ORGANIC EXTENSION SUMMIT

April 17, 2019
North Willamette Research & Extension Center

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INTRODUCTION

This Summit brought together OSU Agriculture Extension faculty, famers, buyers, agricultural service providers, and some OSU-CAS administrators. Thirty-three agricultural professionals met at OSU's North Willamette Research & Extension Center on April 17, 2019 to identify priority topics for future Extension projects that would support Oregon's Organic Agriculture sector (table 5). Our goal was to provide an opportunity for faculty and some stakeholders from around Oregon to meet in person and discuss priorities for Organic Extension at Oregon State University. The Summit was a project of the OSU Organic Extension Working Group and was funded in part by a grant from OSU Extension.

Summit Objectives:

1. Identify research, extension, education and policy priorities for commodity groups and key topics in Organic agriculture
2. Identify people interested in following through on identified priorities
3. Share meeting notes and promote progress on top priorities

METHODS:
We hosted a one-day Organic Extension Summit at OSU-North Willamette Research & Extension Center on April 17 with lunch. The program agenda (table 1) started with quick introductions from all participants, and included short discussions on four over-arching topics in the morning:

1. Organic Needs Assessments
2. Oregon Organic Agriculture Statistics
3. Online Education
4. Extension Methods

We planned the morning and afternoon focus groups to facilitate commodity-focused and discipline-focused discussions.

Table 1. Meeting agenda.

Time	Topic	Facilitator
10:00	Welcome, our objectives and methods for this meeting, and short introductions from everyone	Nick and Heidi McGowan
10:45	Flash talks from faculty and stakeholders. <5 min each • Garry Stephenson, Needs Assessments • Mallory Rahe, Organic Ag Statistics • Alex Stone, Organic Ag undergrad certificate and PACE	Heidi introduce
11:00	Extension methods discussion	Nick, Garry & Heidi
11:20	Commodity teams: identify research, extension, education and policy priorities, potential team projects, and OSU capacity. Identify 3-4 ideas to list on flipcharts.	Heidi introduce
12:10	Commodity team reports (2-3 min each). Briefly share 3-4 of your best ideas. Answer any clarifying questions from the audience. Make sure these ideas are neatly written on a flip chart.	Commodity team coordinators
12:30	LUNCH & Networking	
1:20	Topical teams: identify cross-commodity research, extension, education and policy priorities, potential team projects and OSU capacity. Identify 3-4 ideas to report on to the whole group.	Heidi introduce
2:30	Topical team reports (2-3 min each). Briefly share 3-4 of your best ideas. Answer any clarifying questions from the audience. Make sure these ideas are neatly written on a flip chart.	Topical team coordinators
2:50	Identify themes related to Extension methods and project topics	Nick, Garry, Heidi
3:00	Everyone put their stickers on the flipcharts by any project ideas they're interested in working on.	Heidi introduce
3:30	Thanks and next steps and outcomes	Nick and Heidi
4:00	Adjourn	

Participants broke out into different focus groups before and after lunch (table 2) based on their choice. Morning discussion groups focused on specific commodities, and afternoon discussion groups focused on specific disciplines or topics. Each discussion group had a designated OSU facilitator (tables 3 and 4).

Table 2. Focus groups.

Commodity Team Focus Groups	**Topical Team Focus Groups**
Vegetables and specialty seed	Insect and disease management
Grains, potatoes and seed	Weed management
Perennial crops	Soil health and nutrient management
Livestock and pasture	Genetics and breeding
Economic impacts and policy	Food systems and economics

Table 3. Commodity team coordinators.

Topic	**Coordinator**
Vegetables and specialty seed	Alex Stone
Grains, potatoes and seed	Clare Sullivan
Perennial crops	Javier-Fernandez Salvador
Livestock and pasture	Jenifer Cruickshank
Economic impacts and policy	Lauren Gwin

Table 4. Topical team coordinators.

Topic	**Coordinator**
Insect and disease management	Alex Stone
Weed management	Heidi Noordijk
Soil health and nutrient management	Clare Sullivan
Genetics and breeding	Brigid Meints
Food systems and economics	Lauren Gwin

During each focus group meeting, the facilitator led the conversations to identify high priorities for short to medium term projects (i.e. 1-3 years). They listed high priority projects on flipcharts. After each focus group session, the group facilitators briefly summarized their group findings, and we posted all of the flipcharts on the walls of the meeting room. At registration, we gave every participant about 20 small stickers with their name printed on them. After the afternoon focus groups we gave participants time to mingle and look at all ten flipcharts. We asked them to put their name sticker next to projects they would like to work on. Project ideas identified during focus group discussions and people interested in those projects are listed in Focus Group Notes (pp 5-13).

PARTICIPANTS

Table 5. Participants

1st name	Last name	Affiliation	Email
Heidi	McGowan	East Consulting & Associates	heidi@hbsaa.com
Jenifer	Cruickshank	OSU Animal & Rangeland Science	Jenifer.Cruickshank@oregonstate.edu
Mallory	Rahe	OSU Applied Economics	No longer at OSU
Sam	Angima	OSU College of Ag Sciences	Sam.Angima@oregonstate.edu
Joyce	Loper	OSU College of Ag Sciences	Joyce.Loper@oregonstate.edu
Lauren	Gwin	OSU Crop & Soil Science	Lauren.Gwin@oregonstate.edu
Brigid	Meints	OSU Crop & Soil Science	Brigid.Meints@oregonstate.edu
Ray	Qin	OSU Crop & Soil Science	ruijun.qin@oregonstate.edu
Melissa	Scherr	OSU Crop & Soil Science	melissa.scherr@oregonstate.edu
Garry	Stephenson	OSU Crop & Soil Science	garry.stephenson@oregonstate.edu
Clare	Sullivan	OSU Crop & Soil Science	Clare.Sullivan@oregonstate.edu
Dan	Sullivan	OSU Crop & Soil Science	dan.sullivan@oregonstate.edu
Annie	Allen	OSU Horticulture	No longer at OSU
Nick	Andrews	OSU Horticulture	nick.andrews@oregonstate.edu
Kristie	Buckland	OSU Horticulture	kristine.buckland@oregonstate.edu
Javier	Fernandez-Salvador	OSU Horticulture	Javier.F-S@oregonstate.edu
Scott	Lukas	OSU Horticulture	scott.lukas@oregonstate.edu
Marcello	Moretti	OSU Horticulture	marcelo.moretti@oregonstate.edu
Jim	Myers	OSU Horticulture	James.Myers@oregonstate.edu
Heidi	Noordijk	OSU Horticulture	Heidi.Noordijk@oregonstate.edu
Sara	Runkel	OSU Horticulture	Sara.Runkel@oregonstate.edu
Lane	Selman	OSU Horticulture	laneselman@gmail.com
Alex	Stone	OSU Horticulture	Alex.Stone@oregonstate.edu
Nik	Wiman	OSU Horticulture	nik.wiman@oregonstate.edu
TJ	Hafner	AgriCare, Inc.	tjhafner@agricare.com
Anne	Berblinger	Gales Meadow Farm	meadow@coho.net
James	Henderson	Hummingbird Wholesale	james@hummingbirdwholesale.com
Maryclair	Birkemeier	Meridian Orchards	meridianorchardsinc@gmail.com
Del	Blanchard	Myrtle Creek Farm	del@global-support.us
Sarah	Brown	Oregon Tilth	sarah@tilth.org
Chris	Schreiner	Oregon Tilth	chris@tilth.org
David	Lively	Organically Grown Company	Dlively@OrganicGrown.com
Mike	Neubeck	Organically Grown Company	MNeubeck@organicgrown.com
Jim	Bronec	Praying Mantis Farm	JBronec@canby.com

FOCUS GROUP NOTES

COMMODITY FOCUS GROUPS

Vegetables and Specialty Seeds: facilitated by Alex Stone

Project Idea	Extension Method	Interested People
Symphylan	• Consolidate resources in one place. • Jon Umble and long-term farmers (webinar) • Variety trialing-other management (ask Jon about next steps in management) • Early detection	Nick Andrews Anne Berblinger Jim Myers
Weed management, especially on large acres and in eastern Oregon	• Seed bank management • Aggregate info in on place (new research) • How to make cultivator work • Webinars of videos of farmers showing in detail how to make a cultivation system work.	Scott Lukas Ray Qin Clare Sullivan Sara Runkel
Soil Health Assessment: Physical Properties and Tillage decisions	• Policy-soil health legislative initiative. • Decision tool • Videos • Consulting soil scientists for physical site assessment chemistry 5-foot deep.	Nick Andrews Jim Bronec Scott Lukas Chris Schreiner Ray Qin Kristie Buckland
Variety Trials throughout all of Oregon	• Educational farms • Food Bank farms • School Gardens • Master Gardeners • Field Days	Nick Andrews Del Blanchard David Lively Sara Runkel Mike Neubeck Clare Sullivan Heidi Noordijk Ray Qin Jim Myers Lane Selman

Grains, Potatoes and Seed: facilitated by Clare Sullivan

Project Idea	Extension Method	Interested People
Optimal seed bed prep and mechanical cultivation in cereal grains.	• Applied research with different tine weeders. • Field day	Brigid Meints Jim Bronec Clare Sullivan
Grain yield difference based on soil copper levels (Klamath)	• On-farm field trials in conjunction with soil tests	James Henderson Del Blanchard Brigid Meints
Organic seed production for potatoes and grains	• Survey of current seed sources and grower needs. • Identification of markets	Sarah Brown Brigid Meints
Economically feasible soil fertility for larger-scale crops, related to crop rotation.	• Synthesis of info out there. • Survey successful growers. • Long-term research trials.	Ray Qin Brigid Meints Clare Sullivan

Perennial Horticultural Crops: facilitated by Javier Fernandez-Salvador

Project Idea	Extension Method	Interested People
Fertility: Cost of inputs *K high (management options)	Organic management nutrients and fertility guide.	Maryclair Birkemeier Nik Wiman Ray Qin
Soil Health: diagnosis/measurement tool	• Research to be able to quantify activity/productivity. • Interpretation	Marcello Moretti Nik Wiman Ray Qin
Weed Management (labor)	Sucker and weed control in row research then dissemination	Marcello Moretti
Integrated Pest Management	• Blueberries: Mummy berry • Spotted Wing Drosophila	Nik Wiman James Henderson

Livestock and Pasture: facilitated by Jenifer Cruickshank

Project Idea	Extension Method	Interested People
Hemp as livestock feed	Research trials	Sam Angima Scott Lukas
Livestock feed as rotational crop for vegetables	Enterprise budget development	Jim Bronec Brigid Meints
Organic pasture establishment and renovation	Synthesis of existing info	Sarah Brown Garry Stephenson Jenifer Cruickshank Sam Angima
Voles in pastures and elsewhere	Research and review of what is known (what other cropping systems have vole problems?)	Scott Lukas Nick Andrews Jenifer Cruickshank

Economic Impacts and Policy: facilitated by Lauren Gwin

Project Idea	Extension Method	Interested People
Labor management education: different approaches, regulations, insurance, human resources management	• Scale specific, start with 1-10 employees • Peer-to-peer farmer exchanges • Extension write fact sheets, do needed research (e.g. labor requirements) • Then together identify policy implications and changes needed.	Sara Runkel Sarah Brown Ray Qin
• Document changed landscape of organics at retail: 2015-2017. • Need for differentiated Oregon markets (mid-scale), our uniqueness (profitability plunge)	• Interview growers, distributors and others in value chain. • Analyze public data (census, organics) and check with growers, distributors and others in value chain. • Facilitate conversations about different strategies (products, markets, brand)	Mallory Rahe Chris Schreiner David Lively Annie Allen
• Econ impact assessments (to use with legislators to prompt public investment) • "Hot Spots" report for Oregon • Economic impact of organic farm to retail (State and County data) • Implan-style • Jobs, Money, Growth	• What convinces legislators and other decision-makers? • Talk to organic industry and policy advocates • Adapt and localize national data • Collaborative research with Implan.	Mallory Rahe Chris Schreiner David Lively Kristie Buckland
• Long-term leases to incentivize building soil (etc.) • What models are available? • What would encourage landowners?	• Explore existing lease models and case studies. • Talk to landowners and farmers who lease land what would work or not work for them.	Ray Qin

TOPICAL FOCUS GROUPS

Insect and Disease Management: facilitated by Alex Stone

Project Idea	Extension Method	Interested People
Develop Organic Pest Management Strategic Plans with OSU-Integrated Plant Protection Center	Convening PMSP (publication)	TJ Hafner Melissa Scherr Nick Andrews Kristie Buckland Maryclair Birkemeier
Aggregate and synthesize available information about efficacy of organic insect and disease management materials.	• Searchable from Organic Extension website • Original research • Summaries by product and crop or cropping system	Alex Stone Nick Andrews Brigid Meints
Materials retreat with industry	• Convene experts on organic pest management materials and their efficacy • Make shared information publicly available via an Organic Extension website	Melissa Scherr Alex Stone Nick Andrews James Henderson

Weed Management: facilitated by Heidi Noordijk

Project Idea	Extension Methods	Interested People
Equipment, bed preparation and cultivation. What to use and when. Crop specific information.	• Field days • Weed 'em and reap 2020 • Case studies • Videos • Farmer to farmer visits and discussions	Del Blanchard Nick Andrews Scott Lukas Sara Runkel Clare Sullivan Garry Stephenson Ray Qin Heidi Noordijk Jim Bronec Kristie Buckland
Economics of various weed management techniques	Data collection and analysis Extension Publication	Sarah Brown Jim Bronec Marcello Moretti Scott Lukas
Crop time models for predicting weed seed development	• More accessible and user friendly for growers. • Photos of weed stages	
Organic mulches for weed management	Fact sheet with synthesis of information Webinar	Sarah Brown Scott Lukas Sara Runkel Dan Sullivan
• Holistic weed management strategies • Rotations, equipment, tillage depth	• Farm visits, case studies, videos, equipment demos, farmer interviews and sharing field days. • Farmer to farmer exchanges	Sarah Brown Garry Stephenson

Soil Health and Nutrient Management: facilitated by Clare Sullivan

Project Idea	Extension Methods	Interested People
Nutrient balances in soil related to organic amendments	• Increase education of issue in Oregon related to high price of N. • Creation of FAQ for specific situations (high P, high K, high pH) • Cover crop education	Sarah Brown Ray Qin Jim Bronec Dan Sullivan Clare Sullivan Maryclair Birkemeier
Foliar feeding vs. soil fertility	• Product evaluation • Specific fact sheet with scenarios • Consolidate recent information • Produce safety guidelines	Ray Qin
Soil health database at OSU	• Who is doing what at OSU related to soil health? • Some standard measurements for faculty research and extension projects • Database of soil health measurements	Ray Qin Clare Sullivan Sam Angima Kristie Buckland
Consolidation of OSU information to be easily accessible to growers	• Cross-department agreement on publications and sharing • Make sure only current publications are online	
Demonstrate economics, yield and crop quality effects of 'soil health' practices	• Field trials and enterprise budgets • Soil borne pathogen suppression	Sarah Brown Del Blanchard Ray Qin Kristie Buckland

Genetics and Breeding: facilitated by Brigid Meints

Project Idea	Extension Method	Interested People
Modern Organic Breeding Awareness Campaign	• Social media • Website • Partner media (public • Breeder “baseball” carSds • CBN • Farmer and science conferences • Seed companies • Food and farm ‘influencers’ • Video	Sarah Brown Lane Selman Brigid Meints James Henderson Jim Myers Jenifer Cruickshank Annie Allen
Genetics by environment interactions impacting flavor, quality and nutrition	• On-farm trials • Culinary Breeding Network • Food Scientists at the OSU Food Innovation Center • Field Days • Conferences	Del Blanchard Anne Berblinger Lane Selman James Henderson David Lively Mike Neubeck Brigid Meints Jim Myers Kristie Buckland Ray Qin
Breeding for seed-borne disease resistance	• Applied research • Field Days • Conferences • Extension Publication on management and variety availability	Lane Selman Brigid Meints Jim Myers
Statewide organic trialing network	• On farm trials • Demonstrations • Workshop • Better management on research stations	Sarah Brown Del Blanchard Sara Runkel Jim Myers Mike Neubeck Lane Selman Brigid Meints Heidi Noordijk Ray Qin Nick Andrews Clare Sullivan

Food Systems and Economics: facilitated by Lauren Gwin

Project Idea	Extension Method	Interested People
Continue pack house project	• Education and training for farmers to "bring ideas home" to their farm • Sample plans, estimated costs and financial strategies • Work with Nick and Heidi to develop Extension methods	Mike Neubeck Sara Runkel Heidi Noordijk Nick Andrews
Alternative land tenure arrangements because of cost of land	Connect with access to land working group/RFC-FPP to share info and stories more broadly	
Climate Change: True costs and benefits of organic production in Oregon	• Track national effort on this • Outreach to growers • Educate public/buyers • Help new growers	Sarah Brown Chris Schreiner David Lively Brigid Meints Kristie Buckland Ann Berblinger
Continue KWICTG project	• Roll out enough grower to develop benchmarks • Cost study cohorts curriculum • Work with Tanya Murray (Oregon Tilth)	Sarah Brown Chris Schreiner Mike Neubeck

NEXT STEPS

Volunteer to lead or help coordinate a project:

Summit participants identified many project ideas during the focus group discussions. Some were new ideas, and others are already ongoing. None of these projects will get off the ground or expand without leadership or coordination. Please let Nick know if you are willing to lead or help coordinate a new project, or include other interested people in an existing project identified at the Summit.

OSU Organic Extension website:

The OSU Organic Extension Working Group is planning to develop a content rich webpage for clients interested in contacting OSU faculty working on Organic Agriculture, accessing OSU Organic Agriculture resources, and learning about current OSU projects supporting Oregon's Organic Agriculture sector.

Feedback on the 2019 OSU Organic Extension Summit:

If you have any feedback about the 2019 Summit or the Organic Extension Working Group, please contact nick.andrews@oregonstate.edu. We want to know whether the Summit helped form new partnerships or projects.

APPENDIX 1. ORGANIC NEEDS ASSESSMENTS SLIDES: Garry Stephenson

Organic Farmer Needs Assessments

Insert some smart things here:

1.
2.
3.

Research and Education Partnership

Oregon State University
Center for Small Farms & Community Food Systems

OREGON TILTH

- Surveyed focused on 106 Oregon farmers certified by Oregon Tilth, Inc.
- Interviewed OSU researchers with interest in organic agriculture.
- Conducted focus groups with famers and food system stakeholders.
- Integrated results from each group.

https://ir.library.oregonstate.edu/concern/open_educational_resources/zw12z565t

Top Three Barriers:
Vegetable, Fruit, Livestock, Dairy, Forage and Hay Growers

	1	2	3
Vegetables:	Weeds (62%)	Cost of production (56%)	Farm Labor (43%)
Fruits/Berries	Weeds (57%)	Cost of production (46%)	Farm labor (43%)
Dairy	Cost of production (50%)	Access to inputs (50%)	Yields (40%)
Livestock:	Cost of production (58%)	Yields (50%)	Access to inputs (50%)
Forage/Hay	Access to inputs (48%)	Weeds (45%)	Soil Fertility (39%)

- We surveyed farmers and ranchers* who
  - Had an EQIP- OI contract with USDA-NRCS between 2010 and 2015, and
  - Self-identified as "transitional" participants in that program.
- Four categories:
  - 100% Organic,
  - Transitioning,
  - Split Operations, and
  - No Longer Pursuing Organic

*1,829 farms. 615 farmers completed the questionnaire for an adjusted response rate of 34.2%.

http://ir.library.oregonstate.edu/xmlui/handle/1957/60547

	100% Certified	Transi-tioning	Split	Not Pursuing
Farm Level				
Weed management				
Pest or disease control				
Learning process				
Managing soil fertility				
Reduced yields				
Planning crop rotations				
Local & Regional Infrastructure				
Cost of organic inputs				
Availability of organic inputs				
Availability of labor				
Cost of labor				
Access to technical expertise				
Availability of organic processing facilities				
Marketplace				
Obtaining organic price premiums				
Obtaining adequate prices during transition				
Obtaining organic price information				
Finding buyers for organic products				
Administrative/Policy				
Cost of organic certification				
Recordkeeping requirements of organic certification				

Orange = Major; Yellow = Minor;

- Four categories of farmers in transition:
  - 100% Organic Certified
  - Transitioning to Organic Certification
  - Split Operations—Conventional/Organic Certification
  - No Longer Pursuing Organic Certification
- Differences between these groups regarding perceived barriers
- The barriers could be clustered as
  - Farm level (production issues, farmer learning process, etc.)
  - Local and regional infrastructure (access to inputs, availability of labor, etc.)
  - Marketplace (obtaining price premiums, finding buyers, etc.)
  - Administrative and Policy (cost of certification, recordkeeping requirements)

Farmer perspectives on the transition to organic agriculture : An Oregon study of farmer motivations and barriers

- Surveyed 33 Oregon farms* that recently transitioned to organic certification with Oregon Tilth, Inc.
- Created a typology based on years of farming experience and years of organic farming experience.
  - Experienced Organic Farmers
  - Beginning Organic Farmers
  - Experienced Farmers Beginning Organic

*30 farmers completed the questionnaire for an adjusted response rate of 91%.

https://ir.library.oregonstate.edu/concern/graduate_thesis_or_dissertations/xw42nb53s?locale=en

Obstacles to Organic Certification

	1	2	3	4
Beginning Organic Farmers	Cost of Labor (77%)	Recordkeeping requirements of certification (69%)	Cost of certification (62%)	Weed Management (46%)
Experienced Farmers Beginning Organic	Weed Management (100%)	Pest & Disease Control (80%)	Cost of Organic Certification (80%)	Cost of Labor (70%)
Experienced Organic Farmers	Cost of Organic Certification (86%)	Cost of Labor (71%)	Recordkeeping requirements of certification (71%)	Weed Management (71%)

APPENDIX 2. ORGANIC AGRICULTURAL STATISTICS: Mallory Rahe and Teagan Moran

2017 Census of Agriculture – USDA NASS

A recent high-level summary of the Organic industry including, certified, exempt and transitioning farms and acres.

Oregon's Organic Sector Grows, but slower than the Nation

- Oregon's organic sales increased 43% from 2012 to 2017, compared to 133% nationally
- The number of organic farms in Oregon increased 2% to 567, nationally the number of farms increased 27%
- 46% of all Oregon's organic farms had sales of $50,000 or more, compared to 54% nationally
- Oregon had 3.8% of all US organic sales in 2017, a decline from 6.2% of all US sales in 2012
- While the state added a large number of small scale farms (sales <$2,500), the number of organic small scale farms (sales <$5,000) declined by 22.6%

USDA Certified and Exempt Organic Operations with Sales in Oregon

	Farms			Sales		
	2017	2012	% Change	2017	2012	% Change
Total	567	554	2.3	277,811,000	194,356,000	42.9
Less than $5,000	151	195	-22.6	346,000	399,000	-13.3
$5,000 TO $9,999	59	64	-7.8	405,000	428,000	-5.4
$10,000 to $24,999	45	50	-10.0	695,000	837,000	-17.0
$25,000 to $49,999	53	47	12.8	1,847,000	1,707,000	8.2
$50,000 or more	259	198	30.8	274,519,000	190,984,000	43.7

Item	2017
ALL PRODUCERS' CHARACTERISTICS FOR FARMS WITH CERTIFIED OR EXEMPT ORGANIC PRODUCTION [1] (SEE TEXT) - Con.	
Place of residence:	
On farm operated	1,060
Not on farm operated	303
Days worked off farm:	
None	656
Any	707
1 to 49 days	135
50 to 99 days	78
100 to 199 days	130
200 days or more	364
Years on present farm:	
2 years or less	120
3 or 4 years	128
5 to 9 years	240
10 years or more	875
Average years on present farm	17.3
Age group:	
Under 25 years	27
25 to 34 years	158
35 to 44 years	222
45 to 54 years	226
55 to 64 years	363
65 to 74 years	259
75 years and over	108
Average age	53.8
Military service (see text):	
Never served	1,277
Served	86

Oregon's total organic sales were $278 Million, the 5th highest among states.

Average sales per organic operation were $489,967 in 2017, higher than the national average of $400,603.

Oregon's organic producers are primarily experienced, located on farms, and are on average younger than Oregon's full farmer population.

Oregon State University Extension Service

2014 Organic Survey – USDA NASS

This is a supplemental survey sent out to producers following the Census of Agriculture which provides detailed data about the industry, this survey is being sent out again in 2019.

Land in Certified and Exempt Organic Farms, 2014

ORGANIC LAND OPERATED	Oregon		UNITED STATES	
	Farms	*Acres*	*Farms*	*Acres*
Total certified and exempt organic acres	**525**	**204,166**	**14,048**	**3,670,560**
Land owned	456	96,585	12,353	2,221,715
Land rented from others	170	19,561	5,582	1,507,957
Land rented to others	24	1,979	521	59,112
Total certified organic acres	**455**	**203,555**	**12,595**	**3,642,933**
Land owned	(D)	(D)	10,970	2,195,232
Land rented from others	166	109,528	5,446	1,505,912
Land rented to others	22	(D)	475	58,211
Total exempt organic acres	**70**	**611**	**1,453**	**27,627**
Land owned	(D)	(D)	1,383	26,483
Land rented from others	4	33	136	2,045
Land rented to others	2	(D)	46	901
TRANSITIONAL LAND OPERATED				
Total transitional acres	**37**	**4,452**	**1,365**	**122,175**
Cropland	35	624	1,278	113,011
Pastureland	4	227	196	8,344
Rangeland	x	232	42	820
Land owned	31	2,482	888	66,473
Land rented from others	7	1,970	578	56,486
Land rented to others	24	1,979	15	784

x = data not found

46 certified organic farms in Oregon sold products through Community Supported Agriculture (CSA) shares in 2014.

Oregon's Organic Fruits and Berries, Production and Sales, 2014

	Harvested			Value of Sales		
	Farms	Area	Quantity	Farms	Quantity	Total sales
Crop and unit	*Number*	*Acres*	*Units*	*Number*	*Units*	*Dollars*
Apples (lbs)	71	273	4,130,419	71	4,054,981	1,659,439
Fresh	63	(X)	(X)	63	2,861,835	1,350,560
Processing	11	(X)	(X)	11	1,193,146	308,879
Berries						
Blackberries, Dewberries and Marionberries (lbs)	19	60	261,476	18	259,874	765,183
Blueberries (lbs)	58	218	822,829	58	814,948	2,517,159
Cranberries (barrels)	5	(D)	350	5	350	74,123
Raspberries (lbs)	24	63	183,408	24	176,731	549,497
Strawberries (cwt)	26	29	1,641	26	1,465	(D)
Other berries (lbs)	4	1	1,477	4	1,431	(D)
Cherries Sweet (tons)	14	(D)	(D)	14	(D)	(D)
Cherries Tart (tons)	4	2	1,290	4	1,290	4,766
Figs (tons)	5	2	1	5	(D)	2,715
Grapes (tons)	55	1,165	3,311	55	(D)	(D)
Peaches (tons)	19	81	303	19	303	(D)
Pears (tons)	33	261	2,071	33	1,865	1,661,467
Plums/ Prunes (tons)	31	86	90	31	90	133,105
Other fruits (tons)	14	15	212	14	212	26,954

(X) Not applicable. (D) Withheld to avoid disclosing data for individual farms.

Oregon State University Extension Service

Organic Vegetables, Potatoes, and Melons Grown in the Open, Production and Sales Certified and Exempt Organic Farms,

Crop and unit	Harvested			Value of Sales		
	Farms	Area	Quantity	Farms	Quantity	Total sales
	Number	Acres	Units	Number	Units	Dollars
Beans, snap, fresh (cwt)	31	191	13,638	31	13,634	970,068
Beans, snap, processing (tons)	4	(D)	(D)	4	(D)	(D)
Broccoli (cwt)	36	180	16,036	36	(D)	1,409,444
Cabbage, Green (cwt)	34	109	14,940	35	14,938	725,618
Cabbage, Red (cwt)	9	51	(D)	9	(D)	(D)
Cabbage, Other (cwt)	4	6	344	4	344	31,097
Cantaloup Melons (cwt)	19	30	(D)	19	(D)	(D)
Carrots (cwt)	39	(D)	(D)	39	(D)	(D)
Cauliflower (cwt)	19	71	5,169	19	5,169	393,250
Celery (cwt)	5	(D)	(D)	5	(D)	(D)
Garlic (cwt)	48	25	1,072	48	1,007	338,928
Herbs, Fresh Cut (lbs)	19	211	158,066	19	154,484	1,512,244
Honeydew Melons (cwt)	4	(D)	(D)	4	(D)	(D)
Lettuce (cwt)	52	175	25,712	52	25,664	2,134,051
Onions, dry (cwt)	19	10	2,210	19	2,187	199,271
Onions, red, fresh, (cwt)	12	(D)	(D)	12	(D)	(D)
Onions, white, fresh (cwt)	10	(D)	(D)	10	(D)	(D)
Onions, yellow, fresh, (cwt)	17	(D)	(D)	17	(D)	(D)
Peas, green, (tons)	24	3,294	10,599	24	8,191	4,410,648
Peppers, bell (cwt)	29	66	9,216	29	9,187	695,264
Potatoes (cwt)	44	3,106	861,564	44	861,564	17,204,712
Spinach (cwt)	16	647	59,685	16	59,657	6,711,158
Squash, all (cwt)	58	2,078	366,083	58	358,916	9,158,734
Sweet corn (cwt)	39	4,524	653,481	39	653,204	6,270,990
Sweet potatoes (cwt)	5	5	106	5	8,646	106
Tomatoes, fresh (cwt)	61	51	5,574	61	5,536	1,007,892
Watermelons (cwt)	8	(D)	(D)	8	(D)	(D)
Other vegetables (cwt)	80	393	57,493	80	56,913	3,347,579

(D) Withheld to avoid disclosing data for individual farms.

Organic Field Crops: Production and Sales, Certified and Exempt Organic Farms, Oregon, 2014

Crop and unit	Harvested			Value of Sales		
	Farms	Area	Quantity	Farms	Quantity	Total sales
	Number	*Acres*	*Units*	*Number*	*Units*	*Dollars*
Barley (bu)	31	8,225	420,137	30	403,653	$ 3,598,219
Corn for Grain (bu)	12	1,887	192,936	11	104,712	$ 1,181,279
Corn for Silage (tons)	8	724	12,358	5	1,400	$ 89,979
Hay, Dry (tons)	54	11,725	25,826	41	10,797	(D)
Hay, Dry Alfalfa and Alfalfa Mixtures (tons)	63	22,983	91,652	59	69,089	$ 1,647,923
Hay, All Other Dry Hay (tons)	103	34,708	117,478	87	79,886	(D)
Haiage (tons)	17	3,738	27,638	8	4,164	$ 969,454
Oats (bu)	10	431	21,972	9	15,088	$ 151,504
Rye (bu)	13	286	7,205	13	3,821	$ 40,235
Bukwheat (bu)	3	19	350	3	350	$ 5,410
Wheat, All (bu)	21	2,890	155,951	21	146,441	$2,224,738
Wheat, Winter (bu)	13	1,449	82,751	13	73,241	$1,028,474

(D) Withheld to avoid disclosing data for individual farms.

2014 Organic Survey – USDA NASS

85% of Certified Organic and Exempt Organic Farms sold products Wholesale and 23% sold Wholesale Direct to Retailers in 2014.

Distance to first point of sale:

- 59% within 100 miles
- 32% 101-499 miles
- 9% 500 + miles

Oregon State University Extension Service

Organic Livestock, Poultry, and Livestock Products: Inventory and Sales, and Exempt Organic Farms, Oregon, 2014

Commodity	Inventory		Value of Sales		
	Farms	Peak	Farms	Quantity	Total sales
LIVESTOCK	*Number*	*Head*	*Number*	*Units*	*Dollars*
Milk Cows (head)	*45*	*17,187*	*43*	*3,375*	*$ 4,634,104*
Beef Cows (head)	*26*	*4,558*	*26*	*1,027*	*$ 1,605,911*
Other Cattle and Calves (head)	*69*	*23,284*	*66*	*13,603*	*$11,310,888*
Hogs and Pigs (head)	*2*	*(D)*	*N/A*	*N/A*	*N/A*
Sheep and Lambs (head)	*10*	*730*	*8*	*355*	*$ 58,945*
Goats and Kids (head)	*5*	*(D)*	*4*	*67*	*$ 16,201*
Chickens, Layers (head)	*23*	*4,759*	*3*	*3,005*	*(D)*
Chickens, Broilers, (head)	*1*	*(D)*	*1*	*(D)*	*(D)*

(X) Not applicable. (D) Withheld to avoid disclosing data for individual farms.

2014 Organic Survey – USDA NASS

Production Practices, Certified and Exempt Organic Farms, Oregon and United States, 2014

Oregon's organic producers are more likely to use biological pest management, insect habitat, and water management practices. Fewer produces use green or animal manure.

Practice	Oregon		United States	
	Farms	Percent of total	Farms	Percent of total
Practiced biological pest management	219	42	4779	34
Released beneficial organisms	116	22	2510	18
Maintained beneficial insect/vertebrate habitat	222	42	4840	34
Selected planting locations to avoid pests	201	38	5405	38
Chose pest resistant varieties	198	38	5035	36
Planned plantings to avoid cross-contamination	116	22	4032	29
Produced or used organic mulch/compost	249	47	7082	50
Used green or animal manures	300	57	9409	67
Used no-till or minimum till	243	46	5724	41
Maintained buffer strips	322	61	9259	66
Used water management practices	373	71	7506	53
Practiced freerange livestock production	45	9	2048	15
Practiced rotational grazing	77	15	3075	22

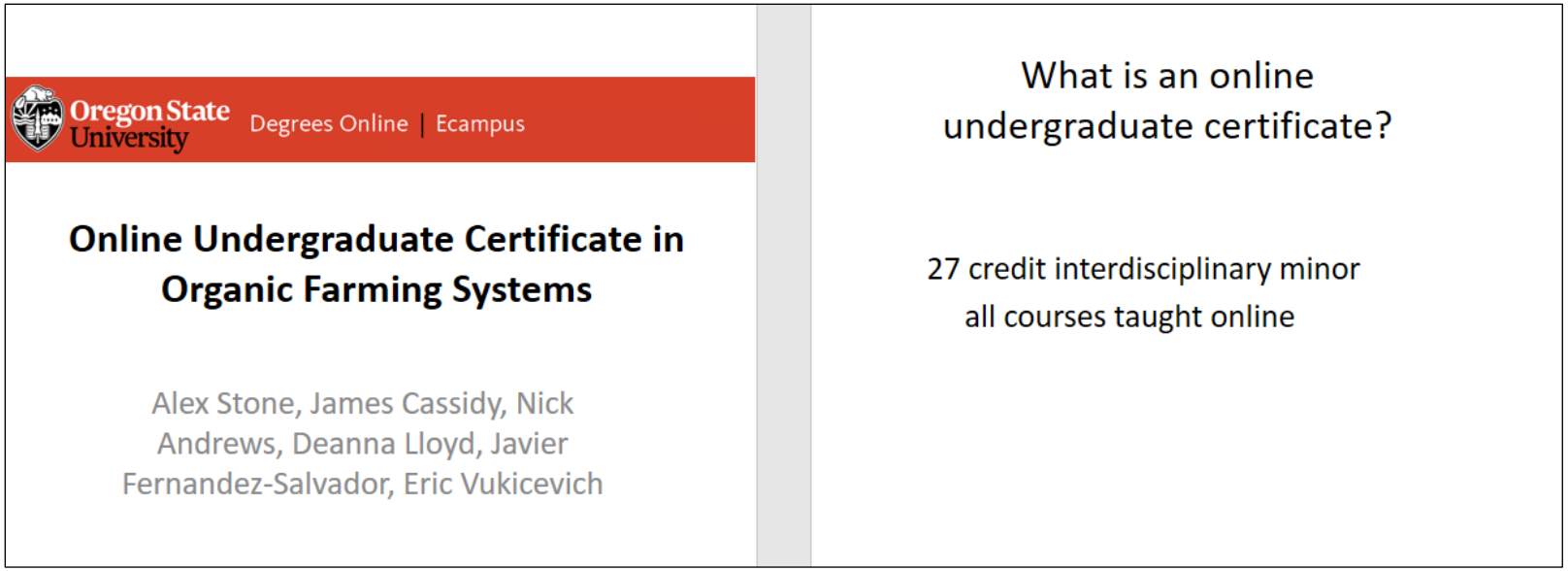
Oregon's organic producers are more likely to cite production problems and less likely to identify regulatory issues compared to peers nationally.

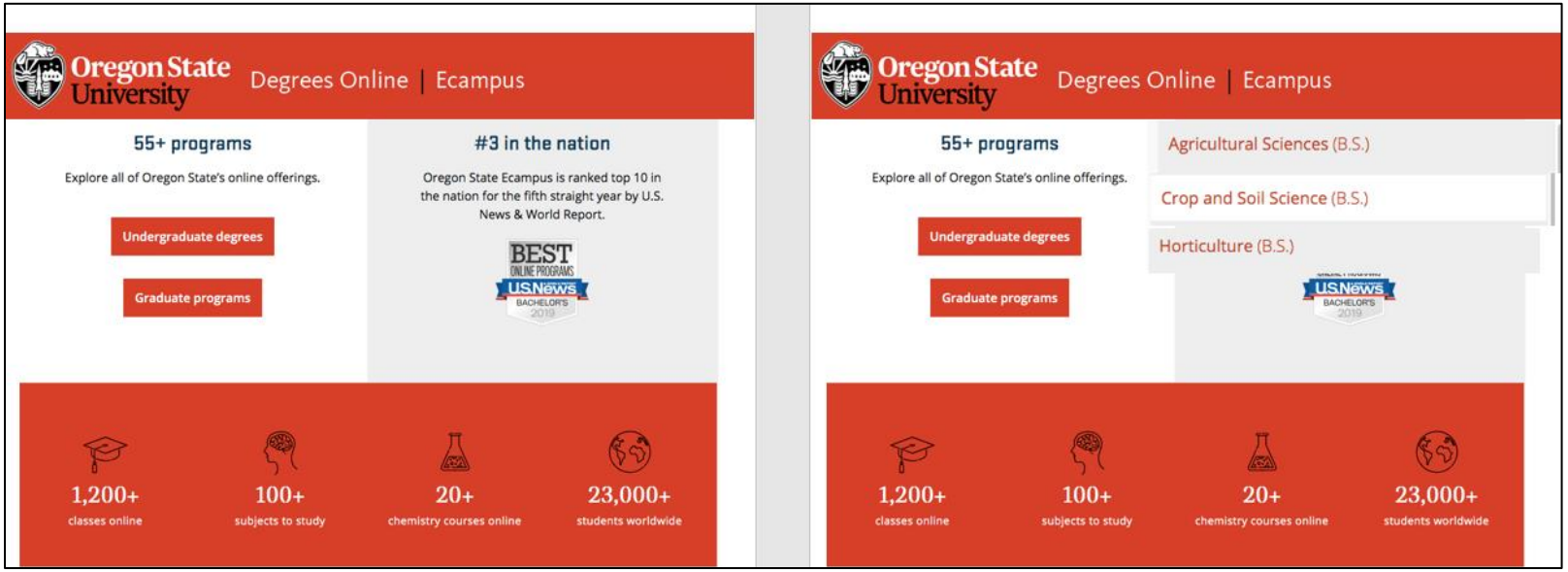
Primary Production Challenge, Certified and Exempt Organic Farms, Oregon and United

	Oregon		United States	
	Farms	Percent of total	Farms	Percent of total
Regulatory problems	128	28	4281	34
Price issues	38	9	927	7
Production problems	115	25	2607	21
Market access	37	8	850	7
Management issues	52	11	1581	12
Other	88	19	2375	19

Oregon State University Extension Service

APPENDIX 3. ONLINE EDUCATION SLIDES: Alex Stone





Timeline

- Initiated in 2017
- Five of 9 courses taught 2018-19
- Certificate program starts Fall 2019
- All courses (but capstone) taught 2019-20
- First graduates of full program – Spring 2022

Over-arching Learning Outcomes

1) understand the principles, practices, science, and outcomes of organic agriculture and communicate to diverse audiences

2) apply science- and practice-based information to design, evaluate and problem-solve in organic systems

3) analyze the effects of organic production and/or purchasing decisions on the three dimensions of sustainability (society, environment, economy).

Courses

- HORT 212. Introduction to Organic Systems (4)
- SOIL 360. Soil Management for Organic Production (3)
- HORT 308. Weed Management in Organic Cropping Systems (3)
- HORT 344. Insect/Disease Management in Organic Cropping Systems (3)
- HORT 306. Inputs in Organic Cropping Systems: Sourcing and Efficacy (2)
- CROP 355. Organic Certification (3)
- HORT 482. Design and Management of Organic Cropping Systems (Capstone) (3)
- HORT 307. Organic System Predicaments (3)
- AGRI 411. Introduction to Food Systems: Local to Global (3)

✓ 27 credits, all required
✓ Focused on cropping systems

THEMES

- History of organic agriculture – practice, science and regulation
- Outcomes of organic agriculture – productivity, profitability, human health, society, environment
- Foundations of ecological agriculture - practical agro-ecology
- Organic farming practices - what do organic farmers do?
- Organic regulations – regulations, certification process, inputs
- Science literacy - how to interpret science-based information
- Technical skills and problem solving – finding credible information, calculating compost and fertilizer amendment rates, efficacy testing of inputs
- Soil and pest management planning – development and evaluation of integrated soil and pest management toolboxes and plans
- Systems thinking – farming systems, food systems
- Career exploration – internships, jobs, careers, required training and experience

Learning Materials

- Data-rich case studies - articles.extension.org/pages/74606
- Articles - articles.extension.org/pages/74505
- Webinars - articles.extension.org/pages/74612
- Videos - articles.extension.org/pages/18329
- Outcomes -advances.sciencemag.org/content/3/3/e1602638
- Podcasts (with organic agriculture professionals, to be developed)
- Management toolbox templates
- Management plan templates
- Interactive learning tools
  - History of organic timeline
  - Rotation and soil preparation learning tool

APPENDIX 4. EXTENSION METHODS SLIDES: Garry Stephenson and Nick Andrews

EXTENSION METHODS

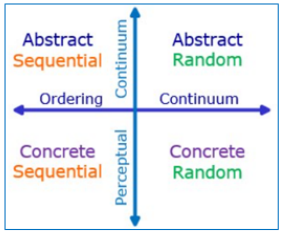
Garry Stephenson, Director OSU Center for Small Farms & Community Food Systems

Nick Andrews, OSU Organic Extension Program: annual crops

Oregon State University

Gregorc Mind Styles

1. Perceptual Quality: concrete concepts **vs**. abstract ideas
2. Ordering Ability: sequential, structured, organized, linear **vs.** random, chaotic, experimental



Gregorc Style Delineator: http://gregorc.com/instrume.html

Nick

Farmer – Ag Professional Study (Maine)

Table 1.
Breakdown of Learning Styles by Group Involved with the Maine Potato Industry

Group	Concrete Random		Concrete Sequential		Abstract Random		Abstract Sequential		Total	
	#	%	#	%	#	%	#	%	#	%
Farmers	20	28	30	42	4	6	18	25	72	62
University/Government	1	6	5	29	9	53	2	12	17	15
Industry	3	20	5	33	6	40	1	7	15	13
Others	5	38	3	23	2	15	3	23	13	11
Total	29	25	43	37	21	18	24	21	117	100

Johnson, S.B., H.S. Carter & E.K. Kaufman (2008). *Learning Styles of Farmers and Others Involved with the Maine Potato Industry.* J of Extension 46(4).

Nick

Concrete Sequential Learning: Farmers	Abstract Random Learning: Extension/Government
Hands-on experiences	Education that relates to personal experiences
Clear directions	Friendly relationships with others
Step-by-step learning process	Non-linear educational process

Johnson et al. recommendations for Extension programming in Maine:

- More hands-on demonstrations
- More programs involving participation and activities
- More on-farm events
- More farmer-farmer discussions and farmer led presentations
- Fewer lectures in meeting rooms

Nick

Extension Methods
Collaborative Model is Best Practice

- Farmers and Extension faculty collaborate as equals to solve problems
  - "Expert" model is not effective and creates hierarchies
  - Farmers are "scientists" in that they are experimenting everyday to solve problems
  - They share this information among themselves and over time create a huge catalogue of wisdom
  - This wisdom accumulates over centuries in some cultures
  - Good research/extension faculty contribute their skill and "insert" information/data where requested to improve the system: Partners in Problem Solving

Garry

How do we develop new information to solve problems with farmers?

- Synthesis: existing scientific and extension literature and adapting to local conditions
- Applied research: variety trials, replicated research → new solutions to problems
- Policy analysis and advocacy: labor, food safety, zoning, water quality, black leg, canola, pinning maps, composting regulations, and so on.

Garry

How Farmers Like to Get Information

- When considering outreach/education methods, think of the people first before the technology.
- Consider the farmers you are working with by experience, stage of transition, approach to farming system, culture, language, and more.

Source of Information	100% Certified	Transitional	Split Operations
Mentoring from experienced farmers	1	1	1
One-on-one technical assistance	1	3	3
In person workshops	3	2	2
Books or printed materials	4	5	5
Online courses or webinars	5	4	4

**Breaking New Ground: Farmer Perspectives on Organic Transition*

Garry

Differences in educational needs and learning styles between new farmers and experienced farmers

Garry

Beginning Farmer Education Framework

Stages of Beginning Farmer Development

Year 1-3 → Year 2-5 → Year 5-7 → Year 7-10+

Basic Instructional • Long and in depth	Advanced Instructional • Short and specific to current need
Basic Experiential • How to…	Advanced Experiential • Field days and demonstrations to critique and apply

Farmer Networks

High Contact Extension Methods	Low Contact Extension Methods
Applied research	Extension Publications
Farmer to farmer networks	Videos
One-on-one technical advice	Podcasts
Hands-on workshops	Online decision-tools
Field days	PACE modules
On-farm trials	Webinar series
On-farm demos	Websites and social media

Hybrids: flipped classrooms with PACE modules, field days with published resources and/or decision-tools, farm tours with social media, etc..

Nick

Today's focus groups

- If you're in a very large group and also interested in a smaller group, consider switching groups.
- Identify and discuss 3-4 good R&E ideas that could be very beneficial in the next 1-3 years.
- Describe the project idea: what do you want to work on?
- Describe some extension methods: how do you want to look for solutions and communicate your findings?
- At the end of the day put your name stickers next to projects you would like to work on.

Nick

Focus groups – Heidi McGowan

COMMODITY FOCUS GROUPS (morning):

Topic	Coordinator
Vegetables and specialty seed	Alex Stone
Grains, potatoes and seed	Clare Sullivan
Perennial crops	Javier-Fernandez Salvador
Livestock and pasture	Jenifer Cruickshank
Economic impacts and policy	Lauren Gwin

TOPICAL FOCUS GROUPS (afternoon):

Topic	Coordinator
Insect and disease management	Alex Stone
Weed management	Heidi Noordijk
Soil health and nutrient management	Clare Sullivan
Breeds and cultivars	Brigid Meints
Food systems and economics	Lauren Gwin

Nick

2019 Organic Extension Summit Report compiled by Nick Andrews and Anna Allen

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