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Local Meats for Local Meals: **An Assessment of Demand for a Mobile Slaughtering Unit in Pierce, King, Kitsap and Thurston Counties, for the Puget Sound Meat Producers Cooperative**

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Introduction

In Washington State, processing of meat from cattle, swine, sheep, and goats is regulated by the Washington State Department of Agriculture (WSDA) and, depending on the type of sale, by the USDA as well (Zenz et al., 2006). Animals slaughtered and processed by WSDA-licensed facilities are limited to "the sole consumption of the owner," and may not be re-sold (WSDA, 2008a) in direct markets (e.g., farmers markets) or wholesale markets (e.g., grocery or restaurants). Meanwhile, a large number of customers who purchase meat at restaurants, farmers' markets, and retail markets, are willing to pay premium prices for locally-produced and otherwise differentiated products. Local farmers' market managers, chefs, and retailers say demand outstrips current supply (Walpert, 2008; Curtis, 2008).

Producers who wish to sell meat products by the pound or to retail sellers must have the animals slaughtered and processed in USDA-inspected facilities (Zenz et al., 2006). The number of these facilities has fallen over the last 30 years, both nationally and in Washington State (Barkema et al., 2001; Gurion-Sherman, 2008). In Washington State, many of the remaining USDA-inspected facilities have minimum head requirements or work only on contract, and many process only beef (Zenz et al., 2006). These restrictions, combined with the loss in total numbers of slaughtering and processing facilities, have made it difficult for small to mid-size farms to access USDA-inspected slaughtering and processing services.

The Puget Sound Meat Producers Cooperative

Producers and butchers, along with interested agencies, governments, and community groups across the Puget Sound region have been working to overcome barriers for small meat producers through a wide range of efforts. The City of Enumclaw identified a need for USDA slaughter facilities in its community as a means to keep agriculture viable. Shortly after

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Taos NM unit owned and operated by the Taos Co. Economic Development Corporation. Photo courtesy of Bruce Dunlop, Lopez Island Lopez Island Farm.

the Enumclaw's Mayor hosted an Ag Summit in November 2007, the Puget Sound Meat Producers Cooperative (PSMPC) formed to provide and strengthen the infrastructure needed to allow local farmers to market local USDA meat to Puget Sound consumers.

The group is working to establish a mobile slaughtering unit to provide USDA-inspected slaughtering services to producers. After researching other mobile slaughtering units (MSU) state and nation-wide, the group believes an MSU will provide high quality services at a smaller scale, with higher flexibility, at a lower capital cost, and with less neighbor opposition than a fixed facility might provoke. The Island Grown Farmers Cooperative, located in Washington State, operated the first mobile unit in the nation, and continues to serve producers in Northwest Washington counties.

The Puget Sound Meat Producers Cooperative has received support from a variety of government agencies in its proposed service area and the Pierce Conservation District is hosting the project as it develops. The group plans to work with existing state-licensed processing facilities to upgrade to USDA inspection and provide USDA cut and wrap. To prepare a feasibility study, Puget Sound Meat Producers Cooperative collaborated with the Daniel J. Evans School of Public Affairs at the University of Washington to survey producers and determine the level of demand.

Farmer Assessment Survey Methodology

Before writing the survey, the logic model was used to identify what additional steps, beyond acquiring and operating the MSU, would be necessary for project success. Five steps were identified:

1. Producers have the skills and resources they need to successfully produce animals for the mobile slaughtering unit.
2. Once running, the mobile slaughtering unit will break even.
3. Existing cut and wrap facilities will be willing and able to upgrade to provide USDA-inspected cut and wrap services, at the times of year, and in the volumes, that the mobile unit will demand.
4. Producers will know how to access new markets that are open to them with USDA inspection.
5. There is existing unmet customer demand for USDA-inspected, locally-raised meat.

Not all of these targeted steps could be tested through the survey, but this allowed project partners to systematically write survey questions and to identify other work that needed to be done to complete a feasibility study. In designing [the survey](#), we assumed that responses would mostly come from those interested in using the unit and who

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were therefore more likely to reply to the survey. Based on this, we attempted to reach as many producers as possible, with the expectation that the results would show a conservative estimate of total demand in the four-county area. The survey was mailed through the National Agricultural Statistical Service's mailing list, to everyone who owned one or more broiler or fryer (but excluding pullets or layers), turkey, goat, sheep, hog, or cattle (including cow/calf operations, dairy, or cattle operations), a total of 1901 surveys. A mailed reminder was sent two weeks later. We also sent announcements through a variety of email list-serves in the counties, reminding people to answer the survey, and giving them a link to an on-line version of the survey. We received 395 responses from within the survey counties, an overall response rate of 20.7 %.

Survey Results

Survey results confirmed what project partners suspected: most producers currently produce differentiated products suitable for premium markets, but market animals live or on the hoof, under WSDA inspection, rather than to markets requiring USDA-inspection (Figures 1 and 2). Once the MSU offers USDA-inspected slaughtering services, one might expect an increase in the number of producers selling to direct markets with USDA inspection.

When asked if they will use the MSU during its first five years of operation, 254 (82%) active producers (out of 309 relevant responses) expressed some level of interest in using the MSU. Limiting the anticipated start-up volumes to animals identified by these interested producers provides an extremely conservative estimate of demand, particularly given that not all interested individuals completed the survey. Based on this, the combination of guaranteed and possible demand may be closer to the true demand within the survey counties.

Table 1 shows anticipated volumes of livestock. Producers plan aggressive expansion in their use of the MSU over the first five years of operation, resulting in producer plans to slaughter 77% more beef cattle, 67% more swine, 139% more sheep, and 94% more goats. This projected increase is striking given that it will occur against a backdrop of a long-term decline in livestock populations in the surveyed counties.

Survey results also provided important information about how the MSU should structure services. For example, both the number of producers who would use the unit and the volume of animals producers would slaughter, diminish if producers have to transport their animals to a satellite location, even at fairly short distances (Figure 3). However, the number of animals slaughtered falls off somewhat more slowly than the number of producers, indicating that producers with more animals to slaughter may be more willing to travel than those with only a few livestock. To remain cost-effective, the MSU would likely be unable to travel directly to farms slaughtering only a few animals.

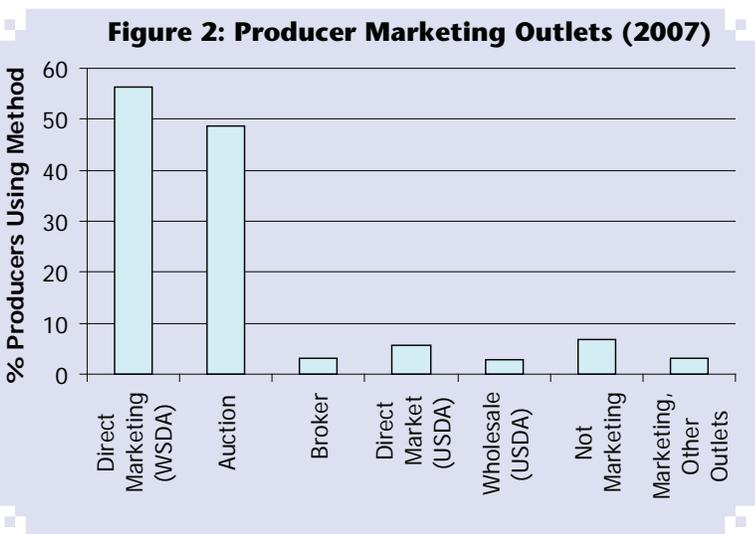
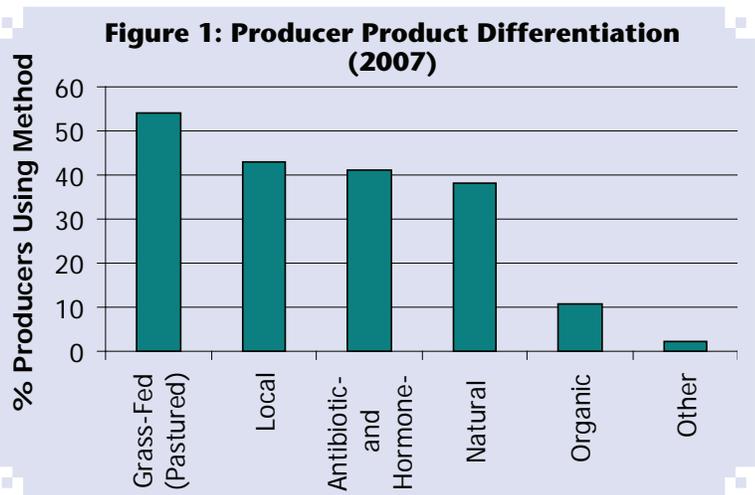
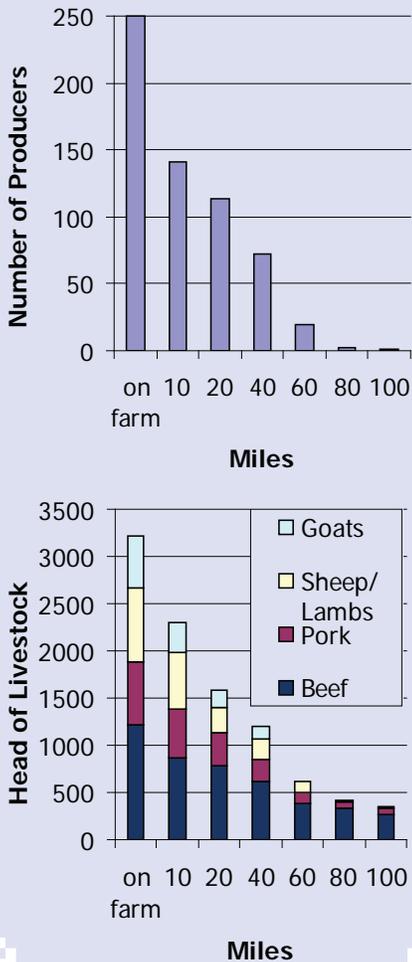


Table 1: Demand for the MSU in Year 1 and Year 5

Demand	Year 1				Year 5			
	Beef	Pork	Sheep/Lamb	Goat	Beef	Pork	Sheep/Lamb	Goat
Guaranteed	880	372	369	472	1559	620	883	916
Possible	309	302	411	70	593	334	265	150
TOTAL	1189	674	780	542	2152	954	1148	1066
Guaranteed/Total	74%	55%	47%	87%	72%	65%	77%	86%

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Figure 3: Miles Producers Willing to Travel to Market & Animals Producers Willing to Slaughter at a Given Travel Distance In First Year



Since animals are not evenly distributed, the project used ArcView GIS to construct maps depicting the location of each farm that indicated in the survey that it will use the MSU. Figure 5 is an example of a map of farms with of beef cattle to be slaughtered. The Puget Sound Meat Producers Cooperative will explore the possibility of operating the MSU at large farms close to the more concentrated areas of animals, allowing producers with only a few animals to travel to farm locations nearest them.

Producers were also asked what optional services they would use in conjunction with the MSU

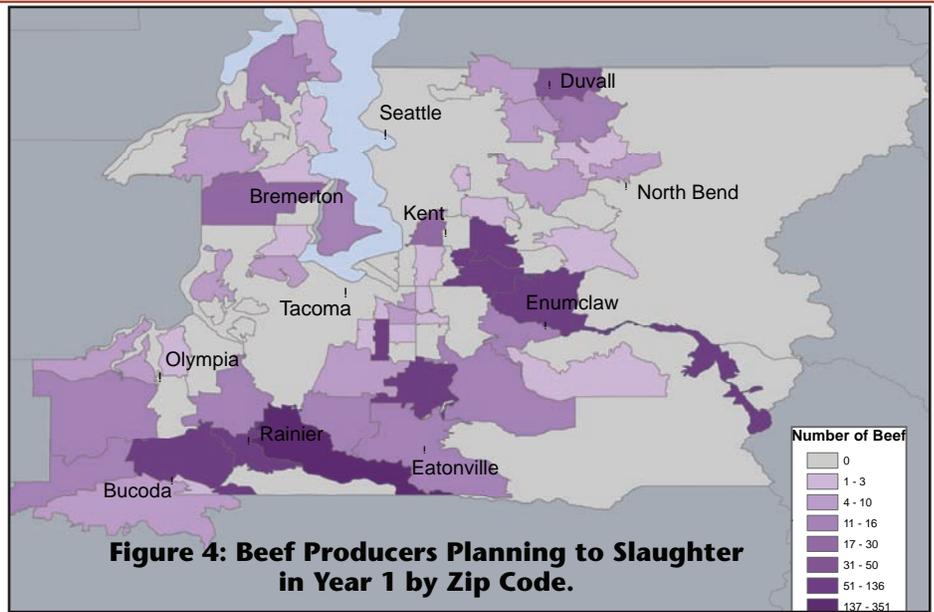


Figure 4: Beef Producers Planning to Slaughter in Year 1 by Zip Code.

(Figure 5). As expected, most producers, more than 80%, said they would use USDA inspected cut and wrap and meat processing services in addition to USDA-inspected slaughtering services. With the exception of meat sold directly to consumers from a WSDA-licensed retail facility, meat slaughtered under USDA-inspection must also be processed under USDA-inspection. A significant number of producers said they would also use marketing assistance to sell to farmers' markets, farm stands, CSA's, or restaurants. This is consistent with the fact that few producers currently market through these outlets.

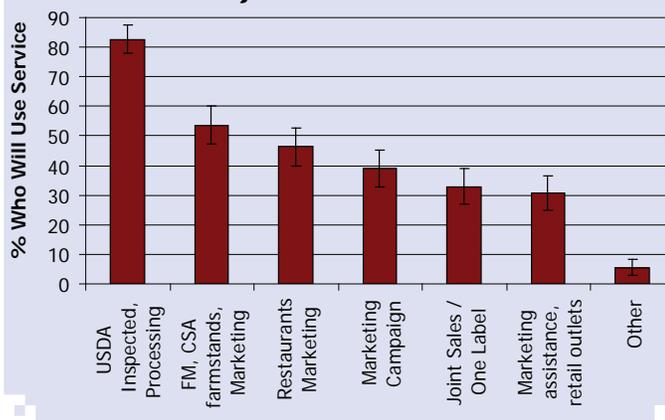
Among the many challenges facing the MSU will be the higher costs associated with USDA requirements

than for mobile facilities licensed under the WSDA Custom Meat program. Costs for equipment, record-keeping, and documentation meeting USDA requirements is high and expensive to acquire and maintain. Nevertheless, roughly 65% to 75% of producers interested in using the MSU were willing to pay an additional mark-up of up to 30% for USDA inspected slaughter, in addition to charges they already pay for WSDA Custom Slaughter. We did not ask whether producers would be willing to pay more than an extra 30%.

Summary

Market interest assessment information obtained directly from farmers provides a tool for educators, local governments, and food marketers to develop practical strategies to support the development of local meat sales. The Puget Sound Meat Producers Cooperative has presented survey results to potential funders and county officials to support the idea that a USDA-inspected mobile slaughtering unit will help support viable farm businesses in Western Washington. In addition, the data helps refine project planning because it

Figure 5: Optional Services Producers Want in Conjunction with the MSU



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empirically illustrates where producers of USDA inspected products are located and what services they would need.

To learn more about the Puget Sound Meat Producers Cooperative please contact: [Cheryl Ouellette](#), Project Coordinator, Pierce Conservation District, P.O. Box 1057, Puyallup, WA 9837.

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The Experiences and Perspectives of Washington's Certified Organic Producers: Results from a Statewide Survey

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Organic farming is one of the fastest growing segments of U.S. agriculture. Washington State ranks third in the number of certified organic operations (USDA-ERS, 2008). Approximately 80,000 certified organic acres produce annual organic farmgate sales over \$144 million (Kirby and Granatstein, 2008). It is important to understand the characteristics, marketing strategies, information sources, challenges, and opinions of the state's organic producers. Therefore, I conducted a survey of all certified organic producers in Washington from October through December, 2007. The survey results will help Washington State University and other service providers better meet the needs of the state's certified organic producers.

Survey Methods

I sent surveys to all certified organic producers in Washington: 670 certified by the Washington State Department of Agriculture's Organic Food Program and 14 certified by Oregon Tilth. I later excluded 49 individuals because of ineligibility (e.g., producers in transition to organic but not yet certified) and bad addresses. I contacted individuals four times by mail: an initial mailing with questionnaire, a reminder postcard, and two follow-up mailings with questionnaires. A link to an online version of the survey was provided in each mailing. Three hundred fifty-six individuals completed the survey (56% response rate).

Who are Washington's Certified Organic Producers?

Nearly 78% of the survey respondents were male, while 22% were female. Nearly 95% of respondents were Caucasian, 3% Latino/Hispanic, and 1% Asian. Most respondents (88%) lived with a spouse or domestic partner. Slightly over half (54%) described their role on the farm as "the primary decision-maker," while 39% shared decision making with a spouse, relative, or non-family business partner. Male respondents more often saw themselves as primary decision-makers (61%) compared to female respondents (37%).

Respondents ranged in age from 23 to 82 with a mean age of 52 years. Respondents had spent 21 years, on average, as a farm owner, manager, or primary decision-maker and a majority (56%) had parents who farmed. Over one half (52%) had a four-year college degree and 15% had a graduate degree. One third (34%) worked at a regular off-farm job and 55% had a spouse or domestic partner with an off-farm job. Children under the age of 18 years lived with almost 40% of respondents.

Survey respondents belonged to many different types of agriculture-related organizations. Interestingly, an equal percentage of respondents (43%) claimed membership in Washington Tilth and the Farm Bureau. Equal percentages (26%) belonged to product-specific and organic-specific growers' associations. Approximately one-fifth were farmers' market association members. Nine percent of respondents held leadership positions in organic or sustainable agriculture organizations.

Characteristics of Washington's Certified Organic Farms

One-half of respondents (52%) transitioned from conventional (non-organic) farming methods to organic methods, while 41% indicated they had always farmed organically. Men were over three times as likely to have transitioned from conventional methods compared to women.

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Respondents operated, on average, 111 certified organic acres, 23 transitional acres, 93 organic (but not certified nor transitional) acres, and 228 conventional acres. The mean acres operated by women and men differed greatly; women operated 45 certified organic and 25 conventional acres while men operated 131 certified organic and 289 conventional acres.

Respondents produced an impressive diversity of organically certified products during 2007. The most common products included: tree fruit (45% of farms); vegetables, melons, and potatoes (37%); small berries and grapes (31%); forage (23%); herbs (23%); poultry and eggs (8%); nursery, greenhouse, and floriculture (8%); milk and other dairy products from cows (8%); grains and oilseeds (7%); and cattle and calves (6%). When asked which product contributed most to their 2007 gross organic farm income, 32% of respondents selected tree fruit, 24% selected vegetables, melons, and potatoes, 14% selected small berries and grapes, and 7% selected milk and other dairy products from cows. Female respondents ranked vegetables/melons/potatoes and berries/grapes higher than tree fruit as contributors to gross farm income.

Reasons for Farming Organically

Table 1 presents respondents' top ten reasons, out of 21 possible reasons listed in the questionnaire, for farming organically. Economic factors (i.e., organic price premiums, consumer demand, and economic sustainability) ranked highest. Environmental sustainability, produce quality, health concerns, and community values also ranked highly. Female respondents, however, ranked environmental sustainability, community values, and health concerns above economic factors.

Less highly ranked reasons for farming organically (with mean scores less than 3.0) included means of farm diversification, humane animal treatment, desire to pass farm to next generation, social justice concerns, opportunities to network with other farmers, reduced input costs, and overseas marketing opportunities.

Marketing Practices

When asked about the use of various types of direct-to-consumer, direct-to-retail, and wholesale marketing channels for their certified organic products in 2007, respondents relied most on natural food stores, farmers' markets, and processors, millers, and packers (Table 2).

Other direct-to-consumer marketing strategies used by survey respondents included websites and catalogs (17%), community supported agriculture

Table 1: Top Ten Reasons Why WA Certified Organic Producers Farm Organically

Rank	Reason	Mean Score*
1	Price premiums for certified organic products	4.1
2	Consumer demand for organic products	4.1
3	Economic sustainability of farm	4.0
4	Land stewardship / environmental sustainability	4.0
5	Quality of organically grown produce	3.9
6	Health of consumers	3.8
7	Personal, family, or farm worker health	3.7
8	Community values / quality of life	3.7
9	Challenging, intellectually appealing	3.3
10	Reduced dependency on large corporations	3.2

* Mean score on a scale from 1 (Not Important) to 5 (Very Important)

Table 2: Top Ten Marketing Channels for WA Certified Organic Producers (2007)

Rank	Marketing Channel	%*
1	Natural food stores and food cooperatives	34
2	Farmers' markets	30
3	Processors, millers, or packers	27
4	Natural food store chain buyers	23
5	Restaurants	23
6	Wholesale distributors or handlers	23
7	Roadside stands or farm stores	21
8	Conventional supermarkets	20
9	Independent brokers	20
10	Other farmers	20

* Percentage of respondents who used marketing channel.

(17%), festivals and fairs (11%), and U-pick operations (10%). One-fifth (21%) of surveyed farms offered agritourism activities (e.g., farm stays, harvest events, farm tours, educational workshops, and corn mazes). One-fourth (26%) of respondents made value-added products (e.g., salad mixes, cheese, cider, dried herbs, bread, jam, and packaged meat) from their certified organic products.

One half (52%) of survey respondents sold all their certified organic products at an organic price premium in 2007. An additional 31% sold at least half of certified organic products at a price premium. Two-fifths (44%) of respondents derived all of their 2007 total farm sales from the sale of certified organic products (including value-added products made from their certified organic products). One-fourth (24%) of respondents derived at least half of their farm sales from certified organic products.

Sources of Organic Farming Information

The most important sources of information about organic production practices, farm management, and marketing strategies were surveyed

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farmers' own experimentation, other farmers, conferences and workshops, certification agencies, (including WSDA), agricultural input suppliers, newsletters and magazines, and Internet-based resources.

Survey respondents interacted sparingly with WSU representatives in 2007. While most respondents read Extension bulletins, less than one-third visited an Extension office, met with a WSU representative on-farm, or collaborated on a WSU research project (Table 3). Nonetheless, 80% of respondents believed that WSU has been "somewhat" or "very" successful in serving the needs of Washington's organic producers. Moreover, 84% expressed interest in working directly with WSU representatives on research projects related to organic agriculture.

Table 3: WA Certified Organic Producers' Contact with WSU (2007)

Type of Contact	% Yes	% No
Read a WSU Extension bulletin or report	67.4	33.6
Visited a WSU Extension website	49.9	50.1
Attended a WSU Extension meeting, workshop, or field day	43.2	57.8
Visited a WSU Extension office	31.7	69.3
Had a WSU scientist or Extension educator visit farm	26.7	74.3
Collaborated on a research project with a WSU scientist or Extension educator	22.5	78.5

The survey included an open-ended question about organic producers' research and outreach needs. The greatest needs related to pest control, soil health, production practices (such as composting and cover cropping), animal care, marketing and pricing,

weed control, small farms, plant diseases, and processing.

Organic Farming Challenges

When asked to indicate the degree to which 22 factors hindered overall organic farming success, respondents listed the high cost of organic inputs as their biggest challenge. Other major challenges included high labor costs, variable or low yields, labor shortages, difficulty in obtaining inputs, limited processing facilities and marketing opportunities, geographic and social isolation, and lack of technical assistance (Table 4).

Table 4: Top Ten Challenges Faced by WA Certified Organic Producers

Rank	Challenge	%*
1	High cost of organic inputs	69
2	High labor costs	56
3	Variable or low yields	42
4	Inability to find enough farm labor	40
5	Difficulty in obtaining organic inputs	31
6	Lack of access to processing facilities	25
7	Limited marketing opportunities	24
8	Geographic isolation	21
9	Sense of social isolation from other farmers	20
10	Limited access to technical assistance	19

* Percentage of respondents who indicated factor was a "moderate" or "considerable" problem.

Survey results suggest women and men face the same major challenges, such as high input and labor costs, variable yields, and labor shortages. However, female respondents faced certain challenges to a greater extent than male respondents: sense of isolation from other farmers, not taken seriously as farmers, lack of family support, lack of farming and business background, and gender discrimination.

Sustainability of Organic Farming

Nearly 74% of survey respondents agreed organic farming is more environmentally sustainable than conventional farming, 61% agreed organic farming is more socially sustainable, and 48% agreed organic farming is more economically sustainable.

To measure the sustainability of Washington's certified organic farms, I presented survey respondents with a list of 22 potential goals for sustainable agriculture and asked the degree to which their farms contributed to each goal. Table 5 lists the sustainable agriculture goals with the highest contributions. The surveyed farms contributed most to environmental sustainability (e.g., promoting soil conservation, reducing toxins released into the environment, and protecting water resources and biodiversity) and

Table 5: Sustainable Agriculture Goals with Highest Contribution from WA Certified Organic Farms

Rank	Goals	Mean Score*
1	Promote soil conservation	4.1
2	Establish relationships of trust with consumers	4.1
3	Reduce toxins released into environment	4.1
4	Protect human health	4
5	Protect water resources	3.9
6	Protect biodiversity	3.9
7	Provide safe working conditions for farm workers	3.9
8	Provide wildlife habitat	3.8
9	Increase the sustainability of agriculture	3.8
10	Make efficient use of nonrenewable resources	3.6

* Mean score on scale from 1 (No Contribution) to 5 (Significant Contribution).

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social sustainability (e.g., establishing relationships of trust, protecting human health, and providing safe working conditions). Washington's certified organic farms made smaller contributions to economic sustainability (e.g., providing adequate farm income, supporting local businesses, enhancing rural economic development, and providing living wages to farm workers).

Conclusion

The survey results reported above provide invaluable information about the characteristics, marketing strategies, information sources, challenges, and opinions of Washington's certified organic producers. A key finding shows that while certified organic producers farm primarily for economic reasons (e.g., organic price premiums and consumer demand), only one-half believe organic farming is more economically sustainable than conventional farming. Moreover, Washington's certified organic farms contribute more to environmental and social sustainability goals than economic sustainability goals. Certified producers see high input and labor costs as their biggest challenges to achieving organic farming success.

Results also demonstrate that Washington's certified organic producers rely on myriad marketing channels as well as value-added production and agritourism. Strengthening these marketing channels is essential for future growth of certified organic agriculture in the state. Most survey respondents believe WSU has been successful in serving the needs of organic producers and over 80% expressed interest in working with WSU representatives on organic farming research projects. WSU's organic agriculture research programs would undoubtedly benefit from increased farmer involvement in setting research priorities, engaging in on-farm field trials, and providing feedback on new production practices.

Aggregate survey results mask the impressive diversity of certified organic operations in Washington. Farms range from small vegetable,

berry, and herb farms in Western Washington to 7,000-acre grain and forage operations east of the Cascades. This geographic divide coincides with significant differences in crop portfolios, marketing opportunities, challenges, and needs. Furthermore, as reported above, the experiences and perspectives of male and female organic producers differ significantly. Further analysis is needed to understand the implications of these geographic and gender differences among Washington's certified organic producers.

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Rootstocks Promote Earlier Ripening in Western Washington Wine Grapes

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In a maritime climate such as western Washington, the range of mesoclimates, measured as growing degree days (GDD), can be quite varied. To ripen wine grapes successfully in areas with a low number of GDD, careful selection of varieties and rootstocks is necessary. GDD



also influence the level of titratable acid (TA) in wine grapes, which plays a major role both in determining fruit maturity and in producing quality wine. Previous tests of different wine

grape rootstocks indicated that they had some effect in controlling vine vigor, which affects the balance of growth vs. productivity and is a factor in attaining good wine quality. Some of these rootstocks also appeared to promote earlier ripening, compared to the same grape varieties grown as self-rooted plants.

Rootstock Trial

In 2000 we began a trial at WSU Mount Vernon NWREC to test the effect of seven grape rootstocks grafted on Pinot Noir 2A (Wadenswil clone). Rootstocks were Millardet et de Grasset 101-14 and 420A, Couderc 3309, Kober 5BB, Malegue 44-53, Riparia Gloire and Teleki 5C. Control was self-rooted plants. Plots were randomized, with five plants per plot, replicated five times at Mount Vernon and three times at Everson.

The two plots were established in different locations, to examine the rootstocks' performance in both a lower and a higher heat environment in western Washington. One plot was located at the Mount Vernon research station in the lower Skagit River valley, three miles from Puget Sound, with average 1693 GDD during six harvest years. In 2002, GDD were low at 1527, went up to 1945 in 2003, and declined thereafter to a low of 1499 in 2007. The other plot was near Everson at Cloud Mountain Farm, approximately 280 feet altitude on a southwest slope, with average 1950 GDD during five harvest years. In 2003, GDD were high at 2147, and declined from that point to a low of 1684 in 2007 (Figure 1).

Juice Quality and Yield Effects

Juice analysis at harvest began in 2002 for Mount Vernon, and initially showed that Pinot Noir 2A grafted on all rootstocks had significantly lower TA than self rooted plants. For red wine grapes such as Pinot Noir, the preferred range for TA is 1.00 or below. In 2003 only plants grafted on 101-14, 3309, and 420A showed significantly lower TA than self rooted plants. Plants on 5BB and 5C were lower but not significant at the 5% level, while

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Figure 1: Growing Degree Days (GDD) in 2002-2007

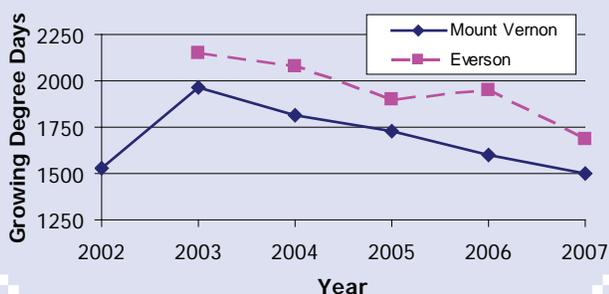


Table 2: Juice analysis of Pinot Noir, Mount Vernon, 2007 (1499 GDD)

Stock	Brix		pH		Titr. Acid	
Self	18.1	a	2.94	b	1.51	a
420A	18.5	a	3.04	a	1.22	b
C3309	18.8	a	3.02	a	1.28	b
101-14	18.9	a	3.03	a	1.22	b

Conclusion

The effect of promoting earlier ripening was observed not only with the initial trial variety Pinot Noir 2A, but also with other varieties including an early maturity clone, Pinot Noir Precoce. The combination of Pinot Noir Precoce on C 3309 or 101-14 rootstock allows for successful wine grape production in cool climate areas considered marginal, and proved effective in ripening fruit even in unusually cool seasons such as experienced in 2007. Based on trial results, we now recommend wine grape varieties grafted on the rootstocks Couderc 3309, Millardet et de Grasset 101-14, and Millardet et de Grasset 420A for new vineyard plantings in western Washington.



Establishing a vineyard on grafted rootstock also protects against future infection of phylloxera, and assures that varieties and rootstocks are true to name. While using cuttings to produce self-rooted vines may be cheaper initially, it will be more economical in the long term to plant known varieties grafted on rootstocks that promote earlier ripening.

For complete reports on wine grape research, visit the [WSU Mount Vernon NWREC website](http://www.wsu.edu/~nwrec).



Riparia Gloire and 44-53 were intermediate (Table 1). In 2003-four plants on rootstocks 5BB, 5C, and Riparia Gloire were eliminated due to their overall poor performance. Focus was given to the top three performers, 101-14, 3309 and 420A and in 2004 each of these rootstocks again bore fruit which had significantly lower TA and also significantly higher brix and pH than self rooted.

Table 1: Juice analysis of Pinot Noir, Mount Vernon 2003 (1945 GDD)

Stock	Brix		pH		Titr. Acid	
Self	19.8	a	3.10	a	1.32	a
5C	20.2	a	3.18	a	1.25	a
5BB	21.3	a			1.25	a
Riparia Gloire	20.7	a	3.24	a	1.20	ab
44-53	20.1	a	3.25	a	1.10	ab
420A	20.7	a	3.18	a	1.01	b
C3309	21.0	a	3.28	a	1.01	b
101-14	20.5	a	3.20	a	0.99	b

Observed yield was also higher in 2004 for plants grafted on the three rootstocks, due mainly to higher incidence of early bud stem necrosis (EBSN) on self rooted plants. In 2005-07 data consistently showed lower fruit TA levels on all three of the grafted rootstocks compared to self rooted plants.

Over the six year period of this study these three rootstocks resulted in lower acids compared to self-rooted plants, which translates into earlier maturity (10-14 days) on the scion cultivar Pinot Noir 2A. These results were consistent throughout the trial from 2003 to 2007. Even in 2007, the coolest year of the study, TA values for the selected rootstocks were significantly lower than self-rooted plants (Table 2). Preliminary comparisons using 101-14 and 3309 rootstock on other cultivars indicates a similar effect of lower fruit TAs and thus earlier maturation compared to self-rooted vines.

Events

Seeing the Forest Beyond the Trees

This is the first announcement for *Seeing the Forest Beyond the Trees: New possibilities and expectations for products and services from small-scale forestry* to be held in Morgantown, West Virginia, USA; June 7-13, 2009. For details on the symposium, please visit the [conference website](#). This conference is being organized by Dave McGill and colleagues on behalf of the IUFRO 3.08 Small-scale forestry group. The first call for papers will be made on November 1st.

There will also be a pre-conference research training workshop offered on quantitative and qualitative survey research methodologies. The quantitative portion will be led by Dr Don Dillman from Washington State University, author of *Internet, Mail and Mixed-Mode Surveys: The Tailored Design Method*. The qualitative portion will be led by Dr. John Bliss from Oregon State University who has extensive experience collecting information from forest owners.

High Tunnel Cherry Workshop

A free workshop on Sweet Cherry Production in High Tunnels will take place at the WSU Mount Vernon Northwestern Washington Research & Extension Center in Mount Vernon, WA on Friday, January 23, 2009 from 8:30 AM to 3:00 PM. The focus will be on the potential for specialty market production of sweet cherries using high tunnel culture, and new ideas on pruning, training and mechanical harvest.



Speakers include Matt Whiting, Extension Horticulturist from WSU Prosser IAREC who has been working on a number of new systems for cherry culture, including the innovative UFO (Upright Fruiting Offshoots) method of pruning and training. Tom Thornton, Cloud Mountain Farm in

Everson, will relate his experience in establishing a new cherry planting for a high tunnel. Annie Chozinski, Oregon State University, will discuss the first three years of a cherry planting in high tunnels in Corvallis, Oregon. Gary Moulton, WSU Mount Vernon NWREC, will report on the cherry varieties and rootstocks best suited to high tunnels in our area. There will also be a hands-on pruning demonstration in the field. Moderator of the program is Carol Miles, Vegetable Extension Specialist and Fruit Horticulture Program Supervisor, WSU Mount Vernon NWREC.

To reserve a seat, contact [Jacky King](#), Fruit Horticulture program assistant, at 360-848-6130 or visit the [NWREC website](#).

OSU Small Farms Conference

The 9th annual Extension Small Farms Conference will be held on Saturday, February 21, 2009, from 9:30 AM to 5:00 PM on the Corvallis campus of Oregon State University at the Alumni Center. The keynote speaker, Michael Rozyne, founder of Red Tomato, will speak on The Dignity Deal: Red Tomato's Fresh Approach to Marketing Produce. The Red Tomato is a nonprofit organization marketing fresh fruit and vegetables from family farms in the northeast and southeast US to supermarkets and other customers throughout New England. ODA Director Katy Coba is the invited capnote speaker. Find [registration materials on-line](#) after January 9 or call the Benton County Extension Office at 541-766-3556 or toll free at 1-800-365-0201.

The conference includes 12 concurrent sessions, covering a range of topics of interest to growers who market their production directly to the public, for farmers' markets managers, and for community food advocates. Pre-registration is \$30 or \$50 for two registering together, and includes lunch; \$40 at the door.

Creating a Sustainable Future for PNW Agriculture

Come help plan the sustainability of agriculture in the Pacific Northwest February 10 – 12, 2009, at the Shilo

Inn in Richland, Washington. This conference will review participants' experiences with sustainability, highlight lessons learned, and craft a plan to sustain Pacific Northwest agriculture and rural communities. The conference is co-sponsored by Washington State University Extension, the WSU Center for Sustaining Agriculture and Natural Resources BIOAg Program, the Kittitas County Conservation District, the Washington Sustainable Food & Farming Network, Rural Roots, Managing Change Northwest, NU View Evaluation & Learning, the Pacific Northwest Direct Seed Association and Solar \$.

[Registration](#) on or before January 15 is \$150.00 for one person and \$275 for two people from the same family. After January 15 the fee is \$175.00 and \$300.00. The fee includes all materials and four meals during the event. Questions? Contact [Don Nelson](#) at 509-335-2922 or [Doug Warnock](#) at 509-525-3389.

Clackamas Community College Classes

[Clackamas Community College](#) has announced its winter term offerings in horticulture, landscaping, and pesticides. Classes run January 5 - March 21, 2009. Classes and workshops cover plant propagation, plant identification, soils, pruning, landscape irrigation, landscape business operation, pesticide application training (both English and Spanish), disease identification, IPM, fruit tree short course and much more. For full details on these classes and workshops browse the [CCC Horticulture events page](#) or call Loretta at 504-657-6958 x2246.

Master Beekeeper Program

WSU Snohomish County Extension and Beez Neez Apiary Supply will sponsor another apprentice level course in the Master Beekeeper Program. The five-week course serves as a thorough introduction to beekeeping for novice beekeepers as well as a comprehensive refresher course for experienced apiculturists.

Continued on next page

The course will be held Monday evenings, January 5 through February 2, 2009, from 6:30 p.m. to 9:30 p.m. at WSU Snohomish County Extension, McCollum Park, 600 – 128th St SE, Everett. Class size is limited to ensure a quality learning experience; register ASAP to hold your spot. Cost for the five-week course is \$50 per person. To register, contact [Karie Christensen](#) at 425-338-2400, or download the [form](#) and mail with your check. For more information on the course, contact [Dave Pehling](#) at 425-357-6019.

Announcements

COOL Law Takes Effect

ATTRA. A new food labeling law takes effect in the U.S. this week, requiring country-of-origin (COOL) labels on fresh produce and meats. USDA's [Agricultural Marketing Service](#) has a web page devoted to COOL information, including links to guidance documents.

Food Alliance Issues National Standard for Sustainable Sheep and Goat Production

Sustainable food certifier [Food Alliance](#) has unveiled comprehensive national standards for sustainable sheep and goat production with strict criteria for raising and treating the animals. Food Alliance's new standard replaces one previously used by the organization to certify Northwest sheep growers, and now applies to goats and both meat and wool producers, and accommodates conditions throughout North America. The [new standard](#) covers a wide variety of animal welfare issues, including: animal health and nutrition handling practices, facilities, pasture management, nutrient management, pest and weed management, and hazard reduction and sanitation.

Tidbits

City Trash Plus Farm Leftovers May Yield Clean Energy

ARS News Service. Tomorrow's household garbage might be blended with after-harvest leftovers from fields, orchards, and vineyards to make ethanol and other kinds of bioenergy. Agricultural Research Service (ARS)

scientists are investigating this straightforward, eco-friendly strategy in their laboratories at the agency's Western Regional Research Center in Albany, Calif.

In most instances, agricultural wastes like rice straw, almond hulls, and the oversize outer leaves of iceberg lettuce will have to be pretreated before being used as a bioenergy resource. That's according to Kevin Holtman, an ARS research chemist who's working out the details of the garbage-to-gas approach. The garbage, known as "municipal solid waste," or "MSW," would also be pretreated, Holtman noted.

The garbage would be processed in a jumbo-size autoclave, a device which acts something like a giant pressure cooker to convert the MSW into grey, lightweight clumps. The pretreated agricultural wastes and autoclaved MSW would then be transferred to a biofermenter. Yeasts and enzymes would be added, to make ethanol.

Holtman and colleagues David Bozzi, an engineering technician, and Diana Franqui, a microbiologist, are determining the best ways to use just water and heat, instead of hazardous chemicals, to pretreat the farm wastes, thus keeping the biorefining process environmentally friendly.

The team, part of the Bioproduct Chemistry and Engineering Research Unit at the Albany research center, is collaborating in the research and development venture with Comprehensive Resources, Recovery and Reuse, Inc., or "CR3," of Reno, Nev., and with the Salinas (Calif.) Valley Solid Waste Authority. Besides producing biofuels, the biorefinery would also reduce the volume at landfills and minimize the need for new ones.

Read more about the research in the October 2008 issue of [Agricultural Research magazine](#).

Leopold Center Releases Local Food Survey Results

Leopold Center. Rising fuel and food prices, coupled with increased concern about environmental impacts

and safety of the food supply, are changing the perceptions of American consumers, according to a recent nationwide survey conducted by the Leopold Center for Sustainable Agriculture.

The survey showed that consumers are re-assessing their shopping and eating habits to cut fuel use, would consider carbon food labels as long as their costs do not increase, worried more about natural habitat loss than greenhouse gas emissions, and were much more likely to view local food as having traveled 100 miles or less from the farm to point of sale than coming from their state or region.

These are the views of a representative, nationwide sample of more than 750 consumers who participated in a web-based survey conducted by the Leopold Center for Sustainable Agriculture in August 2008. Their responses are summarized in a new Leopold Center report, [Food, Fuel and the Future: Consumer perceptions of local food, food safety and climate change in the context of rising prices](#).



Organic Farm Awarded Judgment in Pesticide Contamination Case

A jury awarded \$1 million in damages to a Santa Cruz, California organic farm whose crops were contaminated by evaporative drift of organophosphate chemicals sprayed on neighboring land. Jacobs Farm filed suit against pesticide applicator Western Farm Service, Inc., to halt spraying and recover damages for herb crops it could not sell as organic. Western Farm Service says it followed label instructions and county permit regulations when applying the pesticides, and said it is likely to appeal the decision.

Continued on next page

Study Surveys Former Organic Farmers

The [California Institute for Rural Studies \(CIRS\)](#) conducted a survey of California growers that have discontinued registration with the California Department of Food and Agriculture Organic Program. The research findings shed light on some of the principal challenges affecting organic growers and reasons for exiting organic production. See the full 33-page report, [Factors Associated with Deregistration Among Organic Farmers in California](#).

Resources

Farmers' Market Publications Presented Online



ATTRA. Several popular publications for managers and vendors of farmers' markets are now available as free downloads from the UC Small Farm Program. The [five newly available books](#) can each be downloaded as individual PDFs. Longer books are also available in a chapter-by-chapter format, with smaller downloadable files. The titles now available include: Starting a New Farmers Market, Management Skills for Market Managers, Growing Your Farmers Market, Food Safety at Farmers Markets and Agritourism Venues, and Guide to Managing Risks and Liability at California Certified Farmers Markets.

Journal Highlights Sustainable Food Systems

A recent issue of the [Journal of Hunger & Environmental Nutrition](#) showcases food system experts from the United States, Canada, and the European Union. The authors provide their analyses of the global food system infrastructure and offer alternatives for creating a food system that is ecologically sound, socially just, economically viable, and ensures that all eaters have regular access to fresh and healthy food. This collection of articles explores how food and agriculture decisions determine the quality, quantity, and biodiversity

of the food supply. The purpose of this special double issue is to explore sustainable food systems from philosophical, research, and application perspectives.

Farmer Resource Network

Farm Aid [announced](#) the launch of its web-based [Farmer Resource Network](#) to help farmers answer the consumer call for more quality family-farmed foods. Across the country, more people



are reaching for local, organic and sustainably grown food from family farms.

Farm Aid's Farmer Resource Network links family farmers to new and innovative ideas to help them meet this rising consumer demand. The Farmer Resource Network also contains tools to help put new farmers on the land.

Sustainable Agriculture Education Association

The Sustainable Agriculture Education Association (SAEA) is a professional association for the advancement of sustainable agriculture and agroecology in education. The Association has been in the works for the past few years and it was recently granted non-profit status. The SAEA has launched a website and listserv that feature agricultural education resources. Any person who is interested in the mission and goals of the Association may become a member.

New Agritourism Guides

The National Children's Center has just released new resources for agritourism operators. The *Policies and Procedures Guide* and the *Worksite Guide* include a 10-page checklist for use by agritourism owners and managers, as well as farm owners who host children and groups. [The guides](#)



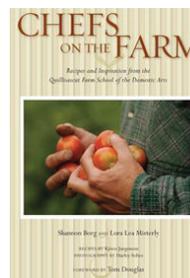
are useful in reviewing health and safety considerations

already implemented on agritourism operations, and can assist in identifying deficiencies so that remedial action can be taken.

Heirloom Variety Trial Reports

This past summer, the Kerr Center's School of Sustainability evaluated 30 heirloom okra varieties and 26 heirloom sorghum varieties. The results are now [available online](#), along with a new overview of heirloom varieties and their importance for sustainable agriculture.

Chefs on the Farm Book



The Quillisascut Farm School of the Domestic Arts recently published, [Chefs on the Farm: Recipes and Inspirations from the Quillisascut Farm School of the Domestic Arts](#).

With over 65 tantalizing farm-fresh recipes, *Chefs on the Farm* is a "treat" for foodies, organic gardeners, cookbook addicts, and sustainable practitioners alike.



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