Michigan Organic Connections

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A Message from the Chair

As I write this I am looking out the window at brown grass and listening to the rain drip on the awnings over the windows. The landscape belies the fact that the Christmas holiday is less than two weeks away; and a quick glance at the calendar shows me that Thanksgiving is past and winter should soon be upon us. As with the past growing season, this is not the weather we expect. Perhaps it is an idealized feeling that this season should be white with snow, perpetuated by holiday songs, movies, and popular stories. However, memories of my childhood included the occasional snowy winter break and days spent sledding. While we have a few more weeks to get our snow for the rest of the winter, you can't help but feel that this isn't quite the way it is supposed to be and that our weather patterns are changing. At this point many gardeners/farmers understand that our weather will no longer be as predictable as it was and that adapting growing methods to handle the weather extremes is now of paramount importance.

With the end of the growing season, conference season begins. If you haven't visited our website lately be sure to check in on the Educational Opportunities. Links to regional conferences and webinars are listed here, helping you to find many

ways to learn more about organic farming. This, of course, includes our own upcoming Organic Intensives. If you are looking for ways to make your organic farming more resilient to weather changes, we encourage you to consider attending Andrew Mefferd's session on no-till farming. If your farm has more apple trees than barns, Michael Phillips will be presenting a holistic system of orchard management that will help you nurture the all important ecosystem of your own orchard. Herbalism is what jim mcdonald has to share at our Organic Intensives this year, and his session on herbs for your health and your farm promises to be very interesting.

During this season of rest and reflection, our board bids farewell to another member. Dan Bewersdorff, after 5 years with MOFFA, has decided to move on. Dan's previous experiences included working with the Michigan United Conservation Clubs and as an assistant marketer for the Organic Farmers of Michigan in 1999, a marketing group for organic grains that grew out of the Thumb Chapter of the Organic Growers of Michigan. His career of marketing organic grains also took him to SunOpta and Herbrucks poultry ranch. His enthusiasm in connecting organic grain farmers with markets to sell their product made him a good match for our organization and our mission to promote organic agriculture and the development and support of food systems that revitalize and sustain local communities.

On the other side of things, we are very happy to welcome Linda Purdy and Kido Pielack to the board. Linda comes to us with a long history of involvement in the organic farming movement in Michigan. Originally producing herbs on her own certified organic farm, she is now an owner of Westwind Farm and Milling Company. Using organic practices and principles, the farm grows, mills, and bakes organic grains and also maintains a select CSA. Linda was an active member in the Organic Growers of Michigan and was motivated to join MOFFA's board to contribute to the world around her. Kido Pielack is based in Detroit where he is the education coordinator for Keep Growing Detroit. KGD supports over 1,600 community gardens and provides services and education to urban gardeners and farmers in the city, thereby giving the residents a source of locally grown fresh produce. Kido is always looking for more ways to connect people in the city with others across the state and growing the network of people that have experience to share.

Already thinking about next summer? We are. This issue includes a summary of the last two stops in our farm tour series this year, and while that is still "hot from the press" we are already thinking about farms for the farm tours of 2020. The farm tour series has been very successful to date. Attendees enjoy the opportunity to visit farms and other operations and have the chance to question farmers as they see their systems in action. If you would like to volunteer your own farm, know of a farm we should consider, or know a farm you would like to tour, please let us know about it and help to make 2020's farm tour series as thought-provoking and valuable as the preceding ones. To you and yours, may the holiday season be blessed and the new year bountiful.

—Jessie Smith

Jessie Smith was raised on her family's organic farm in Barry County, Michigan. She attended Michigan State University and completed a Bachelors of Science in Crop and Soil Sciences and a Masters in Entomology, where she studied nematode community structure under Dr. George Bird. After working on the family farm for 20 years, she has moved to Indiana where she continues to raise chickens and garden organically. Her close ties to Michigan keep her an active member of MOFFA. She was elected Chair of MOFFA's Board of Directors in April, 2019.

Organic Intensives—They are Almost Here!

On January 11th, MOFFA will offer the sixth annual Organic Intensives educational event, providing current and future farmers, as well as serious gardeners, an opportunity to focus intensely on subjects for which there is substantial interest and a desire to reach a level of deep understanding, and to do so with truly expert guidance.

Can't decide which session to attend? Our presenters have each kindly contributed an article to this newsletter, and Andrew Mefferd was also prominently featured in the December issue of Acres USA with a long interview on many of the topics he will address in his session. Their words may help to assist you in your tough decision making. The sessions offered are:

Successful Biological Orcharding
with Michael Phillips

Learn about the biological connections that make for a healthy orchard ecosystem and their ability to combat insect pests and diseases, and to produce healthy and tasty produce. There will also

be important marketing insight on selling the fruits of your labors. Our guide for this session will be Michael Phillips of Lost Nation Orchard, author of The Holistic Orchard, The Apple Grower, and most recently Mycorrhizal Planet: How Fungi and Plants Work Together to Create Dynamic Soils.

Organic No-Till Farming
with Andrew Mefferd

In recent years we have learned the extent to which tilling kills beneficial soil life, burns up organic matter, and releases carbon dioxide into the atmosphere. If the ground could instead be prepared for planting without tilling, time and energy could be saved, soil organic matter increased, carbon sequestered, and dependence on machinery reduced. Andrew Mefferd, author of The Organic No-Till Farming Revolution, will discuss his experiences in talking with farmers during the development of his book, and will address practical as well as philosophical approaches that can help reduce greenhouse gas emissions, increase efficiency and profitability, and promote soil health. He will also discuss his experiences working on a no-till research farm, and how he applied the ideas on his own farm.

Local Organic Herbs for Health
with jim mcdonald

An investment in your diet is an investment in your health and quality of life. Are herbs a part of your diet and/or your farm or garden food and medicine growing? They certainly can and should be. jim mcdonald, one of the country's premier herbal practitioners and educators, will offer a detailed look at several ways herbs that you can grow, harvest or purchase locally can be used in your daily diet for health. jim has been teaching practical herbalism for decades. His website (herbcraft.org) has long been a source of information and a starting point of exploration for budding and blooming herbalists. Focus topics will include bitter herbs as an important dietary health component, gut healing teas, profiles of a range of easy to grow and harvest plants, and detailed demonstrations of using, extracting (water, alcohol, oil) and preserving methods.

We hope you join us on Saturday, January 11th, at the Plant and Soil Sciences building on the MSU campus in East Lansing.

Note: thanks to our sponsors, we have been able to keep the cost low at $85 for MOFFA members and $115 for non-members. The registration fee covers six hours of learning, comprehensive printed materials, lunch, breaks, a reception at the end of the day, and a great chance to network with fellow farmers and gardeners from across Michigan. We anticipate that a limited number of scholarships will be available for those for whom cost is a barrier; for information please email moffaorganic@gmail.com or call 248-262-6826.

Holistic Orchard Management in a Nutshell

By Michael Phillips

Fascinating biological connections make for a healthy orchard ecosystem. All insect pests and fruit tree disease – whether fungal or bacterial – have launching points and particular timing. Healthy trees address these challenges first and foremost from within. Growers utilizing an ongoing investment in the fungal duff and biodiversity set the stage for nutritional and biological sprays to grow a successful fruit crop. The challenges you face at your locale will become far more manageable as you build a holistic system that keeps trees and berry plantings healthy from the get-go.

The five tenets of holistic growing are as follows:

Fungal Stewardship – mycorrhizal symbiosis is the foundation

Mineralization – fertility ratios and enzyme cofactors

Tree Immune Function – boosting phytochemical resistance

Competitive Colonization – reinforcing arboreal biology

Outrageous Diversity – plant community resilience and beneficial allies

Equally telling is the nutrient density—and flavor!—of the apples we then harvest for fresh eating and cider. Engaging environmental reality ups fruit brix yet again and keeps us all healthy. Utilizing pure neem oil, liquid fish, seaweed, effective microbes, and fermented plant extracts allows us to leave behind the mineral fungicides of “Old School

Organics" for the most part. These are exciting times to be growing healthy fruit!

Shifting the paradigm allows us to engage **healthy plant metabolism** pathways fully:

- Photosynthesis efficiency
- Nitrogen utilization and complete proteins
- Fatty acid assets
- Resistance metabolites

Every grower strives to make intelligent choices within the framework of his or her individual belief system. We can only learn from each other if we respect each other. Holistic orcharding is all about finding healthier answers that honor all species.

Michael Phillips is renowned for helping people grow healthy fruit using herbal protocols. The community orchard movement that he helped found at GrowOrganicApples.com provides a full immersion into the holistic approach to orcharding. His Lost Nation Orchard is part of a medicinal herb farm in northern New Hampshire. Michael is the author of The Apple Grower and The Holistic Orchard, which recently received Garden Book of the Year honors from the American Horticultural Society. He teamed up with his wife Nancy to write The Herbalist's Way to explore the many paths whereby herbalists find their green niche. Michael's latest, Mycorrhizal Planet: How Fungi and Plants Work Together to Create Dynamic Soils, will rock you! Together we create the green leaf, the living mycelium, the seed, the good rain, the warm sun, and indeed the perfect apple.

How I Adapted Other Farmers' No-Till Methods to Work on My Own Farm

by Andrew Mefferd

In 2017 and 2018, I traveled to almost 20 vegetable and flower farms and interviewed growers about their no-till methods. These interviews along with analysis became The Organic No-Till Farming Revolution: High-Production Methods for Small Scale Farmers. I wanted a roadmap to implementing farmer-developed no-till methods on my own farm, and when I realized that didn't exist, I set out to write the book I wanted to read.

By now I've had a chance to finish the book (it came out in February 2019) and start trying some of the methods on my own farm. Perhaps the best way to give a short overview of the material that I will be presenting in the MOFFA Organic Intensive in January is to tell you about how I used three of the four main methods on my farm this year, and why I didn't use the fourth method.

One of the nice things about these no-till methods is that most of them are simple and could be described in a sentence or so. The challenge is in getting the timing right and integrating them efficiently into farm systems. It is also worth noting that most of the growers I met with used more than one of these methods in conjunction with each other for an effective system. Let's quickly look at the methods before getting into how I used them.

Tarping can be broken down into occultation and solarization. Occultation describes using an opaque tarp to smother weeds. Solarization means using a clear tarp to bake weeds. The major advantage of solarization is that it is much quicker, sometimes effective in as little as 24 hours. The major drawback is that it only works when it is warm and sunny. Occultation can take a month or more, but it can be done year-round.

Tarping – A Combination of Used Greenhouse Plastic and Landscape Fabric

One of the other methods, which I call deep compost mulch, is to use compost as both a planting medium and a mulch to smother weeds. I talked to growers who used four or more inches of compost to provide both fertility and weed suppression. Though it should be noted that most growers were not applying four inches of compost to their beds every year. They mostly applied that much in the beginning to build fertility and organic matter, and went back to more "normal" amounts of compost once the organic matter level was up in the ten percent range, weeds had been suppressed, and no more weed seeds were being turned up by tillage.

Another method is to use a heavy biodegradable mulch to suppress weeds while the crop is growing. This could be a thick layer of straw, hay, wood chips, or cardboard. In most cases large transplants (like a tomato) are planted through holes in the mulch, whereas small transplants and direct seeds are planted into soil that is exposed by pulling back the mulch. Alternatively, small plants or seeds can be put into compost placed on top of the mulch.

The last method that I profile in the book is what I call the roller-crimper method, or mulch grown in place. Instead of rolling out hay mulch where you want to plant your cash crop, this method has you grow a vigorous, high-biomass cover crop (like rye and vetch, for example) and then kill the cover crop in place without herbicides with an implement called a roller-crimper. Then you transplant your cover crop through the killed-in-place cover crop, which is now a mulch on the soil.

A roller-crimper is an implement that can be mounted on a riding tractor, walking tractor, or it can even be done by hand. The implement is a drum that you use to roll over the cover crop and push it down flat on the ground. There are small fins welded to the outside of the drum which kink the stems of the cover crop to make sure it really dies.

The roller-crimper enables growers to terminate a vigorously growing cover crop without herbicides. However, timing is extremely important for this method. For most cover crops the best time to terminate them is when they are in flower because they are most vulnerable to being mechanically killed then. If you roll them too early they may pop back up and continue growing. And of course if you roll them after they have flowered they may have set seed and you will have planted your own weeds.

First let’s talk about the method I did not use. The biggest no-till experiment on my farm this year was growing a quarter acre of hemp. We got an offer from an established hemp products company in March to grow for them, so it was as much of a spur-of-the-moment as you can have in farming. We decided to grow the crop about two and a half months before we thought it should be planted.

The reason we didn’t use the roller-crimper method is because it requires more planning than the other methods. When we decided in March to grow the hemp we would have needed a cover crop planted the previous fall in order to have enough biomass (in the form of spring regrowth) to act as an effective mulch.

The roller crimper method is a great method and the one that I studied 15 years ago on a research farm. However, the need for more planning and establishment than the other methods, and fewer planting windows, is what has limited its use in our case. Though next year, when we expand hemp seed production to 2 to 3 acres, we plan on using the roller crimper method in order to scale up more quickly than the other methods.

The first method we used to prepare the ground was a combination of solarization and occultation. We used both methods at the same time because I did not have enough landscape fabric or clear plastic to solarize or occultate an entire quarter acre. But when I took all the used greenhouse plastic and all the landscape fabric on my farm and put them together I had just about a quarter acre. I thought it would be interesting to see which did a better job, the tarps or the clear plastic.

One View of the Field After Removing the Tarps.

Aiming for a planting date around the beginning of June, we put our tarps and clear plastic down at the beginning of May. This was based on many growers telling me that tarps had to be down for at least a month in order to do their work. However, we had a very cool rainy spring and planting was delayed such that we didn't put our first plants in the ground until the summer solstice on June 21. So we had our tarps down for closer to a month and a half.

After a month and a half, most of the vegetation was brown and dead on our plot. The solarization certainly killed the weeds much faster. But by the end of the month and a half the only places with real weed growth were where edges of the tarps had blown off in the wind. In fact I'd say our biggest challenge with both types of tarping was keeping them from blowing off.

Now some growers use occultation and solarization almost exclusively for controlling weeds, though many other no-till growers use some kind of a mulch in order to smother weeds while the crop is growing. The second method that I used was the deep compost method to both mulch and fertilize, and build soil at the same time.

The way I did this was by spreading four inches of compost 30 inches wide over my bed tops. I have an old John Deere manure spreader, probably from the 1950's. If you've ever used most manure spreaders, you'll know they're really more flingers than drop spreaders. So what I did was to disengage the beaters at the back of the spreader so it wouldn't fling the compost all over the place and instead drop it straight down as the conveyor belt on the floor pushed it off.

This is not a perfect solution, so the compost application was very uneven, but at least it all stayed in the beds with the beaters off. Though we had to go back and even it out with a rake, it was more efficient than spreading compost with a wheelbarrow.

Applying the Hay After Applying the Compost. Just the Compost In-Row is Visible to the Right, and Where the Hay Has Been Put Down is to the Left.

The last method that we used was deep organic mulch, in this case hay. After we applied the compost to the tops of our beds, we rolled out some rotten round hay bales between the rows. Since the rows were five feet on center, and the hay bales were four feet wide, what we ended up with was a field with hay in the pathways and about a foot of compost exposed down the center of each bed. We transplanted the hemp into this exposed foot-wide strip of compost down the center of each bed.

Overall this worked really well, and I would definitely use this method again. It's hard to say if it saves much time, though what I liked about it was that it meant less tractor work for me and preserved much of the life in the soil that normally would've been killed in our previous tillage regime of moldboard plowing, disking, rototilling, bed forming, etc.

The biggest problem I had with this method was that the tarps kept blowing off, but that was really my fault for not putting enough stuff on them to hold them down in the first place. Now I've learned my lesson. The other problem I had with this method was that I ended up planting my own weeds. I purchased the compost from someone else and really had no idea how weedy it was. I sent it away for a compost test and it came back really good on fertility and decomposition. But that still didn't tell me how many weeds were in it.

The compost didn't turn out to be really weedy, but a lot of weeds did come up in the parts that I assume were at the top of the pile where some weeds went to seed. So even though we had very few weeds coming up from the soil below our crop, where the compost was weedy we had weeds.

Over the course of the whole season I spent a total of ten hours weeding that quarter acre. I pulled some of the weeds closest to the plants by hand and weed whacked the rest. But I only had to do that once over the course of a couple days, and after that the big hemp plants closed canopy and I didn't have to worry about weeds again.

The Field Mid-Season. You Can Still See the Straw, Before the Plants Closed Canopy.

Ultimately, I was very encouraged by my own experiments with no-till. There's much here which I look forward to telling you about at the MOFFA

Organic Intensive. After this season, I realized that I had ended up doing what I was hoping others would do after reading my book – taking the methods developed by other growers and changing them around to work with their own climate, soils, and crops.

So in the end, none of the growers in the book used the exact method that I used. I chose and combined pieces of various methods to come up with the system that worked for me. I can't wait to talk more about it at the MOFFA Conference..

Andrew Mefferd is the editor of Growing for Market magazine, and the author of The Greenhouse and Hoophouse Grower's Handbook and The Organic No-Till Farming Revolution. He spent seven years in the research department at Johnny's Selected Seeds, traveling internationally consulting with researchers and farmers on the best practices in greenhouse growing. He puts what he learned to use on his own farm in Maine. Previously he worked on farms in Pennsylvania, California, Washington State, Virginia, New York State, and Maine before starting his own farm. For more about the magazine, please visit www.growingformarket.com. To contact Andrew, see www.andrewmefferd.com.

herbs, medicinal plants, or food?

by jim mcdonald, herbalist

It's something I've been guilty of myself... a misrepresentation that, I think, actually causes considerable confusion and misunderstanding:

It's the common tendency to use the terms "herbs" and "medicinal plants" interchangeably.

I mean, it does make some sense, because there is overlap. No clear dividing line exists. But what makes it problematic is the way our culture thinks of "medicinal." Most in our culture don't think of the term "medicine" in a more traditional sense: something that's good for you. "Nature is good medicine." "Food is medicine." No, we think of "medicines" as things that are like the pills and tablets and capsules that people take that act on them in a way that eases, relieves, resolves, or, just as often, suppresses various ailments we might be struggling with. And there are indeed thousands upon thousands of medicinal herbs that do just that; some more gently, some more forcefully. But there are also just as many herbs that simply can't be understood if thought of as this kind of medicine. Many of them are among the most common herbs used by herbalists, and may very well live in your yard. Burdock. Chickweed. Nettle. Dandelion. Violet. Yes, they're all "herbs." I suppose, if you use a more traditional definition of medicinal plants, they're "medicinal plants." But they're also just *food*. Wonderfully nutritious, nourishing food.

You see, our contemporary understanding of "medicinal" doesn't really include the concept of nourishment. In fact, it almost entirely overlooks what, for many herbalists, is the first consideration in wellness: "Is your body getting all the stuff that it needs to work well?" If not, it makes the most sense to address that, before using more medicinal things to push or pull at physiological processes, whether they're conventional medicines or more overtly medicinal plants.

Many of our most commonly used herbs are extremely nutrient dense, and the large portion of their virtues lie in that. As an example, nettle (*Urtica dioica*) is absolutely delicious as a green (and when cooked loses its notorious sting), and can be added to all manner of soups, stir fries, baked goods, and what have you. While in the U.S. nettle is largely thought of as an herb or "medicinal plant," in many cultures it is just a staple food; another green to include in the diet. In addition to being eaten, nettle can also be consumed as a strong infusion: an ounce of dried leaves may be steeped overnight in a quart of water just off the boil, strained, and drunk throughout the next day. This is a LOT more herb than we think of when considering herbal "tea" (and certainly a lot more than will fit in a tea bag), but if we are consuming it specifically for its nutrient value, we really can't get much of that using only a teaspoon or two.

Another common herb that is a staple of nourishing tea blends would be oats (*Avena sativa*). Oats are, of course, understood to be food by pretty much everyone; usually this just applies to the seeds, prepared as various forms of "oatmeal." The use of oat*straw*, the leaves and stalks of the oat plant, somewhat defies our understanding of food. Although they're certainly very nutrient dense, they're also quite high in silica, which means that they are generally thought of as "inedible"... until we prepare them as a strong infusion as described above. Oatstraw infusions provide an abundance of bioavailable minerals, including silica, the very mineral we might think makes it "inedible." You see, these nourishing infusions still count as food.

Of course, many know that dandelion leaves are a very nutritive green, but they also possess another quality that is important to the enhancement of nutrition: *bitterness*. The leaves, stems, sap, and roots of dandelion are all bitter, a flavor that we have lost an appreciation for over the course on many decades. Bitterness (today) is often maligned as a "bad" flavor, only really valued in a few things (like chocolate and beer). But I would argue that the *flavor* of bitterness is just as important to diet as the presence of vitamins and minerals, and that it in fact enhances their absorption. You see, when we taste bitterness, it stimulates all manner of digestive secretions and processes. We salivate a bit more. Our stomachs secrete more acids and enzymes. Bile and pancreatic enzyme secretions are enhanced. We can think of all of those digestive secretions as solvents that break down our food from its raw state into nutrients in a form our bodies can readily absorb. If our digestive secretions or processes are deficient, even nutritious foods we eat may not be properly broken down in a way that allows our bodies to get the most nutrition out of them.

We are, after all, not really what we eat, but what we *absorb* from what we eat.

It can be tempting here to think of bitterness as a more "medicinal" herbal action, and indeed many herbals and herbalists do sometimes present it that way. But I would argue that an absence of bitterness in the diet is entirely unnatural, and is better understood as a *deficiency* that causes an imbalance. So many of the foods we now eat used to be, to one degree or another, bitter, and over the centuries we have bred that flavor out of them in favor of more sweetness. Using bitter herbs to restore more normal digestive processes is no different that treating tension or spasm related to magnesium deficiency by restoring magnesium intake. The herbs aren't really acting medicinally, they're replenishing a deficiency.

Ultimately, if we think of all herbs as "medicinal" in the contemporary sense, we might find ourselves thinking that they're not something we should be using daily, or thinking of them as an important part of our larger diet. But if we take the time to learn about herbs more thoughtfully, we'll begin to recognize that some herbs are nutritive, nourishing, and supportive in ways that work in support of health and wellness when used regularly, and possess both nutrient levels and other qualities not as often found in domesticated foods. One need only look to tradition and to the people who still today maintain those traditions to learn how to identify those herbs and make them a part of their diet and life.

Hailing from White Lake, MI, jim mcdonald has been practicing the art of herb craft for over twenty years, and offers a knowledge of herbalism that blends western folk and indigenous views of healing with the Vitalist traditions of 19th century western herbalism. He has taught classes and workshops throughout the Great Lakes bioregion and the U.S., hosts the website www.herbcraft.org, and has written for Plant Healer Magazine, the Journal of the Ontario Herbalists Association, and Llewelyn's Herbal Almanac. He is currently writing (alternately) "A Great Lakes Herbal" and "Foundational Herbcraft." jim is a community herbalist, a manic wild crafter and medicine maker, an occasional email mangler, and has been an ardent student of the most learned teachers of herbcraft.

MOFFA 2019 Farm Tours Series: Stop 3—Plymouth Orchards/Gateway Farm

by John Hooper

On a beautiful August day, Michigan Food and Farm Alliance had the great pleasure of sponsoring, in conjunction with Plymouth Orchards & Cider Mill, an ambitious and extremely diverse tour and educational event. The afternoon was spent in southeastern Michigan just outside the metropolitan area of Detroit (between Plymouth and Ann Arbor) on a rolling, pristine piece of land that is dedicated to organic principles and has been a family farm since 1977. Mary Emmett and family established the orchard and farm; and throughout her tenure has sought out dedicated, like-minded individuals to assist and grow the operation. With 5 decades of innovation and diversification it has become a mecca for families seeking adventure and a wholesome experience. This educational aspect is extremely inspiring to entrepreneurs both young and old as they witness organic agriculture mingled with agri-tourism. A complete synopsis of Plymouth Orchard and Cider Mill is presented at www.plymouthorchards.com.

The schedule for the day's presentations began with simultaneous education offerings. With numerous topics to present and the farm to tour, one had to make a difficult decision as to which of the three sessions to attend—Organic Apple (Fruit), Large-Scale Field Production, or Small Grains:

- 1-**Jim Koan** of Almar Orchards, Michael Adsit of Plymouth Orchards, and **Dr. Matt Grieshop** of MSU held a panel discussion on experiences with organic apple agronomy, post-harvest processing, and organic fruit marketing.
- 2-**Ben Sattelberg** of Bay Shore Farms and **Harold Wilken** of Janie's Farm spoke concerning larger scale organic grain, corn, soybean, and dry bean farming, and organic grain milling.
- 3-**John Edgerton** of Harvest of Joy Farm and **Scott and Eleanor Hucker** of Great Lakes Staple Seeds presented scale-appropriate production of small grains (including the upland rice John has been growing for the last few years on his farm in west central Michigan).

We gathered as the afternoon began in a very accommodating multi-purpose classroom farm building that offered open air access through large doors and was just the perfect size for tour groups. The space allotted ample room for displays by the participating organizations with sufficient seating for all in attendance. As some of the tour members left for the grain discussion sessions; most participants of the tour, which included a large contingent of Amish farmers from the border counties of Ohio and Michigan, stayed in this venue to hear a presentation that lasted well beyond the allotted hour.

Session Reviews

(1) Jim Koan is an apple grower of many decades from Flushing, Michigan, whose Almar Orchards has set the gold standard for large-scale organic apple production. Many value-added products are produced by Koan, including his hard cider which is marketed throughout the U.S. He, along with his son Zach, brought a new offering to try—Hay Baler Switchel (www.almar-orchards.com/). Michael Adsit is the organic specialist at Plymouth Orchards, bringing a lifetime of knowledge and experience, and innovative thinking, to the operation. His energy and continual broadening of new technology and cutting-edge techniques (e.g. a new solar array bio-digester) have given Plymouth Orchards and Cider Mill their progressive steps forward, enhancing the family farm tradition. Matt Grieshop is Michigan State University's leading organic entomologist. Since his arrival quite a number of years ago he has been the organic community's number one resource. His work encompasses all aspects of organic fruit production, and many growers have been assisted to the degree that with his work, expertise, and developed research at MSU, they have been better able to continue their livelihoods (grieshop@msu.edu).

After introductions and opening remarks by the three panelists (conveyed in a very anecdotal and extremely interesting manner), questions began to fly. The subjects were many but the issue of plum curculio began the discourse and lasted for well into the first hour before morphing into discussion of other pest and disease issues (e.g. codling moth, apple weevil, apple scab), cultural practices, weed suppression, rootstock selection, and more. The session could have continued for an entire day, but after a couple hours the session regretfully had to end so that some of the other planned activities could commence.

(2) Production-scale organic agriculture was one of the topics presented during the tour at Plymouth Orchards. This is one aspect of the diversity that Plymouth Orchards embraces as they expand their offerings and begin growing grain and cover crops. Ben Sattelberg, an organic row crop producer from Unionville, MI specializing in dry bean production, and Harold Wilken, an organic producer from Danforth, IL who has added value to his small grain production by building an organic flour mill and developing a direct market for his product, imparted much valuable information on field crop production to those in attendance. Both presenters told of their journeys, sometimes trying and stressful, in organic agriculture.

The Sattelbergs have been row crop farming organically in the Michigan Thumb since the early 2000's, and conventionally for decades before that. They currently operate two enterprises in addition to their production of grains and dry beans. Bay Shore Sales sells seed, tillage tools, and just about everything you need to grow organic grains. Everbest Organics cleans and markets organic dry beans throughout the U.S. and internationally. Visit their websites for details; bayshoresales.com and www.everbestorganics.com. Harold's story is equally compelling, as he brought added value to his livelihood as a farmer with the creation of the flour mill. Visit their website to get details: www.janiesmill.com/.

(3) John Edgerton, Harvest of Joy Farm (harvestofjoyfarm.wordpress.com), and Scott and Eleanor Hucker, Great Lakes Staple Seeds (greatlakesstapleseeds.com), were the presenters at the small grain workshop. Many vegetable, fruit, and animal family farms in a continual effort to diversify and provide their own feed and grains for both on-farm use and as a supplemental source of income are exploring small plots of grain production. One very exciting trial is taking place in an effort to

introduce a grain that has long held interest but whose production requirements are outside the Midwestern norm – rice. John's trials with upland rice were discussed at length in this session, along with many other small grain production techniques from three people that have extensive knowledge and were able to address the numerous questions that the attendees offered. The rice trials have been extremely successful, and may help to offer yet another complete and nutritious food source to Michigan's cornucopia of offerings.

In addition to these three concurrent sessions, Ron Ward [representing Crop Services International (www.cropservicesintl.com/)] had set up outside in the commons area (where we in late afternoon were treated to delicious cider and doughnuts!) a compost tea brewer. One of the tools utilized in bringing Plymouth Orchards a complete plant and soil health scenario involved brewing and applying compost teas on a regular basis. Michael Adsit utilizes a unique brewer manufactured by Crop Services International. This brewer is a "simple" brewer that is comprised of a "SPA" type air pump, PVC pipe, and a 275-gallon tote. A grid is constructed from the PVC pipe and it rests on the bottom of the tote and the pump forces air through the many holes drilled into the grid. Following a recipe, this brewer maintains sufficient oxygen to keep up with the demand from the microbes, maintaining at least 6 ppm of dissolved oxygen during the entire brewing process. This keeps the tea aerobic, which is one of the many keys when applying teas. Additional nutritional and biological products are added to the tea prior to application. These teas are applied as both soil application and foliar applications.

After the first hour in the day's sessions, tour participants were given the option of traveling up the road a piece to Plymouth Orchards & Cider Mill's eight-acre vegetable production operation, Gateway Farms. It is another certified organic farmstead whose harvest finds its way to the public either through being offered at the Red Shed Market Barn & the Cider Mill, Plymouth Orchards' on-site retail stores; through a many-member CSA; or to local produce and market outlets. The new sister farm to Plymouth Orchards is in its first years of production but has blossomed quickly into an ecologically sound, active enterprise, thanks in no small measure to the diligence and hard work of farm manager Ben Kasmenn and his staff.

While a mid-day break was most welcome with some of the first fresh cider of the season and doughnuts direct from the Cider Mill's kitchen, the first group of tour members began loading-up on the hay wagons for a lengthy trip through the property's orchards, brambles, grain fields, large asparagus plot, pumpkin staging area, and woodland. At numerous stops along the way Michael Adsit explained the history of the ground, challenges being faced (e.g. our extremely wet cold spring of 2019), new projects (e.g. grain trials), and Plymouth Orchards' movement toward creating a lasting permaculture landscape which would foster the current diversity and also allow for a totally integrated ecological symbiotic regenerative example of what the farms of the future could be even in a densely populated realm.

Two trips on the wagons were necessary to accommodate all the tour participants this day: folks from all aspects of society—farmers, gardeners, and consumers alike. Tours of the cider mill and kitchen area were ongoing. It was extremely inspiring to witness the many conversations this day—the exchange of information between hosts and tour members and also between participants each telling their story and asking questions of one another. This is the crux of these events—to bring together folks' shining examples of what can be done and what is happening just down the road, and then to share our stories as we each return to our communities with the new ideas and the spark to begin again!

MOFFA's heartfelt thanks to Mary and Mike and all the folks at Plymouth Orchards and Cider Mill for giving us this day!

For over 40 years John Hooper has been an advocate and practitioner of the organic methods of food production. He has been a member of MOFFA's Board of Directors since 2009 and served as its Chair from 2011 through 2015.

MOFFA 2019 Farm Tours Series: Stop 4—Crane Dance Farm

by John Biernbaum

Jill Johnson and Mary Wills were our hosts and guides for a tour of Crane Dance Farm (located in Middleville in Barry County), which took place on a magnificent September evening. We had about 15 participants, including myself, John Hooper, and John Edgerton from the MOFFA Board of Directors.

Jill purchased the property in 1996 after spending time at Albion College and Western Michigan University. She shared how she fell in love with the rolling hills of Barry County and wanted to learn to farm there. An early student of the methods of Joel Salatin, she was clearly successful at putting his ideas to work here in Michigan.

Mary joined the farm after retiring from her first profession, teaching. It sounds like her talents complemented Jill's as she went from a farm volunteer to a co-owner. What I saw was a dynamic duo with experience, energy, and enthusiasm to carry the day and the farm.

Jill shared some of the early story of the farm that included making the shift from an academic background to developing the hands-on connection to the land and the animals. The process included challenges finding affordable and suitable land. She also had to cope with condescending attitudes and gender bias from those selling the land or who were part of the sale and land development process.

Jill and Mary developed a model of multi-species rotation, appropriate managed grazing, and finding appropriate breeds (and then selected lines that can be maintained with adaptation to the land). A Greener World / Grass-fed certification is a key component of the farm's success, as is Animal Welfare Approved certification (for the pigs).

We saw permaculture principles and thinking in action and demonstrations of the importance of knowing the land and its microclimates and using the existing trees for shade and protection.

We saw cattle, chickens, turkeys, and pigs. I think there were lambs around also. I will use the terms calm and relaxed rather than happy, which I could use to describe the livestock. They were obviously well cared for animals and pastures.

We learned about multiple types of electric fencing, methods to provide water in the pastures, and the use of mixed-species cover crops as well as compost to build soil health.

Every year is challenging due to fluctuations in weather, but the 2019 year was a more challenging year than most. The farm experienced extremes from flooding to drought. The animals are sensitive to the weather extremes, which influence breeding, early survival, and growth rate.

Hot air balloons passing overhead want to see the animals, but don't realize how much the noise frightens and upsets the animals. This is also true of fireworks. It sounds like people are not very sympathetic or responsive when they are informed by the farmers.

Finding reliable labor for the farm was another aspect that was addressed. There were successes in the past and more recent struggles with not being able to find reliable employees.

As with most organic livestock producers, processing is a major issue. It is difficult to find organic and Animal Welfare Certified facilities. The drive to the processor can be 1.5 hours. The limited processor options are both a stress for the animals and for the farmers that are working hard to maintain animal welfare standards.

Crane Dance Farm marketing efforts are local, both at the farm and at farmers' markets in Grand Rapids. The farm attracts a range of buyers, from people that care about clean, wholesome food to people new to quality food and learning how it can impact their health. It sounded like the community is supporting the farm. The current challenge was lack of product available for sale due to the poor weather conditions.

After decades of work developing the land, infrastructure, and process, both Jill and Mary are thinking about how to keep the land in animal agriculture. They would like to see it protected rather than developed. With neighboring farmers wanting to sell land at development land prices, it is a challenge to maintain the farm value.

After the tour, Mary and Jill generously shared three types of their meat sausage, which were complemented by some fresh tomatoes, cucumbers, and other veggies. We finally had to head out so they could do the evening chores before dark.

The experience for me was as much about what I felt as what I saw and learned. Jill and Mary have

my deepest respect for the work they are doing and the product they are providing for their farm supporters. It was great to see first-hand many principles that I have read about working well here in Michigan. Livestock stewardship and organic management is something the current MOFFA board members consider essential to our Michigan food system.

Other than at seeding and transplanting, most crops can survive a few days without attention. With livestock, insuring that water and feed are safe and accessible is typically at least a twice-a-day requirement that keeps you close to home. The commitment that Jill and Mary have made to the farm, the livestock, and their community was inspiring.

I honestly wish that more of you could have or would have been able to see what participants of the MOFFA Farm Tour at Crane Dance Farm were able to see. The main question I was left with is how do we help more people see and experience what Jill and Mary are doing? It seemed to me that they had valuable methods to share with other livestock producers. I hope some on-farm educational events are in the future both for livestock farmers and friends of farming that are looking for high quality, wholesome meat products.

For more about the farm and the products offered, visit https://cranedancefarm.eatfromfarms.com/, or Crane Dance Farm on Facebook.

Submitted by John Biernbaum, MOFFA Board Member and very satisfied tour participant.

Dr. John Biernbaum is Professor of Horticulture at MSU, was instrumental in the founding and growth of the Student Organic Farm at MSU, has been a member of MOFFA for over 15 years, and served as MOFFA's Chair 2015-2018.

Farm Tours 2020

We are currently in the planning stages for farm tours in 2020.
If you are interested in hosting one of these on your farm, please let us know:
moffaorganic@gmail.com.

Check Out OnMark Certification

MOFFA has a new sponsor! OnMark Certification Services LLC (out of Goshen, Indiana) was founded in 2018 by its Executive Director, Mark Seeley. With services available in Michigan, Indiana, Ohio, Illinois, and Iowa, it offers certification for commodity crops, field crops, livestock/poultry, greenhouse, hydroponics, aquaponics, and industrial hemp production. After 12 years of experience on his organic, 300-acre row-crop farm north of the Detroit metro (in Michigan and on the other side of the audit), Mark knows how overwhelming certification paperwork can be, and how valuable a grower's time is. That is why the people at OnMark strive to be efficient and precise, while maintaining their authenticity and passion about organic farming systems. For more information, please visit their website at www.onmarkcertification.com. You will also have the opportunity to speak with OnMark representatives at their table at Organic Intensives.

Policy Corner

If you are keeping an eye on the world of organics at large, here is a collection of snippets of policy issues that have come to our attention over the previous two months. Please follow the links to learn more.

As part of their efforts to arm farmers and ranchers with the tools they need to meet the challenges of climate change mitigation and adaptation, the National Sustainable Agriculture Coalition (NSAC) released a policy position paper: Agriculture and Climate Change: Policy Imperatives and Opportunities to Help Producers Meet the Challenge. This paper, which was co-authored by several members of NSAC's Climate Change Subcommittee, reviews the latest science on climate change and agriculture and lays out policy recommendations to advance climate action that will help farmers meet the challenge and be part of the solution.

The big news on the policy front in Michigan is that the Michigan Department of Environment Great Lakes and Energy (EGLE) has released the draft of the updated permit that regulates CAFO's and their waste in Michigan. The proposed changes for 2020 include a partial ban on the spreading of CAFO waste in the winter. Public comments are being accepted through December 18th.

From the Editor

I hope you enjoyed this unique and, I think, exciting newsletter. Exciting because it has contributions from three "guest writers;" we always enjoy sharing the thoughts of folks different from our stable of writers, and thank them for their contributions. However, John Hooper and John Biernbaum deserve just as big a thanks as regular contributors; as anyone who reads MOC regularly will know, there would often be no newsletter without Dr. Biernbaum in particular. It looks as if they each had a challenging task in having to condense an information-filled farm tour into a brief review. As I look forward to the OI's in January, I see that each speaker, in their own way, is discussing a no-till or permaculture brand of agriculture; the agricultural techniques that studies are showing can perform extreme carbon sequestration. Carbon sequestration is one of the greatest ways agriculture can help to combat climate change. And I hear Greta Thunburg was named Person of the Year by Time Magazine. Let us hope we are approaching a moment of real change. Best wishes to us all.

— Leah Smith

Leah Smith is the MOFFA Newsletter Editor and a Michigan State alumna (B.S., Crop and Soil Sciences). She works at her family's farm, Nodding Thistle, and is a freelance writer.

MOFFA News

Organic Connections Newsletter – As always, we are interested in featuring new voices in the newsletter. If you are interested in contributing, or if you have a suggestion about future content or can recommend someone who would be interested in contributing, please contact Leah, our newsletter editor. If you're not interested in writing an article, please consider contributing photos of your farm or your harvest; we're always looking for more illustrations.

Sponsors – MOFFA is now accepting Sponsorship from organizations and individuals who are willing to demonstrate their support of our mission with a financial contribution. The change to soliciting sponsorships generally, rather than specifically for Organic Intensives, will enable us to increase our activities throughout the year. Please take a moment to view the logos of those who have already pledged their support at the end of this message, and let them know you appreciate their sponsorship. If you are interested in becoming a sponsor for 2020, please email us or view the sponsorship page on the website.

WHY JOIN MOFFA : To position yourself and every dollar you donate toward spreading a wholesome, just, ecologically focused organic ethos across all of our local Michigan communities. Join online at http://www.moffa.net/membership.html or call 248-262-6826.

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