

Agricultural Communications

Pennsylvania

Grassland FFA

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Executive Summary

Having recently formed a specialized aquaponics team, Penn State Extension has contacted us, the communications committee of the Grassland FFA chapter, to assist them in developing a media plan for their "Food From Fish" campaign. This campaign aims to promote aquaponics technology and publicize the establishment of the Penn State Extension aquaponics team. Being provided with a \$10,000 media budget, our team was challenged to fulfill three major objectives.

First, we were to inform commercial horticultural producers about aquaponics technology and the creation of the Penn State Extension Aquaponics team. To meet this challenge, we recommended hosting open-houses at multiple existing facilities, as well as operating a booth at the popular Mid-Atlantic Fruit and Vegetable Convention. Second, in order to communicate these messages to hobby gardeners, we suggest creating a press release and designing a Penn State Master Gardener course. Finally, we were challenged to inform consumers, which should be done through the use of social media and operating a booth at the Pennsylvania Farm Show.

In order to accomplish these three objectives, our plan uses a variety of techniques during a timeline stretching from September 2016 to the close of the campaign in January 2018. The \$10,000 budget will be utilized to rent booths at two conventions, to print flyers, to pay for advertisements, and to cover other costs associated with the implementation of this media plan. The appendices contain several examples of media to be utilized, including a press release, social

media posts, and both full- and half-page flyers.

Introduction and Overview

Introduction:

Aquaponics is the process of growing plants and raising fish in the same system. It is the job of the fish to provide nutrients for the plants and for the plants to filter the water. The plants are sustained through the waste of the fish, and the fish live in a clean environment because of the plants. It can be used on a small scale, with a two gallon fish tank carrying two or three fish and sustaining just a couple of plants, or it can be implemented commercially on a larger scale. Large systems can contain hundreds, if not thousands, of fish and plants.

When this technology first emerged, it was neither convenient nor cost-effective to implement.

Now, after several years of new developments, Penn State Extension sees the benefits of installing aquaponics systems and, as a result, has assembled an aquaponics team to promote this technology and to act as a resource for owners.

Aquaponics can be seen as a worthwhile addition to many businesses and groups, and, as stated before, even a great addition for families. This eco-friendly practice could not only better the environment, but it could also benefit the wellbeing of every company, business, school, and any other group, around us for as long as we can foresee into the future. Aquaponics allows for easier access to fresh and local sources of both vegetables and protein. Penn State Extension believes it is important to promote aquaponics systems and inform everyone of how they are able to help implement aquaponics systems in various settings. Through this media plan, Penn State Extension will be able to inform commercial horticulturalists, hobby gardeners, and consumers about the numerous benefits of aquaponics.

Problem Statement:

The greatest problem facing the implementation of aquaponics technology is the lack of public awareness. This is a result of modern aquaponics being a relatively new technology. Penn State Extension has recognized this problem and, therefore, has aimed their "Food from Fish" campaign at promoting the technology. The second part of the problem is that when people learn about the benefits of aquaponics, they are unsure of how they can learn more or who they can consult to discuss the possibility of installing a system. Since tasks like these are part of the Penn State Extension aquaponics team's responsibility, they want consumers to be aware of the creation of the team. This communications plan aims to assist the Penn State Extension aquaponics team in fighting thess problem through their "Food From Fish" campaign.

Overview:

This document contains a recommended plan of action for the Penn State Aquaponics team to use for their "Food from Fish" campaign. This plan includes the utilization of fliers, open houses, social media advertising, and other forms of publicity. The communications committee recommends that Penn State Extension utilizes a variety of sources to educate residents of Pennsylvania and to fulfill their objectives. If used properly, this media plan will prove to be an efficient investment in terms of financial and labor inputs.. The plan begins in September 2016 and stretches to the close of the campaign in January 2018. During this time, two open houses will be held, two conferences will be attended, a Master Gardener course will be created, fliers will be distributed, and social media will be utilized. By using a variety of sources, Penn State Extension will be able to maximize their inputs, reach a diverse audience, and solve the aforementioned problem.

Audience

Our client, the Penn State Extension Aquaponics team, is based in and serves only the Commonwealth of Pennsylvania. Therefore, this media plan is designed to promote the aquaponics technology and the "Food From Fish" campaign primarily within Pennsylvania. They challenged us to target three different audience groups within the state.

The first audience groups is commercial farmers, who our client hopes may consider implementing aquaponics technologies. According to the 2012 Census of Agriculture, there are 3,995 farms growing "vegetables, melons, potatoes, and sweet potatoes," with 551 of these exceeding \$50,000 in annual sales (United States, 2012, p. 188). Additionally, there are 3,012 "nursery, greenhouse, floriculture, and sod" farms, with 846 of these having sales exceeding \$50,000 annually (United States, 2012, p. 188). The census also reports that over 50,000 principal farm operators are male, compared to less than 9,000 female (United States, 2012, p. 202). Additionally, Pennsylvania is home to over 90,000 white principal operators, but less than 1,000 operators of other races (United States, 2012, p. 55).

Item	Total farming	Farming						
	and other	Total	Age of operator (years)					
			Under 25	25 to 34	35 to 44	45 to 54	55 to 64	65 and over
FARMS AND LAND IN FARMS			- 411			111111		
Farmsnumber percent	59,309 100.0	30,638 51.7	274 0.5	2,668 4.5	3,912 6.6	6,068 10.2	7,567 12.8	10,149 17.1

The table above (United States, 2012, p. 188)

breaks down the age of the primary operator of farms in Pennsylvania, while the table to the right (United States, 2012, p. 15) breaks down farms into groups by their income.

W-15-24	2012		
Item	Farms	Value (\$1,000)	
Total income from farm-related sources, gross before taxes and expenses (see text)	21,979 (X)	309,738 14,092	
Farms with receipts of- \$1 to \$999 \$1,000 to \$4,999 \$5,000 to \$9,999 \$10,000 to \$24,999 \$25,000 to \$49,999 \$50,000 or \$49,999	7,213 7,527 2,526 2,478 1,105 1,130	2,832 17,978 17,501 39,292 38,757 193,379	

This research shows us that our advertising for our first audience should target white, male farmers who are above the age of forty-five.

The second audience that this media plan targets is hobby gardeners. The Internal Revenue Service defines a hobby as an activity designed "for sport or recreation, not to make a profit" ("Tax Tips"). Therefore, we expect that a majority of people in this group will not be making a significant profit on gardening, but instead they will have an alternate, primary revenue source. Since gardening is a hobby, they will probably not want to make large financial investments in aquaponics systems. At the same time, they probably enjoy gardening and therefore are interested in learning what work Penn State Extension is doing in that area. We expect the demographics of this group to be similar to that of our third group.

The third and final group we are challenged to target is the general public, in order to raise awareness about aquaponics. The United States Census Bureau estimates that there are approximately 12.8 million people in Pennsylvania ("Quick Facts," 2015). Each of these 12.8 million Pennsylvanians who do not fit into one of our first two groups will be targeted in our third group. About 21% of the population is under 18, and about 17% are over 65 ("Quick Facts," 2015). The same source also reported that a majority of Pennsylvanians (82.6%) are white. The median household income is just over \$53,000 and 13.6% of the population is living in poverty ("Quick Facts," 2015). This research has shown us that our media plan should target white, males and females, between the ages of 20 - 60. These are the people we expect to be hobby gardening and also the general public who could benefit from learning about aquaponics.

Strategic Plan

The objectives of the "Food From Fish" campaign are as follows:

- The communications committee will assist our client by informing at least 50 commercial horticulture producers in Pennsylvania of the creation of the Penn State Extension aquaponics team and its campaign by January 1, 2018.
- The media plan will communicate information to at least 500 gardeners about the creation of the Penn State Extension aquaponics team and its campaign by January 1, 2018.
- 3. The media plan will effectively inform at least 100,000 consumers about the "Food from Fish" campaign by January 1, 2018.

During the promotion of the "Food From Fish" Campaign, the Penn State Extension aquaponics team will utilize the following key messages during all advertising and promotion efforts:

- 1. Aquaponics uses approximately "ten percent of the land area" compared to conventional growing methods (Burden & Pattillo, 2016). This means it utilizes space more efficiently.
- 2. Growing crops in an aquaponic system is less labor-intensive than using traditional methods.
- 3. More efficient agricultural production practices are necessary to support a burgeoning world population that is rapidly approaching nine billion people.
- 4. Higher quality produce can be achieved using aquaponics, compared to traditional methods.
- 5. Aquaponic systems can be used to produce a wide variety of foods, including both protein and vegetables.

Objective 1: The Grassland FFA communications committee will assist our client by informing at least 50 commercial horticulture producers in Pennsylvania of the creation of the Penn State Extension aquaponics team and its "Food From Fish" campaign by January 1, 2018.

1. Advertise and hold two open-houses at existing aquaponics systems.

Ways and Means

- The Grassland FFA communications committee will design a flyer (appendix 3) promoting the open-houses to be published in local horticultural literature, to be posted online, and to be displayed at other Penn State Extension horticultural events.
- The Penn State Extension Aquaponics team will be cooperating with Sunset View
 Aquaponics to host an open-house at their existing aquaponics system on May 13, 2017
 and with New View Farm to host an open-house at their facility on June 3, 2017.
- A videographer will be employed to create a YouTube video consisting of a virtual tour for producers who are unable to attend either event.

Rationale

Hosting an open-house at two different locations should increase the number of producers who will attend by decreasing the distance they must travel. For example, producers in the northern region of the state may not be willing to make the several-hours-long trip to Sunset View Aquaponics. It is more likely, however, that they will attend an open-house at New View Farm, which is much closer to them. Our committee feels open-houses would be effective in reaching our client's objectives, because attendees would be able to see both the application of and the success of aquaponics technology firsthand, rather than relying solely on information provided by our client. These two facilities are recommended for hosting an open-house, because they are

both diversified, growing several different varieties of produce. Also, they both offer tours and training to potential aquaponics producers.

2. Manage an exhibit at the Mid-Atlantic Fruit and Vegetable Convention.

Ways and Means

- Contact Maureen Irvin, the Convention Coordinator, to reserve an exhibitor booth at the
 2017 Mid-Atlantic Fruit and Vegetable Convention
- The Penn State Extension Aquaponics team will staff the exhibit and provide all educational models and literature, with the exception of the printed media (half-page flyers, appendix 4) arranged by the communications committee.

Rationale

Exhibiting at the 2017 Mid-Atlantic Fruit and Vegetable Convention will prove to be an effective choice for the Penn State Extension Aquaponics team to employ, because the convention is attended primarily by commercial fruit and vegetable producers, who make up a portion of the team's target audience. Also, since the convention is hosted in Hershey, Pennsylvania, many of the convention attendees will come from within the geographic region Penn State Extension is targeting ("About the Convention"). Furthermore, since the convention hosts approximately 2,200 individuals, the traffic flow is great enough to justify staffing the exhibit for three days ("About the Convention").

.**Objective 2:** The media plan will communicate to at least 500 gardeners the creation of the Penn State Extension aquaponics team and its campaign by January 1, 2018.

1. Draft a press release that can be utilized by print and digital magazines and newspapers throughout the state of Pennsylvania.

Ways and Means

- The Grassland FFA communications committee will work with the Penn State Extension Aquaponics Team to utilize extension letterhead and proper press release templates, to create an approved draft press (appendix 1) release by December 17, 2016.
- Our committee will provide a draft press release to Penn State Extension by December
 20, 2016 for final feedback and revisions
- Our committee will locate at least 5 local and state newspapers and contacts for our editor to send the finalized press release to the identified newspapers by December 28, 2016.

Rationale

In 2012, a survey reported that 49 percent of adults read a newspaper "regularly" (Rosentiel, 2013). This indicates that using newspapers to publicize this information should allow us to reach a large percentage of our target audience which, just like with the survey, is adults. Our communications committee would recommend using both print and digital editions of newspapers, in order to reach both types of consumers.

2. Work with the Penn State Extension Master Gardener Program to create an aquaponics class for both Master Gardeners and trainees to attend.

Ways & Means

• Contact the State Master Gardener Coordinator, Nancy Knauss, to arrange the addition of a new workshop.

- The aquaponics team members who are teaching the class will plan their presentation, set dates, and gather all necessary materials.
- The aquaponics team will add all workshop dates to the Penn State Extension calendar.

Rationale

Working with the Penn State Extension Master Gardener program would prove to be an effective method to accomplish this objective because it is an existing organization whose members are included in our target audience. According to the organization's 2014 report, there are "2,460 active Penn State Master Gardener Volunteers" and nearly half a million adult contacts ("2014 Penn," 2016). Each of these volunteers must complete at least five hours of "Extension-affiliated programming" annually ("How to Become," 2016). The master gardeners who complete the aquaponics course will also be able to educate other gardeners and consumers about aquaponics technology and the Penn State Extension Aquaponics team in order to complete their required number of volunteer hours.

Objective 3: The media plan will effectively inform at least 100,000 consumers about the "Food From Fish" campaign by January 1, 2018.

1. Staff an exhibit at the Pennsylvania Farm Show.

Ways & Means

- Reserve space for an exhibit at the Pennsylvania Farm Show.
- Print half-page flyers (appendix 4) to hand out, hand a banner to from the table, have miniature aquaponics system displayed.
- Write and record a radio script (appendix 2) to encourage consumers to attend

• Staff the exhibit with members of the aquaponics team during the event.

<u>Rationale</u>

Our committee feels that operating a booth at the Pennsylvania Farm Show will effectively accomplish our third objective for two reasons. First, the event is primarily attended by residents of Pennsylvania, who make up our entire target audience. Secondly, the number of people attending the Farm Show is significant enough to justify the time and financial commitment. In 2011, over 400,000 people attended the event during the week (Pennsylvania Farm, 2014).

2. Create a hashtag to be utilized on all social media postings to promote the campaign.

Ways & Means

- The hashtag #FoodFromFish will be included in all social media communication pieces.
- Social media posts will be made on a regular basis in order to inform consumers of work being done by the Penn State Aquaponics team.
- Multiple social media outlets will be used, including Facebook (appendix 5), Twitter (appendix 6), and Instagram (appendix 7).

Rationale

By utilizing the three most popular social media platforms, we will maximize the impact of advertising for the "Food From Fish" campaign. Social media is an effective form of advertising, since it is one of the most used types of media, being used by 65 percent of American adults, according to a 2015 survey (Perrin, 2015). Establishing a hashtag will create a link between all posts related to the campaign and will allow readers to quickly access additional posts.

Timeline

Date	Person Responsible	Action
9/1/2016	Penn State Extension	Reserve space for Farm Show
9/19/2016	Communications Committee	Draft and film YouTube video with videographer
10/24/2016	Penn State Extension	Record radio spot
12/2/2016	Penn State Extension	Contact Maureen Irvin to reserve exhibitor booth at Mid-Atlantic Fruit and Vegetable Convention
12/12/2016	Penn State Extension	Send full page and half page flyers to be copied
12/17/2016	Communications Committee	Draft press release will be created
12/20/2016	Communications Committee	Draft press release will be sent to Penn State Extension for approval
12/28/2016	Penn State Extension	Press release to be sent to news outlets
1/2/2017	Communications Committee	Begin social media posts #FoodFromFish
1/7-14/2017	Penn State Extension	Operate an exhibit at the Pennsylvania Farm Show
2/2-4/2017	Penn State Extension	Operate an exhibit at the Mid-Atlantic Fruit and Vegetable Convention in Hershey, PA
3/6/2017	Penn State Extension and Communications Committee	Conduct meeting with Penn State Master Gardeners
4/17/2017	Penn State Extension	Open house flier to be sent to news outlets
5/13/2017	Penn State Extension	Host an open-house at Sunset View Aquaponics
6/3/2017	Penn State Extension	Host an open-house at New View Farm
6/19/2017	Communication Committee	Have aquaponics class created for Master Gardeners
11/11/2017	Penn State Extension	First aquaponics class to be held through Master Gardeners

Evaluation

Objective 1: The Grassland FFA communications committee will assist our client by informing at least 50 commercial horticulture producers in Pennsylvania of the creation of the Penn State Extension aquaponics team and its "Food From Fish" campaign by January 1, 2018.

- Penn State extension plans to measure this by tracking the number of commercial horticulture producers that attend the Penn State Extension open houses on the dates of May 13 and June 3.
- We also will record the number of attendees who visit the "Food From Fish" booth at the Mid-Atlantic Fruit & Vegetable convention. As a back-up, we will be able to get an estimated number by counting the number of fliers we handed out.

Objective 2: The media plan will communicate to at least 500 gardeners the creation of the Penn State Extension aquaponics team and its campaign by January 1, 2018.

- First, we will track the number of people who attend the Master Gardener workshop.
- Second, we will track how many copies of the press release were sent to hobby gardeners
 via magazine or newspaper, and we will estimate that at least one person read our press
 release for every ten copies sent out.

Objective 3: The media plan will effectively inform at least 100,000 consumers about the "Food From Fish" campaign by January 1, 2018.

- First, we will count the number of flyers that are handed out at Farm Show.
- Second, we will track the number of times each of our social media pages are liked, followed and shared.

Budget

Item	Unit Cost	Number Required	Total Cost
PA Farm Show booth rental	\$3.41/sq. Ft. (Pennsylvania Farm, 2014)		\$682.00
Mid-Atlantic Fruit & Vegetable Convention booth rental	\$675/ booth \$25 / registration 1 booth 2 registration		\$725
Printing full-page flyers	\$0.27/flyer (Staples)	700 pages	\$189.00
Printing half-page flyers	\$0.21/2 flyers (Staples)	10,000 flyers	\$1,050
"Food from Fish" Banner	\$35.99/ 2'x6' banner (Staples)	1 banner	\$35.99
Catering for two open-houses	\$11.95 per person	150 people	\$1792.50
Fuel reimbursement	\$0.55/ mile	2500 mi	\$1375.00
Radio spots	\$500.00/ week	1 week	\$500.00
Magazine advertisements	\$11.00/column inch (Gaebler)	10 column inches x 5 magazines	\$550.00
Model aquaponics system	\$88.30 (Gardners Edge)	1 system	\$88.30
Videographer	\$2,042.00/video	1 video	\$2,042.00
Master Gardener Course Creation	\$650 / course	1 course	\$650
"Food from Fish" T-Shirts	\$9.95/ shirts	5 shirts	\$49.75
"Food from Fish" Business Cards	\$113.99/200 cards ("Pricing," 2016)	400 cards	\$227.98
"Food from Fish" Name Tags	\$5.10 ea. ("Pricing," 2016)	5 name tags	\$25.50
		Total	\$9983.02

Conclusion

With this strategy set up to inform 100,000 individuals about the "Food For Fish" campaign, the media plan is centered around flier distribution, social media campaigns, broadcast radio spots, and open houses, all in an effort to mass promote aquaponics before January 1, 2018. Penn State Extension focusing advertising on commercial farmers, hobby gardeners, and simply, the general public, will target the groups most likely to adopt aquaponics practices. A \$10,000 budget allows for an immense flier distribution, and also allows for other forms of advertisement, such as business cards and t-shirts.

By adopting the contents of this media plan, Grassland FFA will be working towards one of their primary goals: to better the environment, specifically here in southeastern Pennsylvania. The timeline established for this plan is packed with details from September 2016 to November 2017 and allows for easy delegation of promotion for aquaponics. The leaders of the Grassland Chapter Communications Committee, in conjunction with chapter officers and advisors, will use the well-designed timeline to delegate deadlines for the completion of tasks by the committee members. Additionally, these members must be the people in charge of planning everything on the timeline. Followed by the planning, the members must be the ones to advertise via Facebook, Twitter, and Instagram. The last month of this process, November, presents the opportunity to build excitement around the system and also build a following for both the Grassland FFA chapter and for the "Food For Fish" campaign, months, even years after the media plan is carried out. In turn, farmers will hopefully adopt the aquaponics practice and hobby gardeners will do the same, helping to conserve the environment and being a part of a learning experience in the process.

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PENNSTATE

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For Immediate Release

Penn State Extension Aquaponics Team (123)-456-7890 aquaponics@psu.edu

Penn State Extension Announces Creation of Dedicated Aquaponics Team and its "Food From Fish" Campaign

University Park, Pa. - The Penn State Cooperative Extension recently became the only extension agency to organize an aquaponics team.

Aquaponics, which may be the way of the future for the food and fiber industry, is the process of raising plants and fish together in one integrated system. It allows producers to grow more food on less land. The technology also offers the potential for higher-quality products with less labor inputs.

As this technology has been developed, Penn State Extension has seen the need to develop a specialized aquaponics team to fulfill two major objectives. First, we act as a resource for both commercial producers and hobby gardeners throughout the state of Pennsylvania who are considering, in the process of, or have already implemented aquaponics technology.

Second, we are dedicated to informing the general public about aquaponics and working to improve the public perception of the technology.

--MORE--



Our first step in accomplishing these two tasks is to launch our initial "Food From Fish" campaign, which will last until January 1, 2018. This campaign is designed to publicize the creation of the Penn State Extension Aquaponics team and aquaponics technology among three audience groups throughout Pennsylvania: commercial horticultural producers, hobby gardeners, and the general public.

For our first two events, as part of our "Food From Fish" campaign, we will be operating a booth at the Pennsylvania Farm Show, January 7-14, 2017 in Weis Hall, and running a booth at the Mid-Atlantic Fruit and Vegetable Convention, February 2-4, 2017. We look forward to sharing our knowledge of aquaponics with our friends and neighbors who attend either of these events.

More information about the Penn State Extension Aquaponics team and its "Food From Fish" campaign is available online at extension.psu.edu or by following us on social media #FoodFromFish.

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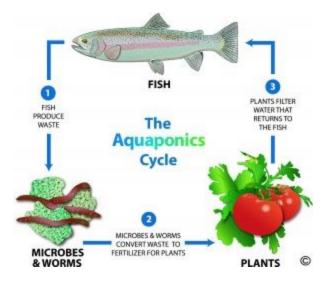
Penn State Cooperative Extension is an educational network that gives people in Pennsylvania's 67 counties access to Penn State's resources and expertise. Extension provides educational programs to enable the Commonwealth to maintain a competitive, environmentally sound food and fiber system, as well as to prepare youth, adults, and families to participate more fully in community decisions.

Appendix 2: Radio Script

- It could be right in your own backyard. Just imagine it! Food From Fish!
- Aquaponics, which may be the way of the future for the food and fiber industry, is the process of raising plants and fish together in one integrated system. It allows producers to grow more food on less land or even in your backyard!
- Join us at the Pennsylvania Farm Show in Weis Hall from January 7 to 14 for a
 demonstration on how an aquaponics systems work! Meet members of the Penn State
 Extension Aquaponics Team who can help you start your own aquaponics system today!
- Be a part of this environmentally friendly system get involved today! Follow us on social media using #FoodFromFish or by visiting extension.psu.edu for more information

Appendix 3: Full Page Flier

FOOD FROM FISH



The Penn State Extension aquaponics team is holding two open-houses as part of their "Food from Fish" campaign. At this open house, the following questions will be answered:

- → What is aquaponics?
- → What are the benefits?
- → How can I start?
- → Any questions you may have!

What?

Open-house at an existing aquaponics facility

Who?

Open to commercial horticultural producers

When/Where?

May 13 @ Sunset View Aquaponics June 3 @ New View Farm



Join us and enjoy a free meal while learning how to grow more, higher-quality crops through a less labor-intensive process on a smaller amount of land.

For more information or to contact us, please visit extension.psu.edu. Also, view our informational video online at www.youtube.com/foodfromfish.



Appendix 4: Half Page Flier

What is aquaponics? Aquaponics is simply the marriage of aquaculture (raising fish) and hydroponics (the soil-less growing of plants) that produces fish and plants together in one integrated system.

What are the benefits?

- Aquaponics uses approximately "ten percent of the land area" compared to conventional growing methods, meaning it utilizes space more efficiently.
- Growing crops in an aquaponic system is less labor-intensive than using traditional methods.
- More efficient agricultural production practices are necessary to support a world population approaching nine billion people.
- Higher quality produce can be achieved using aquaponics, compared to traditional methods
- Aquaponic systems can be used to produce a wide variety of foods, including both protein and vegetables.

How can I learn more? For more information or to contact the Penn State Extension aquaponics team, visit <u>extension.psu.edu</u>. #FoodFromFish

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How can I learn more? For more information or to contact the Penn State Extension aquaponics team, visit <u>extension.psu.edu</u>. #FoodFromFish

Food from Fish Campaign

Sponsored by: PennState Extension

Appendix 5: Facebook Posts

Grassland FFA Facebook Page:

Penn State Extension has contacted our communications committee to help them develop a media plan for their "Food From Fish" campaign. This campaign aims to raise awareness of the newly-formed Penn State Extension aquaponics team and promoting aquaponics technology for commercial horticulturalists, hobby gardeners and the general public. Visit extension.psu.edu for more information. #FoodFromFish

PSU Extension Facebook Page:

"Here is an example of what your "Food From Fish" setup could look like. Produce more food on less land. Visit <u>extension.psu.edu</u> for more information #FoodFromFish

PennState Extension







Combination of Systems

Appendix 6: Twitter Posts

- @PennStateEXT: Starting our very own aquaponics system! #FoodFromFish
- @GrasslandFFA: @PennStateEXT is assisting our chapter install an aquaponics system for hands-on learning and to produce food for our cafeteria.

 #FoodFromFish
 - @PennStateEXT: Raising food in your backyard is so simple! Plus, get both vegetables and protein. #FoodFromFish
 - @GrasslandFFA: Super excited to help @PennStateEXT promote aquaponics #FoodFromFish
 - @PennStateEXT: Aquaponics only uses about ten percent of the land area of traditional methods. Great for large farms or backyards. #FoodFromFish
 - @GrasslandFFA: Just got our new system installed. Very easy. Very efficient.
 #FoodFromFish
 - @PennStateEXT: Aquaponics: the key to feeding nine billion people.
 #FoodFromFish

Appendix 7: Instagram Posts



@grasslandffa:
Started aquaponics, created a lifestyle! #FoodFromFish



@pennstateEXT:

Come see our demonstration model aquaponics system! #FoodFromFish





Appendix 8: Master Gardener Course Outline

Course Name: Aquaponics

Instructor(s): Penn State Extension Aquaponics Team

Course Description: This course focuses on teaching master gardeners the basics of aquaponics and the work that the Penn State Extension Aquaponics team is doing with aquaponics technology. The course will also equip attendees with the skills and resources necessary to take on the role of instructor and teach other gardeners about aquaponics and the Penn State Extension Aquaponics team. A special focus will be on the sustainability of aquaponics and their diversity. This course is recommended for all master gardeners, whether they are interested in growing flowers, vegetables, or other horticultural products.

Teaching Methods:

- PowerPoint Presentation
- Demonstrations using aquaponics models
- Guest Speakers, including PSU extension agents and industry professionals

For more information, visit <u>www.extension.psu.edu</u>, or contact the State Master Gardener Coordinator, Nancy Knauss, by phone at (412)-482-3453 or by e-mail at <u>njk12@psu.edu</u>.

Penn State Cooperative Extension is an educational network that gives people in Pennsylvania's 67 counties access to Penn State's resources and expertise. Extension provides educational programs to enable the Commonwealth to maintain a competitive, environmentally sound food and fiber system, as well as to prepare youth, adults, and families to participate more fully in community decisions.

Appendix 9: Mileage Reimbursement Calculation

Description	Distance per trip (from State College, PA)	Number of trips	Total Distance
Farm Show transportation (Harrisburg, PA)	87.5 mi	16 (2/day, 8 days)	1400 mi
Mid-Atlantic Fruit and Vegetable Convention transportation (Hershey, PA)	101.6 mi	6 (2/day, 3 days)	609.6 mi
New View Farm open-house transportation (Mansfield, PA)	104.1	2 (2/day, 1 day)	208.2 mi
Sunset View Aquaponics open-house transportation (Gap, PA)	141.1	2 (2/day, 1 day)	282.2 mi
		Total Distance	2500
			X \$0.55/mi
		Total Cost	\$1375