Final Report of the "Searchable Library of Articles on Organic Growing" Project

An OFRF-funded NOFA/Mass project to build an online searchable archive of *TNF* articles August 31, 2012

Submitted by Jack Kittredge, Primary Investigator

1. Project Summary

The Natural Farmer (TNF) is the quarterly journal of NOFA, the Northeast Organic Farming Association, which is a membership organization for organic farmers and supporters of organic farming. NOFA has over 5000 members in chapters in New York, New Jersey, Connecticut, Massachusetts, Rhode Island, Vermont and New Hampshire.

TNF has been continuously edited by Jack Kittredge, a certified organic farmer in Massachusetts, since 1988. During that time it has become a respected and award-winning journal of timely and practical information about organic agriculture. Each issue of the journal focuses on a particular topic, making it of special value to people interested in that topic, and giving the issue a collector's status.

Although hundreds of useful articles have been published in TNF over the years, and although PDF versions of each issue are made available online at the NOFA website www.nofa.org, the issues are not searchable by internet search engines. So someone looking for a specific topic will not find it. For example, typing the string "organic potatoes" into a search engine will not find you any of the many articles in the entire issue devoted to organic potatoes.

The purpose of the **Searchable Library of Articles on Organic Growing** was to put 100 articles from twelve recent issue of *TNF* online in a searchable format. Besides being of use themselves, this would enable us to measure the 'hits' these articles experience online and, if they are widely used, encourage us to seek to put more issues into the searchable archive.

The actual work of the project involved reviewing each selected article, assigning "tags" to them for internal indexing purposes, putting them online in a searchable format, and posting appropriate illustrations with each article.

2. Introduction to Topic

Practical information on organic agriculture in the northeast United States is in great demand. Despite the growth of small scale and organic farming in the area in the last few years, most new farmers have only a few years experience as apprentices and lack consistent means of continuing their education.

Much of such practical information is published each quarter by NOFA in *TNF*, but this is not easily available once printed. This project has taken 100 articles from twelve issues of the journal and placed them in a searchable archive at http://tnfarchives.nofa.org/. The organization will continue to monitor the number of visits experienced by each article into the future as a way of evaluating their usefulness to farmers. If deemed useful, NOFA will attempt to archive more such articles in the future.

The articles and issues archived are as follows.

Organic Cucurbits Issue #65 Summer 2005

Saving Cucurbit Seed; Bryan Connolly, Connecticut farmer

Feature on NJ Farmer Bob Muth; Jack Kittredge, TNF editor

Pumpkin and Squash Blight; Robert Wick, University of Massachusetts Department of Plant Soil and Insect Sciences

Raising July Melons in Vermont; Tom Honigford, Vermont farmer

Silicon Nutrition of Soils & Crops for Curcubits; Joseph Heckman, Rutgers University Soil Specialist

Feature on Roots & Fruits Farm in New Hampshire; Jack Kittredge, TNF editor

Striped Cucumber Beetle & Cucurbits; Ruth Hazzard, University of Massachusetts Entomologist

Organic Potatoes Issue #70 Fall 2006

History of the Potato; Jack Kittredge, TNF editor

Feature on Ivy Donovan, Massachusetts Organic Potato Farmer; Jack Kittredge, TNF editor

Comparing Organic & Conventional Potato Production; Abby Seaman, New York State IMP Educator

Harvesting & Storing Potatoes; Jack Kittredge, TNF editor

Feature on Jim Gerritsen & Wood Prairie Farm; Jack Kittredge, TNF editor

Potato Leafhopper vs. Organic Pesticides; Brian Schultz, Professor of Natural Sciences, Hampshire College

Producing Potatoes Organically; Eric Sideman & Steven Johnson, University of Massachusetts Extension Service

Managing Potato Diseases Organically; Margaret Tuttle McGrath, Cornell Plant Pathologist, Barbara J. Christ, Pennsylvania State University Plant Pathologist

Feature on Paul Maiewski, Massachusetts Organic Potato Farmer; Jack Kittredge, TNF editor

Organic Minor Fruit Issue #73 Summer 2007

Feature on Lee Reich, NY Organic Fruit Grower; Jack Kittredge, TNF editor

Ground Cherries; Erica Myers-Russo, organic researcher

Feature on Forest Fruit Gardening; Jack Kittredge, TNF editor

Organic Pawpaws and Hardy Kiwi; Peter J. Rothenberg, Connecticut farmer

Soils and Uncommon Fruits; Lee Reich, Ph. D., NY organic fruit grower

Farmer to Farmer Organic Apple Grower Meetings; Alan Surprenant, Massachusetts apple grower

Climate Change and Organic Farming Issue #74 Fall 2007

Organic Farming and Global Climate Change; Roger Blobaum, organic agriculture consultant Indicators of NE Climate Change Over 100 Years; Cameron Wake, University New Hampshire Climate Change Center

Climate Change's Impact on Crops & Livestock; David W, Wolfe, Cornell Horticulture Department Overview of Climate Change Science; Art DeGaetano, Cornell Department of Earth & Atmosphere Science Climate Change: Design for It; Ben Falk, Permaculture designer

Carbon Sequestration & Nitrogen Management; John M. Duxbury, Cornell Professor of Soil Science Organic Farming's Response to Climate Change; Paul Hepperly, Rodale Institute Fact Sheet on Greenhouse Gases in Agriculture; Jennifer Wightman, Cornell University

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Labor on Organic Farms Issue #75 Winter 2007-08

Labor Needs on Organic Farms; Elizabeth Henderson, New York organic farmer Feature on Labor at CT Old Maids Farm; Jack Kittredge, *TNF* editor On-Farm Mentoring and Labor Law; Miranda Smith, New England Small Farm Institute Working with Ex-Offenders on the Farm; Julie Rawson, Massachusetts organic farmer Organic Farms and Immigration; Richard Mandelbaum, Farmworker Support Committee Trainee Housing; Miranda Smith, New England Small Farm Institute The Agricultural Justice Project; Elizabeth Henderson, New York organic farmer Feature on Featherstone Farm and Fair Trade Labor; Jack Kittredge, *TNF* editor Resources for Information on Farmworker Organizations; Jack Kittredge, *TNF* editor

Manure & Organic Farming Issue #76 Spring 2008

Composted Manure as Eco-Fertilizer; Mark Shwartz, Stanford University researcher Composting Solid Manure; Saskatchewan Manure Handling Guide

Auto Fuel from Cow Manure; Mechanix Illustrated

Manure Management and Antibiotic Resistance; Mahdi Ebrahimi, Colorado State University Reducing Risks from E. coli 0157 on Organic Farms; David Patriquin, Dalhousie University

Feature on CT Dairy Making Manure into Cow Pots; Jack Kittredge, TNF editor

Using Manure and Compost for Vegetable Crops; Carl Rosen and Peter Bierman, University of Minnesota Methane Recovery from Animal Manures; Philip D. Lusk,

Feature on Managing NY Organic Dairy Manure; Jack Kittredge, TNF editor

Making Oil from Pig Manure; Stefan Lovgren, University of Illinois

Internet Marketing Issue #77 Summer 2008

Creating a Farm Website, Online Stores and Blogs; Community Involved in Sustaining Agriculture Internet-Based Organic Home Delivery; Jack Kittredge, *TNF* editor

Creating a Web Presence; Jack Kittredge, TNF editor

Local Foods Plymouth, an Organic NH Online Market; Jack Kittredge, TNF editor

The Nuts and Bolts of Selling Online; Jack Kittredge, TNF editor

Online Credit Card Processors; William T. Lasley, consultant

Feature on Marketing Organic Connecticut Daylilies Online; Jack Kittredge, TNF editor

Winter Production & Sales Issue #78 Fall 2008

Winter Farmers Market in Rhode Island; Jack Kittredge, *TNF* editor
Feature on Skip Paul, Rhode Island Winter Organic Grower; Jack Kittredge, *TNF* editor
A Year-Round CSA; John Biernbaum, Professor of Horticulture, Michigan State University
A Pre-Thanksgiving Farmers Market; Karen DiFranza, Massachusetts organic grower
Feature on New York's Blue Heron Farm and its Winter CSA; Jack Kittredge, *TNF* editor
Growing in the Winter Greenhouse; Harvey Ussery, Virginia farmer
Cold Weather Greens Production; Paul & Sandy Arnold, New York organic farmers
Farming Winter Greens; Seth Jacobs, New York organic farmer

Organic Mulches Issue #79 Winter 2008-09

Mulches for Home Vegetables; Diane Relf & Alan McDaniel, Virginia Cooperative Extension Feature on NJ Organic Blueberry Grower's 24 Acres of Mulch; Jack Kittredge, *TNF* editor

Lasagna Gardening: A Review; Jack Kittredge, TNF editor

Why Mulch?; Lee Reich, New York organic grower

Mulch Guide; Lee Reich, New York organic grower

Organic No-Till?; Jack Kittredge, TNF editor

Organic Mulching at New York's Pleasant Valley Farm; Jack Kittredge, TNF editor

Building Organic Soil Issue #80 Spring 2009

Soil Health; Cornell Soil Health Assessment Training

Humic Substances; Elham A. Ghabbour & Geoffrey Davies, Northeastern University

Soil Building; Lee Reich, New York organic grower

The Soil Ecosystem; Paul Sachs, author

Soil and Human Intestines; Bill Duesing, New York organic grower

Soil Without Toil; Witch Hazel, organic blogger

Building Soils for Better Crops; Fred Magdoff & Harold van Es, University of Vermont

The Importance of Building Humus; Jack Lazor, Vermont organic dairy farmer

Soil Building and Biodynamics; Bill Day, Threefold Educational Center Development Coordinator

Soil Biochar: Key to Carbon Negative Farming; David Yarrow, NY organic grower and researcher

Crop Nutrient Density Issue #83 Winter 2009-10

Nutrient Dense Crops; Dan Kittredge, Massachusetts organic farmer

Restoring Soil Life; Mike Amaranthus, Oregon State University

Farming for Health; Arden Andersen, author

Using a Refractometer; Rex Harrill, Maryland farmer

Feature on Mark Fulford and Nutrient Dense Farming; Jack Kittredge, TNF editor

Healthy Soil Grows Healthy Food; Michael Martin Meléndrez, New Mexico nurseryman

Biological Dairy Farming; Gary Zimmer & Becky Brown, Otter Creek Foundation

Nutrient Density as a Marketing Tool; Mark Nakata, Beyond Organix

Alternative Organic Animal Feeds Issue # 84 Spring 2010

Why Pasture Livestock?; Jack Kittredge, TNF editor

Phytoestrogens: Why Replace Soy?; Jack Kittredge, TNF editor

Making Your Own Organic Poultry Feeds; Harvey Ussery, Virginia poultry raiser

Forages for Swine; Howell Wheaton and John Rea, University of Missouri

Feeding the Flock From Your Own Resources; Harvey Ussery, TNF editor

Organic Chickens in Japan; Elizabeth Henderson, NY organic farmer

Hog Production Feed Alternatives; Lance Gegner, National Center for Appropriate Technology

What Can Replace Soy in Commercial Organic Feeds; Jack Kittredge, TNF editor

Sprouting to Enhance Poultry Feeds; Harvey Ussery, Virginia poultry raiser

Black Soldier Fly, white Magic; Harvey Ussery, Virginia poultry raiser

How to Culture Mealworms; Primer of Wildlife Care, Bruckner Nature Center

Whey-Fed Pigs; William G. Winter, D.V.M.

3. Objectives Statement

The original stated objective of the project was:

"To publish a searchable online library of over 100 articles (including illustrations) on organic production and marketing, to be resident at NOFA's website. Each article will be searchable by topic, author, or key word. Farmers interested, for instance, in building organic soil, pasturing livestock, organic winter growing methods, growing organic potatoes, composting manure, internet

marketing of organic crops, or organic controls for squash blight need simply search for such topics; the software running on the website will serve it up to interested visitors."

All articles listed in the proposal (101 to be exact) have been posted, with illustrations, in a searchable format at http://tnfarchives.nofa.org/. The only significant change in the project from what we proposed was the change of web developer. The original candidate found the workload at his day job as a web developer for Democratic political candidates during an election year to be far too burdensome to follow through on his original agreement to do this work. Instead, the web master of NOFA agreed to take this on and worked to fulfill the project with dispatch.

4. Educational Approach

This is a project to establish a searchable library of information on organic growing. There are a number of articles on organic growing available on the Internet, of course, but many are not as long, detailed, and well illustrated as those archived here. The inclusion of in-depth features on many growers and their methods is also unusual. A number of the articles are by farmer-specialists in the crops or methods discussed. One reason we took this approach is that it is a very low-cost way to make a lot of information available. All that was required was to secure the digital information as text and illustrations, review and tag it, and then code it for a searchable format and place it up on the website

5. Project Results

The outcome of the project is the searchable information contained in the 101 articles from *The Natural Farmer* listed in point 2 above. No new educational materials were created; existing materials were gathered and placed in a format online that makes them searchable by any text string entered in a search engine that matches a text string in an article.

6. Conclusions and Discussion

This project was reasonable to administer. The only problem was with our original web developer finding out that he could not deliver what he had agreed to because of new work requirements at his place of employment. It took some time for us to realize this and find a new person to do the work.

The actual usefulness of this information to farmers and growers has been attested to by the popularity of the issues in which it was originally published, but of course its future usefulness will be determined by the number of users who seek it out and use it on the Internet. In part this project is an effort to gauge the usefulness of such information because there is a good deal of similar unpublished information available if this proves useful.

7. Outreach

We will use the journal itself to publicize the fact that these archives are available, as well as letting the many organizations and publications that are on our "swap" database know about the archive.

The primary way we expect the information to become available to users is when they search for it by entering appropriate text strings on an Internet search engine. Such a search will take them directly to the appropriate article. We will measure that usage and determine if it is substantial enough to justify further efforts to post *TNF* articles.

8. Leveraged resources

We will be measuring the website visits generated by these articles and making a determination of how useful they are on that basis. If actively used, as measured by a lot of visits, we expect to continue posting articles with funds from the journal or NOFA itself, probably supplemented with donations from others also interested in this work.

9. Photos and other addenda

To provide a sense of what they look like, I have attached three screenshots of portions of articles as they appear in searchable form on the website. Also attached is a notice in the current *TNF* about the archive project.

Potato Leafhopper vs. Some Organic Pesticides & Common Potato Varieties

Wed, 06/27/2012 - 17:22 - admin

Author: Brian Schultz

Body:

Potato leafhopper (PLH) has been one topic of study as well as a conspicuous pest in potatoes at the Hampshire College farm. PLH in general arrives on winds from the south in summer, and while feeding it introduces a toxin to the plant that can cause the spectacular withering and blackening of potato plants called hopperburn ("hburn") (see Howell et al. 2006, PSU 2004, Tingey and Muka 1983, including web pages and photos).



Potato leafhopper adult and nymph (source: Penn State; PSU 2004

Clay particles also have negative charges on their surfaces (figure 4.3b), but organic matter may be the major source of negative charges for coarse and medium textured soils. Some types of clays, such as those found in the southeastern United States and in the tropics, tend to have low amounts of negative charge. When these clays are present, organic matter may be the major source of negative charges that bind nutrients, even for fine textured (high clay content) soils.

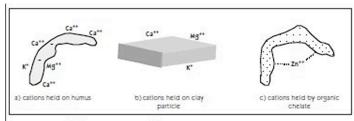


Figure 4.3 Cations held on organic matter and clay.

A further point about protein: My feeds would be considered short on protein by people who design poultry feeds. For example, the recommended percent protein for broiler chicks is 22%, I believe, and you will notice that my Starter Mix may be around 17.5%. I am not growing one of the

Ingredient	Amount per 100 lb	Amount per 25 lb
Premix:		
Aragonite	1.25	
Nutri-Balancer	2.00	
Kelp	0.50	ME PERMIT
Salt	0.25	
Fish meal (.60)	5.00	
Crab meal (.25)	1.50	
Cultured yeast (.18)	1.50	The second secon
Flax seed (.25)	4.00	
Total Premix:	16.00	4.00
Grind:		
Corn (.09)	32.00	8.00
Peas (.22)	32.00	8.00
Whole:		
Wheat (.15)	16.00	4.00
Oats/Barley (.11)	4.00	1.00
Grand Total:	100.00	25.00

souped-up, fast-growing hybrids such as the Cornish Cross, nor am I growing broilers for a market. Those who are would perhaps do well to increase the percentages of protein in my sample mixes. For traditional homestead breeds, however, I'm not sure it's a good idea to "push" growing birds for maximum rate of growth. It may be that best long term health and reproductive success are achieved through a growth curve which is somewhat slower, but more balanced.

TNF Now Searchable Online

Twelve back issues of The Natural Farmer are now published online at http://tnfarchive.nofa.org/ in pdf format. These issues are fully searchable by Internet search engines, so they can be accessed by anyone typing into a search engine a text string which appears in an article. Type "Striped cucumber beetle in the Northeast" and the TNF article on Striped Cucumber Beetles from the 2005 Summer issue is the 5th listing on Google. The work posting these 12 issues was performed by David Pontius, the NOFA webmaster, and paid for with a generous grant from the Organic Farming Research Foundation. We hope to post other searchable TNF issues should these prove useful and popular.

source: The Natural Farmer press release, August 20, 2012