



Farm OPS: Advancing Agricultural Opportunities for Military Veterans in New York

Enhancing Agriculture Opportunities for Military Veterans (AGVETS)

USDA: National Institute of Food and Agriculture

Year 1: September 1, 2020 – August 31, 2021

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Introduction

Cornell Cooperative Extension of Jefferson County (CCE), in partnership with Cornell University’s Small Farms-Farm Ops Program, Syracuse University, the 10th Mountain Division Transition Assistance Program (TAP) at Fort Drum, along with local agriculture producers, many of whom are veterans, provides a multi-faceted agriculture training program for veterans and transitioning service members (TSM). As a result of targeted outreach, key strategic partnerships, and high-quality evidence-based programs that provide hands-on and immersive experiences, veterans and TSM engage in individualized and unique pathways to secure successful careers in the food and agriculture sector. The Office of Professional Research and Development (OPRD) at Syracuse University agreed to serve as the third-party evaluators with a mission to provide research and evaluation services to meet and surpass the expectation of funding agencies.

Methodology

The evaluation team gathers and analyzes both quantitative and qualitative data intended to document program outcomes as well as feedback and information that sheds light on the experiences of program participants to inform program improvement. Data, for example, includes that gathered by a participant questionnaire and/or interview after each experience for transitioning soldiers at Fort Drum and area veterans as well as the hands-on immersion programs serving soldiers at area agricultural businesses. These questionnaires were designed to capture soldier satisfaction with the programming and related knowledge/skill development, as well as insight as to what support participants need *next* to pursue a career in the food and/or agricultural sectors. Such data, quantitative and qualitative, is analyzed and presented in user-friendly formats so the grantee may use the information immediately to plan future sessions and provide targeted participant follow-up.

Findings

Program Outcomes

As outlined in in the AGVETs proposal, this project will:

- ⇒ Document improved skills, knowledge and /or abilities of veterans and Transitioning Service Members (TSM).
- ⇒ Connect veterans and TSM to USDA field offices, Farm Service Agencies, Natural Resource Conservation Services, Rural Development agencies, Cooperative Extension Services, Department of Labor and Veterans Affairs, and Small Business Administration.
- ⇒ Demonstrate a proven strategy for integration of agriculture curriculum into Transition Assistance Programs (TAP) for soldiers at the US military installations worldwide.
- ⇒ Provide sector driven, comprehensive and immersive agriculture learning opportunities through farmer-student mentoring, internships and diverse farming experiences

The following Table 1. offers Year 1 objectives and outcomes to date.

Table 1. Farm OPS Year 1 - Program Objectives/Outcomes

Objective	Activity (Target)	Resources/Partner	Objectives	Goal/Outcomes
# 1	Communications and Marketing Plan	Facebook, website updates, local news and radio	↑ Reach service members/veterans	Year 1 = 312 Soldiers Reached + social media
# 2	Train (20) Fort Drum and Vet P2P Counselors	Farm OPS Counselor Training Curriculum	↑ Knowledge	Year 1 = 51 Trained Recruit transitioning soldiers to Farm OPS Experiences
# 3	Classes for: <ul style="list-style-type: none"> • Transitioning Service Members (TSM) (24/year) 	Master Gardener, Mushroom Workshop, Zoar Tapatree, Wind-Swept, USDA Tour, Churchill Bee	↑ Awareness/Interest for Farm OPS Offerings Introduce Farm OPS offerings: <ul style="list-style-type: none"> • Internships • In-person classes • Online (Cornell) • Identify interest? 	TSM and Vets continue to pursue Ag-related Experiences Year 1: = 23 SM Classes = 5 Veteran Classes
# 4	Classes for <ul style="list-style-type: none"> • Vets (12/year) 			
# 5	20+ Online courses available through Cornell University	Cornell University	↑ Knowledge	Year 1 = 1 Participant
# 6	Immersion Sessions (20) (Avg.4 weeks at partner farm)	Partner Farm/Business	Align student with interest Offer high quality/hands on experience	Year 1 = 5 Participants
#7	Unique Farm Experiences (10) <ul style="list-style-type: none"> • Modification to attract attendees model farm did not provide the breadth of experiences 	Partner: Lake Effect Farm (Model Farm Facility)	Provide incubator experiences	Year 1 = 8

Successes

Transitioning soldiers and veterans were recruited to attend introductory class/workshops as well as hands-on experiential learning opportunities of the course of Year 1. The Master Gardener(MG) Series was central to the spring 2021 opportunities and part of Cornell Cooperative Extension's Master Gardener Network Vision to expand their learning networks and ecological gardening skills towards greater resilience and connections. The Master Gardener program is perfect for those interested in learning more about the art and science of gardening such as botany, plant identification and propagation, pest and weed management, sustainable gardening techniques and more. It is a national certification with 25 service hours needed for certification.

In addition to the MG Program, Farm OPS offered numerous opportunities to experience multiple agricultural venues including the Churchill Bee Farm, Zoar Tapatree Maple Syrup, and a Mushroom Farm. (Table 2.)

Table 2. Transitioning Service Members and Veteran Experiences (Objectives 3 & 4)

Tour/Class	# Sessions	# Participants	Survey Responses
Master Gardener + Business	15	3	2
Mushroom Workshops	2	3	3
Maple Syrup	2	3	2
Bee Farm Tour	1	6	1
Bee Work Party Instruction	1	4	1

Post course and tour surveys were administered immediately following the Farm OPS experience. (Appendix A-D)

Survey Findings:

- ⇒ **Participant perspectives offer high levels of satisfaction** with classes, tours, and immersion experiences.
 - 100% of participants rated offerings as either great or exceptional across programs. (Appendices A-F)
 - Perspectives comments related to high quality, relevance and interest.
 - *"After 30 years of being around people that really didn't understand what I was talking about, it was great to be around people who do."*
 - *"I was perpetually informed and engaged."*
- ⇒ **Participants increased knowledge,**
 - Survey prompt "I learned" offered the following responses:
 - *"The certifications needed for my type of growing/producing."*
 - *"The differences in various types of markets/marketing"*
 - *"Steps to setting up your garden as well as long term planning goals"*

- *“The things to consider when looking for land, getting set up and going and what to after the season. The mushroom workshop pointed yet another direction I should consider for this lot”*
- *“To consider the immediate environment first and foremost and to investigate.”*

⇒ **Increase Awareness/Interest**

- *“I'm interested in true permaculture. This visit really made me re-think my design to do that. This turned a few light bulbs on at a very critical time. This (and part of next year) are my "building" years and this visit will probably be reflected in what becomes reality here, though much modified to fit conditions here.”*
- *“The things to consider when looking for land, getting set up and going and what to after the season. The mushroom workshop pointed yet another direction I should consider for this lot.”*
- *“All of the mushroom workshop ideas were eye opening and I will probably be growing mushrooms in a year or so.”*

Interview Findings:

Interviews with both mentor and mentee of (6) month immersion experience offer positive insights from both sides. Ryan Washburn has worked full time on a local dairy farm (Birch Creek) owned by his veteran mentor. Ryan speaks daily to his mentor and appreciated the opportunity.

- Mr. Gingerich (mentor) has enjoyed Ryan (mentee) working with his crew and is appreciative of his time there. Initially, Ryan did some “herd work” with the cows and soon after began working with the calves and then became “Calf Manager” when the acting manager went out on maternity leave.
- Ryan has always been interested in agriculture and worked milking cows in “an old barn” in high school. This experience is very different as Birch Creek has 3000 cows that need milking three times a day. While he would like to start something of his own he feels he does not have the capital to do so. “To have something of your own you have to have money or have it run in the family.” Ryan speaks daily to his mentor, Chris.

Challenges/Opportunities

Despite a very favorable review by attendees, often “getting them there” was the biggest challenge. A few events were cancelled due to low or no registration, and when events are attended the numbers are few.

⇒ **Access to Transitioning Members**

The Fall of 2020, the Farm OPS visited Fort Drum regularly to build relationships with the TAP counselors. Due to a spike in COVID cases in November 2020, Fort Drum completely shut down to visitors and the on-site visits were cancelled. Farm OPS attempted to replicate their on-site presence, virtually

⇒ **Low Turn-out**

One of the most immediate challenges to the program is engagement. Four or more events were cancelled due to low or no interest; the August 18th *Business Planning Event, Growing is Not Enough – Even Farmers are Bean Counters*, the August *Empire Farm Days*, and the *Asparagus Tour* were canceled despite the marketing efforts. Farm OPS leadership continue to brainstorm on both the messaging and approach currently used to engage service members and local veterans.

Looking Forward - Continuous Improvement

Farm OPS Leadership is aware of the low numbers of participation and to some degree this is the expectation, however they are currently reviewing their marketing and outreach strategies and plan to make some changes to increase numbers.

Among some of the most promising:

1. Leadership will begin to re-establish existing partnerships with Fort Drum counselors, developing an ongoing dialogue to stay informed of the needs of transitioning service members and at the same time continue to keep counselors updated of upcoming events.
2. Leadership will make a concerted effort to identify places and spaces to engage with veterans.

Mid-course Corrections:

- The Program Director noted the planning stage offered multiple experiences on the model farm but has since acknowledged this does not provide for the breadth and depth of experiences transitioning service members and veterans are looking for. Authentic experiences in multiple settings appears to be the way to engaging the target population.

Appendix

Appendix A: Zoar Tapatree Tour Survey Results

1. I learned:
 - That I really need to talk to everyone involved with Zoar Tapatree more. There are a bunch of nuances that could be invaluable to me in the future.
2. I can use:
 - A lot of the ideas that Paul is using at Zoar. My vision of production would be different, but his experience with successes and failures would be valuable.
 - I can use this information to identify issues.
3. I wonder:
 - The visit reminded me to review the base of my plan and I think I have in a way come full circle on how I'll proceed with my property. (I wonder if I will? Haha!)
 - if a maple syrup farm would work in the rockies.
4. 100% (2) Participants rated this experience as “exceptional.”
5. What was your favorite part of this tour?
 - Believe it or not - hearing the general cycle of work through the year.
 - learning how the process of making syrup works
6. Would you suggest we continue this experience as part of our program?
 - Both participants answered “yes.”
7. How did this experience influence your future decision-making?
 - I'm interested in true permaculture. This visit really made me re-think my design to do that. This turned a few light bulbs on at a very critical time. This (and part of next year) are by "building" years and this visit will probably be reflected in what becomes reality here, though much modified to fit conditions here.
 - It made me want to work with him so i can listen to him explain stuff
8. Would you like to know more about this subject, or have an opportunity for a more hands-on experience?
 - Both participants answered “yes.”

Appendix B: Mushroom Tour

1. I learned...

- The certifications needed for my type of growing/producing
- The differences in various types of markets/marketing
- Steps to setting up your garden as well as long term planning goals
- The things to consider when looking for land, getting set up and going and what to after the season. The mushroom workshop pointed yet another direction I should consider for this lot

2. I can use....

- Others ideas and suggestions are always welcome from their experiences with various plants.
- A conk on the head when I say something wrong. In example, I use elemental sulfur to lower the ph of my soil, and use pine products as mulch to help maintain that low ph. I don't use pine products to initially lower soil ph, which is what came out.
- All the knowledge has been useful, as someone with no background in gardening all has been helpful to know what i can or shouldn't do.
- All of the info in the getting started was good (reminder that I have a lot of it started). All of the mushroom workshop ideas were eye opening and I will probably be growing mushrooms in a year or so

3. I wonder...

- I have a constantly moving mass of ideas flowing through my head on what to grow and how. I like to experiment (a lot) and wonder how the actual execution is going to look like to incorporate all of the experiment stuff. I have a good idea of what the "control" portion will look like.
- The knowledge has been generally focused but I wonder more about specific steps and methods to setting up your own personal garden.
- How many mushroom varieties I can grow here using the tree species on the property

4. Please rate your overall tour experience:

1 Star	2 Star	3 Star	4 Star	5 Star
Poor	Okay	Pretty Good	Great	Exceptional
0	0	0	1	2

5. What was your favorite part of this tour?

- For me, it was a great refresher on lowtunnels, hightunnels (hoophouses) and greenhouses. I guess my favorite portion was the experimental geothermal projects.
- Learning how mushrooms are actually grown and cultivated
- Learning about the different varieties of mushrooms available

6. Would you suggest we continue this experience as part of our program?
 - 100% answered “yes.”
7. How did this experience influence your future decision-making?
 - I love new ideas and that geothermal greenhouse has me thinking...
 - Might try to grow mushrooms myself once i get settled
 - I bought several books on growing mushrooms (and syruping)
8. Would you like to know more about this subject, or have an opportunity for a more hands-on experience?
 - I have soil with a lot of rocks, a neighbor with a small excavator and a gravel pit nearby that sells crushed stone at a decent price. Would it be worth it to do a geothermal greenhouse with my own bent to it? In other words - yes.
 - Yes
 - Absolutely

Appendix C: Master Gardner Survey Results

1. I learned...
 - to consider the immediate environment first and foremost and to investigate.
2. I can use....
 - I have applied various aspects from both the online and practicum as they fit to my situation, and will implement more as time allows. Again, probably more than I can fit
 - All the tools provided, like my soil test and online software like the US Soil survey.
3. I wonder...
 - I'm trying a technique that - for lack of a different name - I call "deep watering". We have heavy soil and fragipan about 18 inches below the surface. My raised beds are only a few inches above ground level and about 50 feet long and are tractor accessible, so ran a subsoiler through the beds - keeping the tractor on the logs (to minimize compaction) that are along them to keep the soil in place - and then stuck a hose 2 feet down in the subsoiler channel and filled them to ground level. The intent is that the water will #1. hold the increased soil space until the roots get down there and #2. lessen the amount of water I have to do in the late summer. Intent is that if this works again (I've done it before with good results) if this would be an acceptable alternative to late season watering, when water is less available.
 - if given land to work, what kind of marvels could i make with it.
4. Please rate your overall experience in the Master Gardener program:

1 Star	2 Star	3 Star	4 Star	5 Star
Poor	Okay	Pretty Good	Great	Exceptional
0	0	0	0	2

100% gave the Master Gardner a % Star rating. This is what they had to say:

- After 30 years of being around people that really didn't understand what I was talking about, it was great to be around people who do.
 - I was perpetually informed and engaged.
5. What was your favorite part of the Master Gardener program?
 - I'm a trees guy, so everything about trees and shrubs. That being said, the veggies part was good too, because I have lost a lot of that knowledge, especially now that I'm just getting into this and no longer have my parents to ask questions to
 - Hard to say since most of the course was information i did not know.
 6. What part of this program most influenced/impacted your future decision-making and career goals?
 - Listening/seeing to what everyone recommended/does and figuring out if it will work for me
 - Understanding soil and landscapes.

7. What do you see as your next step in exploring the field of agriculture?

- I will have to compare what I find at markets to what I can produce and find my niche. I think initially that will be wild fruit products while cultivating nut producing shrubs and trees that will take several years to decades to produce
- Acquiring more land.

8. How can we help?

- I guess any info on programs about mushroom production (I forgot to add them in question #7), wild fruit production & processing and lastly - nut tree & shrub cultivation, production and processing
- Networking with other Master Gardeners.

Appendix D: Field Notes/Interviews

Intern: RW

Mentor: CG (315) 783-8754

Birch Creek Farm

9133 County Route 79

Henderson, NY

Mentor: CG

Birch Creek Farms is located in Henderson, NY, United States and is part of the Cattle Ranching and Farming Industry. Birch Creek Farms has 40-45 total employees. RW works full time at Birch Creek. He started in May 2020 and will finish his internship in in November 2021. On November 3rd he will return to Fort Drum for his final two weeks of military service. He works Monday through Friday, approximately 8 hours a day.

CG has enjoyed RW working with his crew and is appreciative of his time there. Initially, RW did some “herd work” with the cows and soon after began working with the calves and then became “Calf Manager” when the acting manager went out on maternity leave. By the end of August, the plan is to transition RW to working with the crops, chopping corn. CG characterizes RW as dependable, not needing much direction or supervision. There is a tentative plan to hire RW at the end of his internship at Birch Creek. CG sees this experience as a mentor as a positive one and welcomes the opportunity to work with more transitioning veterans and bring them on as interns.

Intern: RW

RW stated, “I wasn’t sure what to expect. I learned way more than I thought.” He characterizes his work on the farm as “a little bit of everything.”

RW has always been interested in agriculture and worked milking cows in “an old barn” in high school. This experience is very different as Birch Creek has 3000 cows that need milking three times a day. While he would like to start something of his own he feels he does not have the capital to do so. “To have something of your own you have to have money or have it run in the family.” RW speaks daily to his mentor, CG.

RW talked about calves being the next generation of farms. He has an interest in farms with designated calf facilities that prioritize growing the next generation of the farm. At Birch Creek, the goal is to raise 100 calves a month, “we have 5-13 calves born every day.” The calf facilities at Birch Creek are not optimal in Ryan’s eyes. “The maternity barn can hold 10 newborns, enough time for vaccination and two feedings and within 24 hours the calves are bedded outside (4) feet apart. “We make do, adding a fresh layer of straw Monday, Wednesday, and Fridays. We try to limit the spread of bacteria.”