can be used by organic producers. We scoured libraries and the internet for relevant information. Additionally we spoke to poultry researchers at local land grant universities, cooperative extension, and professional organizations.

6. Results

Our final product is the “Remedies for Health Problems of the Organic Laying Flock: A Compendium and Workbook of Management, Nutritional, Herbal, and Homeopathic Remedies.” We did not attempt to rewrite everything that has been written on poultry diseases or diagnosis. This includes a section on how to give herbal and homeopathic remedies. This is followed by a section on each health issues. For each health issue we include: Other names, Organism or Mechanism, Preventative Measures, Management Techniques, Physical Treatments, Nutritional Treatments, Herbal Treatments, and Homeopathic Treatments. This is a compilation of what is known and what is done by fellow egg producers.

7. Conditions

No specific conditions affected our project.

8. Economics

We did not do an economic analysis per se. But it follows that if farmers have healthier flocks that this will help improve their profitability.

9. Assessment

All the research done provided us with insight on how better manage and improve layer health.

10. Adoption

The Compendium produced a resource that we and other farmers can use to further improve the health care for our flocks. The next step is to continue adding information to the compendium to make it more complete

11. Outreach

- We presented a summary of our findings at the 2003 NOFA conference in Massachusetts.
- A summary of the survey results was published in the newsletter of NOFA-NY (Organic Farm, Food, and Folks).
- An announcement of the availability of the Compendium was in the newsletter of NOFA-NY (Organic Farm, Food, and Folks).
- Complimentary copies of the Compendium were mailed to everyone that participated in the survey.
- Complimentary copies of the Compendium were also mailed to organizations including all the state NOFA's, PASA, ATTRA, and APPPA.
- Complimentary copies of the Compendium were also mailed to people who had attended our workshops and requested a copy. Additional copies are available to those that request it.
- We have included a copy of the Compendium online at our website www.kingbirdfarm.com.

2002 Survey of Organic Health Care Methods for the Laying Flock

Return To: Karma Glos, Kingbird Farm
9398 West Creek Rd., Berkshire, NY 13736

Farm Profile

(This information is for contact use only, it will not be published in the results of this survey unless indicated.)

Name(s): _____

Farm Name: _____

Address: _____

Phone: _____ Email: _____

Would You Like to Receive a Copy of the Information Compiled from this Survey? Yes/No
Can we list the above information in our completed document so other farmers may contact you for further information? Yes/No

Section I: Overall Management Practices

1. Are You Organic? Yes/No Certified? Yes/No Certifying Agency: _____
2. Total Acreage Farmed: _____
3. Acreage Used for Layers (pasture, yards, etc.): _____
4. Do you raise other poultry? Yes/No If yes please list: _____
5. How many mature layers are typically kept on your farm? _____
6. What breed or breeds do you use? _____
7. How long are laying birds kept? _____
8. How are they disposed of? _____
9. Do you force molt? _____
10. Do you raise chicks or buy started pullets? _____
11. What is your primary water source? _____ Water Tested? Yes/No Potable? Yes/No

Section II: Summer Housing and Management

Answer these questions in relation to the grazing months of the year.

1. Are your layers given outdoor access during the grazing season? Yes/No
If "no" skip to the **Winter Housing** section.

2. Please Indicate Your Overall Type of Outdoor Access (circle one) :

Bare Yard Seeded Yard Permanent Pasture Rotated Pasture Other _____

3. If Your Birds are Pastured Please Indicate the Overall Quality (Circle one):

Unmanaged Grass/Weeds Managed Native Grass Seeded Legumes/Grass Other _____

4. How are Your Birds Housed While on Pasture (circle all that apply):

Moveable Confinement Pens Moveable Pens w/ Access to Pasture Barn w/ access to Yard
Permanent Structure w/ Rotated Pasture Other _____

5. Square Feet of Housing? _____ Square Feet per Bird? _____

6. Indicate your pasture housing Ventilation System (circle all that apply):

Windows Vents Fans Climate Control System None Other _____

7. Indicate your pasture housing Heating System (circle all that apply):

Climate Control System Composting Litter Sunlight None Other _____

8. Indicate your summer housing Water System (circle all that apply):

Nipple Drinkers Bell Drinkers Founts Troughs Other _____

9. Indicate your summer housing Litter System (circle all that apply):

Deep Litter Composting Dirt Grass Other _____

Section III: Winter Housing and Management

Answer these questions in relation to the non-grazing months.

1. Please Indicate Your Over-all Type of Winter Housing (Circle One):

Barn Portable Hoophouse Permanent Hoophouse Greenhouse
None (Layers are not overwintered) Other _____

2. Are your birds confined to this house year-round? Yes/No

3. Square Feet of Housing? _____ Square Feet per Bird? _____

4. Please Indicate Your Type of *Winter* Outdoor Access (circle one) :

Bare Yard Seeded Yard Deep Litter Pack Cement None Other _____

5. Can all of your birds use the outdoor access at once? Yes/No

6. Indicate your winter housing Ventilation System (circle all that apply):

Windows Vents Fans Climate Control System None Other _____

7. Indicate your winter housing Heating System (circle all that apply):

Climate Control System Composting Litter Sunlight None Other _____

8. Indicate your winter housing Water System (circle all that apply):

Nipple Drinkers Bell Drinkers Founts Troughs Other _____

10. Indicate your winter housing Litter System (circle all that apply):

Deep Litter Composting Clean Out Disinfection Other _____

Section IV: Feeding Practices

1. Do you use Organic Feed? Yes/No
2. Do you use Organic Feed *Exclusively*? Yes/No

3. Does it contain any of the following? (circle all that apply):
 DE Probiotics Kelp Limestone Vitamin Pack Fish/Crab Meal
 Flax Other Ingredients you feel contribute to bird health:

4. Do you offer any free-choice supplements? Yes/No
 If Yes, Circle all that apply:
 Grit Oyster Shell Limestone Alfalfa Minerals DE Other _____

Section V: Health Care Practices for Pullet Rearing

Skip this section if you buy pullets.

1. What preventative health care measures do you take? Circle all that apply.
 Closed Flock Vaccinations (list) _____ Passive Immunity
 Medications in Water (list) _____ Other _____

2. Do you practice deep litter management in your brooder? Yes/No
 If no then please describe clean-out/disinfectant methods: _____

3. Please list your Top 5 Health Problems Rearing Pullets

Problem	Preventative Measures	Treatments	Success	Rate 1-5*

*Rate this problem as it affects the development of your pullets:

- 1=Only affects a few chicks 2=Affects and kills some chicks
 3=Affects the whole flock but does not kill 4=Kills a large number of chicks
 5=Has destroyed the whole flock

Section VI: Health Care Practices for the Laying Flock

1. Please fill in the following chart of common health problems.

Problem	Preventative Measures	Treatments	Success	Rate 1-5*
External Parasites				
Poultry Lice				
Feather Mites				
Scaly Leg Mite				
Ticks				
<i>other</i>				
<i>other</i>				
Internal Parasites				
Coccidiosis				
Stomach Worms				
Lung Worms				
<i>other</i>				
<i>other</i>				
Disease and Infection				
Croup/Cough				
Sinusitis				
Influenza				
Bronchitis				
Marek's				
Newcastle				

Ailment	Preventative Measures	Treatments	Success	1-5*
<i>other</i>				
<i>other</i>				
<i>other</i>				

Physical Ailments and Injuries

Rats				
Prolapse				
Bumble Foot				
Crop Bound				
Egg Bound				
Frost Bite				
Cannibalism				
<i>other</i>				

Nutritional Problems

Rickets				
Weak Shells				
Poor Molt				
<i>other</i>				
<i>other</i>				

*Please Rate this health problem as it affects your egg production:

0=Not a problem

1=Only affects or kills a few birds

2=Affects the production of some birds

3=Affects the production flock

4=Affects production and kills birds

5=Kills many birds and is very detrimental

2. What are your top 5 health problems?

1.

2.

3.

4.

5.

3. Please list any **diagnostic and/or treatment manuals** you have found helpful:

4. Please list any **experts and/or clinicians** (vets, researchers, other farmers) you have found helpful:

5. What problems do you commonly need assistance with?

6. What information would you like to see come out of this survey?

Thank you very much for your time and thoughts.

Please see reverse side for mailing directions.....

A Review of Small Organic Egg Farms in the Northeast

Karma Glos

In November of 2002 we distributed a survey of organic egg production and hen health care practices to nearly 100 small farmers in the northeast. This endeavor and the subsequent research and manual on organic layer health care was funded through the USDA-Sustainable Agriculture Research and Education Program (SARE). Under the project "Remedies for Common Health Problems of the Organic Laying Flock (FNE02-415)," we are putting together an *Organic Layer Health Handbook* detailing what organic producers can do to keep their hens in prime health and laying condition. One part of the project was to survey small regional egg producers that may be able to provide useful information for the handbook.

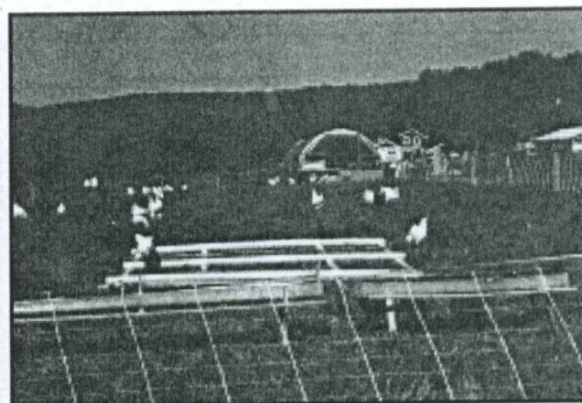
We received a total of 45 surveys from all over the northeast. While limited in their usefulness for the hen health care handbook, these surveys provided a wealth of information on the wide variety of methods used to house and manage small laying flocks. What I would like to present here is a review of the management practices used by these growers so we can see how these practices might contribute to the reported outstanding health of their flocks. The broad categories I will outline are: Overall Management Practices, Housing and Pasture Management, and Feeding Practices.

Overall Management Practices

The majority of the responding farms averages 56 acres and are located in Maine, Vermont, New York, and Massachusetts. Most of these farms are certified organic, although not necessarily the egg operations specifically. Approximately 25% of these farms raise poultry other than layers, mainly broiler chickens and turkeys. Most farms have small, semi-commercial flocks of 150 birds or fewer, although a few with flocks of several hundred are marketing commercially. The most popular breed for all these flocks is the Rhode Island Red, with the Araucana and Plymouth Rock as close seconds. Also used are several varieties of link hybrid, production red hybrids, and a vast array of rare breeds. Most farms raise these birds from purchased chicks, but 12 farms buy in already started pullets. Layers are then kept for quite a range of times. The farms with small flocks tend to keep birds 2-years or "until death," but farms with 100-500 birds cull at 1.5-years. Most farms process these cull birds to sell as soup hens, while others sell them live, compost, or bury them.

Housing Methods and Management

During the growing season most farms report they keep hens in moveable pens with access to pasture. Also common is housing farms with access to a yard or a permanent house with rotating pasture. The quality of pasture given the hens seems to be very good with most farms reporting they use fully managed seeded meadow and grass pasture. A substantial number of others manage their grass pastures, while only a few use only unmanaged grass, woods, woodland, or orchards. Those using unmanaged areas



Permanent house with rotating pasture.

typically have small, free-range flocks. Floor space given within the summer housing varies widely according to flock size, but averages 4.72 square feet per bird. In the winter most farms move their flocks indoors to a barn with a bare yard for outdoor access. Others use hen houses or chicken coops, or greenhouses and hoophouses. Some farms report managing their winter outdoor access by seeding or bedding the yard and others provided none at all (this could be weather related in many snowy areas). Floor space given within the winter housing is also generally generous at an average of 4.62 square feet per bird. More than half of the farms report using a deep litter system in both their winter and summer housing. They utilize this litter system combined with sunlight to heat their winter houses.

Feeding Practices

Nearly all of the responding farms use organic feed, most of them exclusively whether their egg operation is certified or not. Some farms report using a commercial bagged organic feed, but many have it custom mixed or do it themselves. The primary feed supplements other than grain that farms include in their feed are kelp, vitamin packs, fish or crab meal, feeding limestone, flax, and probiotics. A few other farms report adding garlic, yeast, Echinacea, DE, and milk replacer. Most farms also offer a wide range of free-choice supplements, particularly in the winter. These include primarily oyster shell and grit, but also fresh greens, alfalfa, kelp, vegetables, and a variety of herbs to help prevent worms. Many of these farms also have special supplements they use while brooding chicks to help prevent disease and create passive immunity. These include electrolytes, Echinacea, fresh greens/grass, apple cider vinegar, and molasses.

Many of the farms that answered our survey provided important information about how they manage their laying flocks and what their chicken health care needs are. I would like to thank all those who responded. I am currently researching and writing up the Organic Layer Health Handbook which is based on the needs and ideas of the survey respondents and fleshed out by research on grower's practices from around the world. Look for a review and publication information for this handbook by the end of the summer.

Karma, Michael & Rosie operate an incredibly diverse farm in Berkshire, NY.