

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 Cucurbits; 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

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 ("h-burn") (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.

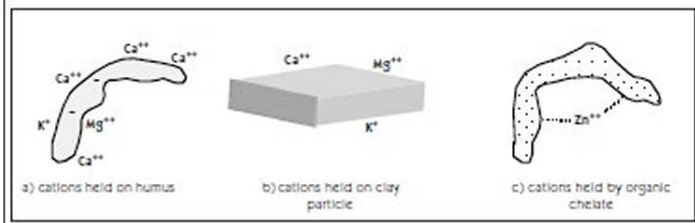


Figure 4.3 Cations held on organic matter and clay.

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

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.

Table 1: Starter Mix - Protein 17.5%

Ingredient	Amount per 100 lb	Amount per 25 lb
Premix:		
Aragonite	1.25	
Nutri-Balancer	2.00	
Kelp	0.50	
Salt	0.25	
Fish meal (.60)	5.00	
Crab meal (.25)	1.50	
Cultured yeast (.18)	1.50	
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

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