

Personal Reflections from Three Years of Beginning Farmer Instruction and Mentoring



by Jim Leap

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Along with other activities, the grant also supported the revision and expansion of two instructional resources, *Teaching Organic Farming & Gardening: Resources for Instructors*, and *Teaching Direct Marketing & Small Farm Viability: Resources for Instructors*. Both are available in print at cost, or can be downloaded for free from the CASFS website, casfs.ucsc.edu/about/publications/index.html.

For more information about the Center for Agroecology & Sustainable Food Systems, see casfs.ucsc.edu, or contact us at casfs@ucsc.edu, 831.459-3240.

Cover: Jim Leap teaching a class on tillage and bed preparation to members of the CASFS Apprenticeship in Ecological Horticulture at the University of California, Santa Cruz. *Photo by Abigail Hueter.*

FARMER-MENTORING REFLECTIONS BY JIM LEAP

Personal Reflections from 3 Years of Beginning Farmer and Rancher Program-Funded Instruction and Mentoring

Introduction

I was hired as a farmer mentor in 2013 as part of the Beginning Farmer and Rancher Development Program (BFRDP) grant to the Center for Agroecology & Sustainable Food Systems (CASFS, based at the University of California, Santa Cruz). The grant, Building a Foundation for New Farmers: Training, Resources, and Networks, included a mentoring program as part of its goal of training and supporting beginning farmers¹ throughout California's five-county Central Coast region (San Mateo, Santa Cruz, Santa Clara, Monterey, and San Benito Counties).

I have been teaching and advising beginning small- and medium-scale organic farmers since 1990 through my work as farm manager and apprenticeship instructor at CASFS. Following graduation, many of the Apprenticeship program's alumni have continued to rely on me for advice. This "community" of program alumni and affiliated beginning farmers formed the foundation for my work on the Central Coast through the BFRDP grant. I have also been a frequent speaker at California farming conferences, with presentations focused on equipment needs, mechanical weed control, cropping systems, and irrigation management in small- and medium-scale mixed organic vegetable operations.

With support from the BFRDP grant, I formalized my role as a mentor,² advisor and workshop presenter throughout the Central Coast, where from 2013–2015 I gave both classroom and

field-based presentations and demonstrations as well as one-on-one farming advice to beginning farmers. The advising, mentoring, demonstrations workshops, and instruction were specifically related to small-scale vegetable and flower production systems.

During the past three years, I (and my cohorts) have conducted 32 public presentations (workshops, field day demonstrations, and "roundtable" discussions) on a range of topics including irrigation, tillage sequences, tractor and implement maintenance, soil test analysis, crop production, and soil fertility management.

During the three years of the grant I also conducted 76 site visits to farms in the five-county Central Coast region, answering a range of question from the basics of starting a farm to specifics related to production system management, irrigation, fertility, implement selection and design, and strategies to improve overall systems efficiencies. Site visits typically lasted 2 to 3 hours, with some going much longer.

I also responded to over 430 email queries related to small-scale production system challenges, including assisting with soil analysis interpretation, equipment purchase and maintenance, irrigation system design and operation, water quality analysis, as well as questions related to scale, profitability, marketing, economics etc. If I was not able to answer specific questions I was often able to refer beginning farmers to reliable resources, farmers, and other agencies set up to assist beginning farmers, such as the Natural Resources Conservation Service, UC Cooperative Extension, Farmlink, Community Alliance with Family Farmers, etc.

Here I offer my reflections on the elements of successful workshops, field days, mentoring sessions, and communication efforts, as well as some of the most common challenges facing the beginning farmers I have worked with.

1 The USDA defines beginning farmers as those in their first 10 years of farming. This BFRDP grant also served farmers in training programs, including the Apprenticeship training coordinated by CASFS at UC Santa Cruz.

2 Though I was referred to as a "mentor" my role could more accurately be described as an "Agricultural Advisor/Educator". The term "Mentoring" suggests a one-on-one relationship between a beginning farmer and an established and economically viable farmer whereas an "advisor" (i.e. farm advisor) is typically meeting the informational needs of an extensive list of clients. In my case I provided ongoing advice to over 50 beginning farmers over the three years of the BFR grant and extended information to countless others through public workshops and presentations. For organizations considering the development of programs providing farmer "mentoring", consideration should be given to accurate use of terminology. For the sake of consistency, in this document, we will be referring to my advising role as "mentoring."

Workshops and Presentations

TOPIC SELECTION

- For any organization considering offering beginning farmer mentoring through grant funding it would be extremely helpful, in the early stages of the grant, to convene a meeting of all potential “clients” in the region to get a clear idea of their informational needs. This will better inform the process of workshop selection and design.
- Some topics can be effectively presented in a “lecture” format, e.g. –
Reading and interpreting soil tests
Irrigation basics (scheduling)
Marketing
Financial planning
Crop planning
- Some topics need both lecture and hands-on components to be most effective, e.g. –
Understanding soils and soil structure
Pest, weed and disease management
Irrigation distribution uniformity
Tractor maintenance
- Some topics are most effectively presented as field demonstrations (see below)



Jim Leap teaching a class on cover crops at Pie Ranch in Pescadero. *Photo by Elizabeth Birnbaum.*

PROMOTION AND ORGANIZATION

- Significant staff time is required to successfully organize a public workshop. Any organization that anticipates developing a beginning farmer educational program should allocate staffing to cover all aspects of workshop support including organization, outreach, assistance with audio visual needs, follow up to RSVPs and evaluations, as well as site logistical needs such as parking, water, shade, etc.
- Good use of both social media and traditional advertising venues is important to “get the word out” when advertising for public workshops. Using the Central Coast network of farmer education groups to cross promote workshops helped reach a variety of beginning farmers.
- It is important to get potential participants to commit to attending a workshop via an RSVP or registration. For example, it is helpful to follow up via phone or email to confirm attendance, or to charge a minimal sign-up fee.
- Workshop locations should be selected based on easy “regional” access, parking, and amenities.
- A comfortable classroom is critical for good learning and teaching (well lit, fresh air, comfortable seating, plenty of space, and easy access to a data projector and computer).

- When doing presentations at agricultural education venues (training programs and educational farms), I found it important to the presenter as well as the students to have the host program instructor/coordinator present for the duration of the workshop, or guest lecture, in order to answer specific questions related to the facility and to assist with logistics, etc.

SCHEDULING AND COORDINATION (ALSO APPLIES TO FIELD DEMONSTRATIONS, BELOW)

- Time of year, and time of week, time of day, are critical for workshop attendance. Growers are most often too busy to attend workshops during the peak of the production season; if possible, workshops should be scheduled during the “off peak” months for maximum participation.
- During the production season, many small- and medium-scale growers are busy on weekends with farmers’ markets, and busy with harvests for markets on Fridays. Monday and Wednesday afternoons are best for workshops during this busy time of year.
- Workshops organized as a series, where each one builds on the skills presented in the prior session, require both careful planning and significant time commitment from students. It is best to require a class fee for classes offered as a series to insure ongoing participation. Some or all of this fee could be refundable based on completion of the series.
- Coordination of regional workshop offerings with other agencies providing such services is critical to insure good attendance and minimize duplication of services. This type of regional coordination takes commitment, staff time, and resources, and may require grant support to be successful.³
- Based on our experience it is clear that workshop attendance will drop off with repeated workshop topics in a specific region.

The Advantage of Peer-to-Peer Instruction

Peer-to-peer instruction was one of the most effective workshop formats we used during the course of the BFRDP grant. In 2015 we organized three very successful and well-attended peer-to-peer workshops on crop planning, flower production, and tillage sequences at Pie Ranch, an educational farm located near Pescadero, California.

For each workshop I invited two or three presenters with from 1–2 to up to 7 years of experience. The participants really appreciated hearing from a range of experience levels and the beginning farmers who presented were able to relate very clearly the challenges they were facing as “beginning” farmers.

In this learning environment information sharing is greatly facilitated and there is often a much higher level of audience participation than in the typical “lecture” format. I found that the presenting growers were more than willing to share what they had learned on their farms and were actually honored to be included on the panels. It was clear this workshop format really promotes engagement and learning.

Note that the topics selected were based on feedback from beginning farmers who had participated in earlier workshops. This, I believe, is an important approach to use when planning and implementing beginning farmer educational events.

STRUCTURE

- If appropriate (i.e., with a group size up to 20), provide time at the beginning of the workshop for course participants to briefly introduce themselves and talk about their interest in the workshop. This process has to be well facilitated so that it doesn’t run too long, but can be extremely helpful both to the participants and the instructor.
- One of the greatest benefits of bringing growers together for a workshop is the opportunity for networking; you can encourage this by including time in the program or after the presentation.

3 See “Reflections on Running a Farmer Education Network,” available online at casfs.ucsc.edu/about/publications.

- “Hands-on” exercises built into workshops require significant planning, coordination, staff support, and resources. It is important to limit the number of participants and provide separate “learning stations” for specific skills / exercises with an assistant instructor at each learning station. Careful thought should be given to time allotments for each exercise. We’ve found that “hands-on” exercises take more time than is often available and can end up feeling “rushed” if not planned well.
- It takes careful observation on the part of the instructor to learn which concepts are difficult for students to comprehend, e.g., flow vs. pressure (irrigation design) or “inches” of irrigation water (irrigation scheduling) or CEC (soil tests). Time and patience are required to explain difficult concepts in a way that all the students understand.
- A significant portion of information learned in classroom lecture format is quickly lost unless it can be applied or put into practice following the lecture.
- Student learning (class time) should be limited to two-hour time slots for maximum retention, interaction, and learning. It is unrealistic to expect all students to stay focused for an entire day of instruction.
- Students’ information retention and classroom interaction are greatly enhanced when they have prior field experience with the topic being presented.

HANDOUTS

- It works well to provide students with a detailed handout of the course material including additional resources to enhance the topic that is covered. Based on our experience, handouts should be passed out at the end of the workshop to minimize distractions.

Attributes of a Good Presentation

These are some of the things I found to be helpful in developing and presenting a workshop or field day presentation.

Instructor must:

- Be passionate about topic
- Be experienced/familiar with topic
- Be sensitive to different learning styles
- Set specific goals for learning outcomes
- Be well organized

Do’s:

- Provide basic overview of class content at beginning of class/demonstration
- Make students feel confident with the topic
- Keep to the basics of the topic
- Access the level of skill in the audience – tap into it
- Be open to and allow lots of time for questions and discussion
- Encourage participation and engagement by asking questions of the students
- Provide examples and share experiences and stories to back up points
- Seek help from students when there are perceived problems in understanding complex or difficult to understand concepts
- Shift knowledge from “teacher” to “students”
- Provide detailed handouts at end of class (handouts are distracting if distributed prior to the class)
- Teach to different learning styles
- Constantly “check in” with students via eye contact and make sure students are “with you”

Don’ts:

- Don’t rush
- Don’t try to cover too much information
- Don’t show busy slides with too much information
- Don’t allow students to derail discussion or get off topic
- Don’t go past designated “stop” time
- If you say “we’re going to cover that later” you better mean it

POWERPOINT

- PowerPoint-type presentations, if well done, can be an extremely effective teaching tool when the venue is set up well to accommodate their use. Since technical glitches with PowerPoint are common, it's important to make sure ahead of the workshop that a laptop and data projector are available and in good working order, or that the proper equipment (cords, dongle) are available to hook up the presenter's laptop to the data projector.
- Workshop participants appreciate being able to access the PowerPoint presentation via email or online following the workshop

EVALUATIONS

- Evaluations can have a negative impact on a sense of closure at the end of a presentation and often break up the flow of the discussion and impede critical networking opportunities. However, evaluations also provide a valuable tool for those assessing the effectiveness of presentations and developing future programs. If evaluations are used, students should be given ample time to fill them out. Sending them out after the class decreases the number you receive back significantly, and takes staffing to manage the process.
- Student "comments" on evaluations are much more effective than "checked boxes," although the rating boxes are useful for reporting to funders.
- Mailing out surveys to "mentored" farmers is awkward for the farmers and the mentor – especially when responses are required at the peak of the season, since growers are typically too overwhelmed with the day-to-day operation of their farms during peak months to take the necessary (and thoughtful) time to fill out an evaluation. However, having the mentor send an email request directly to those mentored substantially increases the numbers who respond.

- I found that exchanging a class handout for a completed evaluation at the end of a workshop helps ensure that participants will complete the evaluations.
- If sufficient staffing is available, I found it better for evaluations to be handed out and retrieved by someone other than the instructor for reasons related to confidentiality.
- I personally would prefer an evaluation process that is more "discussion" based and that allows participants to discuss directly with the instructor what worked and what didn't. It is important to allow time for this type of feedback.

Examples of Innovative Workshops

CASFS Research Lands Manager Darryl Wong and I conducted a field demonstration in the summer of 2015 at the CASFS Farm that involved planting out a small plot of carrots and beans using 5 different types of planters 30 days prior to the actual demonstration.

On the day of the workshop we demonstrated all of the planters and then walked participants through the areas that had been planted earlier so they could see first hand the capabilities of the various planters. I think these types of demonstrations provide a rich learning environment for the participants.

Another innovative, hands-on activity that we experimented with over the past three years was our "Nuts and Bolts" workshop, in which we guided participants through a series of exercises including drilling and tapping threads, sweating copper pipe, sizing various nuts and bolts, using a pneumatic wrench, etc.

We still have some work to do in refining this approach, but it is clear that many beginning farmers in our region have had limited exposure to many aspects of basic farm repair and maintenance procedures.

Field Demonstrations

THOUGHTS ON FIELD DEMONSTRATIONS

- Some topics require a “hands-on” component or demonstration to be taught effectively, e.g. –
Tractors / implements
Equipment maintenance
Irrigation layout
Irrigation distribution uniformity
“Nuts and Bolts” – literally the various nuts, bolts, screws, etc. used in farming equipment
- It is difficult (if not impossible) for an outside instructor to do demonstrations involving tractors/implements/irrigation, etc. on a “host” farm. On several occasions I was put in this position and quickly realized it is less than optimal – mainly due to lack of familiarity.
- It is important to have drinking water, toilet, snacks, shade, good signage and coordinated parking for field demonstrations.
- It takes time, resources and good planning to provide an educational experience through field demonstrations.
- Learning is tremendously enhanced when students can see “in field” demonstrations of various aspects of farming, e.g., mechanization / irrigation systems. This is especially true with participants who have already had a season or two of field experience on their own farms.

Apprentices at the UCSC Farm listening to an introduction to tillage practices.
Photo by Abigail Hueter.



- “In field” demonstrations are much more effective if they can show a sequence of field operations, e.g., bed forming, shaping, planting and cultivation.
- For maximum efficiency field demonstrations of tractors and implements require two instructors capable of teaching as well as driving tractors/ implements (otherwise there is too much “down time” when switching tractors/implements).
- A well-made video of a specific field operation involving planters, cultivators, etc. can provide an amazing “close-up” view of that implement or operation that is hard to obtain when doing an actual field demonstration, and can effectively enhance a field demonstration.

DIFFICULT SKILLS TO DEMONSTRATE

- Tractor driving is a skill that requires one-on-one instruction and involves many hours of closely guided practice to fully master. For this reason there are very few opportunities for instruction on tractor and implement operation for beginning farmers, although some college programs offer these classes.
- Welding also requires significant one-on-one instruction and many hours of closely guided practice to master effectively. Most community colleges offer welding classes.

One-on-One Farmer Mentoring

Promotion of availability of beginning farmer mentoring service:

- Getting the word out about mentoring services offered through BFRDP funding is critical to the success of the program and involves the use of multiple venues including announcements at conferences, meetings, and workshops as well as through social media and ag publications.

FARMER / MENTOR SITE VISITS

- On farm visits are important to allow the mentor to fully understand all of the various issues the new farmer might be facing.
- It is almost impossible to set a specific time duration for a farm visit. It was my experience that farm visits often go much longer than anticipated.
- Travel time can be a significant portion of the farmer/mentor time commitment.
- More experienced farmers tend to take better advantage of information provided by farmer mentors because they know what questions to ask.

LESSONS LEARNED SPECIFIC TO MENTORING BEGINNING FARMERS

- It takes time to develop trust between a mentor and a beginning farmer and trust and confidentiality are critical components of a successful farmer/mentor relationship.
- The more farms the mentor visits, the more valuable the mentor becomes.
- Continuing education is critical for mentors to stay informed, and this should be factored into grants that provide funding for farmer mentors. Farmer mentors need to attend regional workshops, field days, ag-related conferences, farm tours, etc., put on by NGOs, State and County Extension services, Universities, NRCS, etc. so that they can effectively network and stay informed on all of the current information related to pest and disease issues, fertility and irrigation issues, regulatory issues etc.



Jim Leap and Deb Harrison at Pie Ranch in Pescadero.
Photo by Elizabeth Birnbaum.

- An important role of a farmer mentor (working within a specific geographical region) is to provide the beginning farmer(s) with contact information for local resources, agencies, extension agents, NRCS staff, neighboring farmers, vendors, etc.
- It can be challenging for a farmer mentor to recommend important purchases or strategies to beginning farmers to improve systems efficiencies when it is clear that the beginning farmer doesn't have either the time or the resources to follow through on recommendations. This was probably one of my greatest challenges (frustrations) in working with beginning farmers in our region.

Challenges facing beginning farmers

- Access to scale-appropriate equipment and implements for proper soil management and basic production system labor savings (often related to lack of access to capital).
- Lack of skills and knowledge to adequately perform basic soil tillage.
- Land that is available to beginning farmers typically has serious weed and soil quality issues, which can take additional resources and years of proper management to mitigate.
- Entry into “high volume/high return” local farmers’ markets is almost impossible in our region.
- In our region the CSA market is saturated and highly competitive.
- Limited access to scale-appropriate vegetable packing, washing and storage facilities
- Limited access to information and “mentors”

Financial success for the beginning “small farm” is typically dependent on the following set of criteria:

- Maximization of rented production area (efficient use of space)
- Reasonable rent
- Reasonable water cost
- Soil type conducive to vegetable production
- Good water quality and adequate quantity
- Excellent weed management strategies
- Excellent soil and fertility management strategies
- Access to high value / high volume markets
- Labor efficiencies in all aspects of production and marketing
- Access to well designed and functional packing and cooling facilities
- Good crop variety selection
- 100% stands with minimal pest and disease pressure
- High quality product with good flavor and shelf-life
- Time- and fuel-efficient tillage practices
- Mechanization where appropriate
- Season extension where appropriate
- Diversification of product
- Minimal loss of product – well thought out crop planning
- Efficient and uniform irrigation delivery system
- High value crops
- Dependability and integrity
- Adequate capital
- Excellent business, marketing, and labor management skills
- Solid decision making related to scale and income potential
- Consistent supply of high value product throughout the season
- Excellent food safety protocols and certification
- Access to funding and information assistance through various agencies including CAFF, Farm Link, NRCS, RCD’s, Beginning Farmer Rancher programs Cooperative Extension, etc.

OBSERVATIONS

- Many beginning farmers are reluctant to acknowledge the financial challenges associated with starting a farming enterprise and often lack adequate resources to get off to a solid start.
- Weed management decisions will make or break a beginning farm and many beginning farmers spend an inordinate amount of time dealing with weeds after it is “too late” because of a lack of a clear strategy, knowledge, or proper tools to manage weeds in an appropriate and timely manner.
- Good soil management takes many years to master and requires expensive tractors/ implements to do well. Poor soil management decisions such as working the ground either too dry or too wet, or with inappropriate implements, or not deep enough often leads to soil compaction and degradation that can have long term negative impacts on soil physical properties, plant growth, and economic return.
- Many beginning farmers need assistance with harvest and post harvest handling skills, quality control, and marketing.
- Beginning farmers often need help with business and financial planning.

- It became apparent to me over the past three years of farm visits that one of the most financially devastating mistakes made by beginning farmers is to plant more crops than they can effectively manage.

This type of poor planning always leads to significant lost time and resources, since many crops are abandoned due to either intense weed pressure or an inability to get the crops harvested and sold. In most cases the farmers would have been much better off financially if they hadn't planted the crop in the first place because they lost not only the labor involved in planting and maintaining the crop, but also all of the production costs leading up to the failed crop.

ELECTRONIC COMMUNICATION

- Email can be a very effective tool for communication between beginning farmers and farmer mentors, and often questions can be easily handled via Email.
- On-line farmer forums seem to work best if they are geographically specific and are well moderated to avoid sales scams and ill-informed responses.
- Social media can be an important networking tool for beginning farmers.

