

SUSTAINING THE PACIFIC NORTHWEST

Food, Farm, & Natural Resource Systems

May 2009

Volume 7, No. 2



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Summer Squash: Is Mini-Squash Worth the Effort?

Karen Strickler, Pollinator Paradise, Parma ID

Before we had a garden, my husband went to a Farmers' Market one summer and purchased a large zucchini for what seemed to him a very minimal price. The next day he bragged to his coworkers, "I got a great big zucchini at the Farmers' Market for only 25 cents!"

His coworkers looked at him incredulous. "You paid for zucchini," they asked?

The prolific reproduction of summer squash, particularly zucchini, is legendary. "Why do folks in Lake Wobegon lock their cars during the summer?", Garrison Keillor asked his audience on National Public Radio's Prairie Home Companion one summer day. "To prevent their neighbors from leaving bags of zucchini in the car."

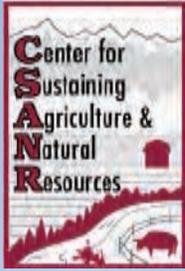
When I first started bringing summer squash to the Farmers' Market in Nampa, Idaho, I wasn't sure if it would sell. Everyone sells summer squash at the same time, and many of the customers have zucchini in their garden, or have neighbors who do. So, it's not surprising that much of the summer squash doesn't sell. One vendor, a high school student, used large yellow patty pan squash as weights to anchor the poles of his canopy. It's a clever, if temporary way to use the excess.

To my surprise, most of my summer squash does sell. The secret is that I sell small, "baby" squash in a variety of colors and shapes. The small patty pan or scallop zucchini are a novelty to many people. People comment on how colorful our display is. We have even been asked if they are real.

In order to sell small squash, I have to pick daily. Some days I pick twice, once in the morning and once in the evening. Most summer squash grows very fast; you can almost watch it grow. A patty pan marginal in the morning may be perfect by the end of the day. By the next day it is no longer "baby" size. Many of the vendors at our market harvest only a few times per week, so most of their squash are large baseball bats, like the one my husband purchased for 25 cents.

I wondered whether harvesting mini squash daily is really cost effective. Am I making a profit? How would my yields and profit compare if I let the squash grow to a typical market size? In 2006, I received a WSARE Farmer Rancher grant to find out. Below is what I did and what I found out.

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WASHINGTON STATE UNIVERSITY
EXTENSION

WSU Small Farms Team

Sustaining the Pacific Northwest
Food, Farm, & Natural Resource Systems

This quarterly newsletter provides a discussion forum for people working towards community-based sustainable food, farm, and natural resource systems using interdisciplinary oriented research and practitioner knowledge.

[WSU Small Farms Team](#)
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Objectives:

To determine how harvest frequency and harvest size affect the yield and marketability of fruits produced by summer squash plants, Cucurbita pepo, I compared the yields from harvesting mini squash daily vs. every 2-3 days at a larger size. The study included a field experiment, a customer survey at two Farmers' Markets, a vendor survey, and development of an enterprise budget for squash production aimed at market gardeners and small farmers.

Materials and Methods: I used four summer squash varieties: two zucchini (green Cash Flow from Johnny's Selected Seeds and yellow Butterstick from Territorial Seed Company) and two patty pans (green Starship from Territorial Seed Company and yellow Sunburst from Territorial Seed Company). I created 40 equally spaced hills in a sprinkler irrigated garden plot.

The hills were randomly assigned a variety and harvest frequency resulting in 5 hills of each variety and harvest frequency combination. When the plants started blooming, flags were placed in each hill identifying the hill number, variety, and harvest frequency. Squash from each hill were counted and weighed individually.

Results: Squash Yield

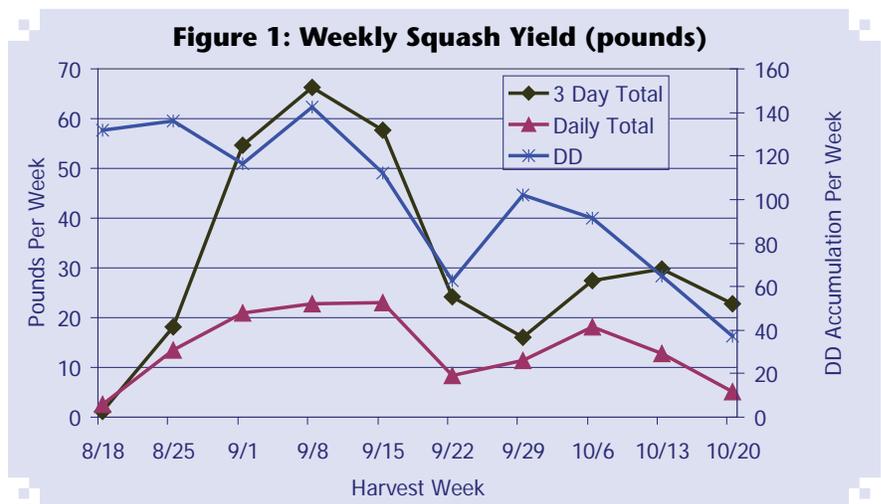
Weekly squash yield tracked fluctuations in temperature (DD = Weekly degree day accumulations) over the season. Yields reached a peak during weeks 3-5 (Figure 1). The weather turned cold during the week of September 15-22 (note the dip in the blue degree day DD line) and yields declined correspondingly. Note also that overall weekly yield in pounds of squash harvested at the larger



Flowering begins August 8. Flags indicate harvest frequency.



Squash harvest over a three day period. Large squash harvested 9/3, small squash harvested 9/3-5.



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size was about three times the yield of small squash during peak production. The difference decreased as yields declined late in the season.

Daily harvests yielded a greater number of fruits. The yellow patty pan plants produced over three times more small fruit by the end of the season than large fruits (Table 1), compensating for the greater yield in weight of harvesting less frequently. The other varieties produced 1.5 to two times more fruit when picked small.

Table 1: Squash Fruits Produced During Season

| Color | Green | | | | Yellow | | | |
|-------------------------|-----------|----------|----------|----------|-----------|----------|----------|----------|
| | Patty Pan | | zucchini | | Patty Pan | | zucchini | |
| Harvest Frequency | Daily | 2-3 days | Daily | 2-3 days | Daily | 2-3 days | Daily | 2-3 days |
| Total Squash Harvested | 438 | 213 | 392 | 196 | 743 | 232 | 335 | 225 |
| Ratio: Daily ÷ 3 Day | 206% | | 200% | | 320% | | 149% | |

Results: Squash Sales and Pricing

Large squash sold well at Farmers’ Markets at two to four for \$1.00. Small squash sold well at five to eight for \$1.00. The number of small squash for \$1.00 increased as size of the squash decreased late in the season. Mini squash sold by numbers brought in the highest price per pound.

Percent Sold: small squash 94% (green squash slightly more than yellow)
 large zucchini 83%
 large patty pans 72% (“What do you do with these?”)

From a customer survey, we learned most people preferred to buy squash by numbers (5-6 baby, 2-4 medium squash) (89% of respondents) than by the pound. Most customers said they would pay no more than \$1.00 per pound for squash, and many said they would not pay as much per pound for baby squash as for medium squash. Yet in actuality, they paid approximately \$1.77-2.97 per pound, depending on variety and time of season, for baby squash as compared to \$0.65-0.85 per pound for medium squash.

Results: Enterprise Budget

I modified an enterprise budget for summer squash from the University of Kentucky, using my 2007 costs. I used the enterprise budget to consider what combinations of yield, price of squash, and costs of growing squash would result in a profit. I determined I profit if I grow and sell at least 600 lbs of squash and it sells for over \$2.75 per pound. I tried putting these goals into effect in 2008, but the downturn in the economy made it difficult to sell squash at premium prices.

Conclusions: Harvesting mini squash lowers weight yields, but sells at higher prices. Producing 600+ lbs per year and selling at \$2.75 per pound results in a profit.

More information about this project, and about growing squash, can be found on my [website](#) and [blog](#).



Karen at Pollinator Paradise booth, Nampa Farmers’ Market, Idaho



Western SARE Farmer/Rancher Grants: 2010 Request for Applications

Western SARE (Sustainable Agriculture Research & Education), a USDA competitive grant program, has issued a request for applications for 2010 Farmer/Rancher grants. Farmer/Rancher Research and Education grants provide up to \$15,000 to single producers and up to \$30,000 for three or more producers. Western SARE grants fund projects that recognize whole-farm systems approaches, are multidisciplinary, produce measurable results that are beneficial to other producers, and examine the implications of adopting sustainable agriculture practices.

Producers typically use grants to conduct on-site experiments that improve their operation and the surrounding environment. Successful projects must include both research and education components, and an outreach plan for communicating the project findings is required.

Applications will be accepted through December 4, 2009. For more detailed information about the application guidelines, please visit the [Western SARE grant website](#).

**Unique Vegetables:
Climbing Cucurbits**
Sacha Johnson & Carol Miles,
WSU Mount Vernon NWREC

As interest in local food production increases, farmers are seeking new crops to diversify food options, production cycles, and rotations. In this first in a series of articles, we will present summary information on some uncommon vegetables suitable for production in the Pacific Northwest. More detailed information on growing each of these crops is provided in the resource section at the end of this article.

Climbing Cucurbits

While most farmers and consumers know about vining vegetable crops in the cucurbit family such as squash, melons and cucumbers, less commonly known crops in this family are easy to grow and provide unique vegetable qualities.

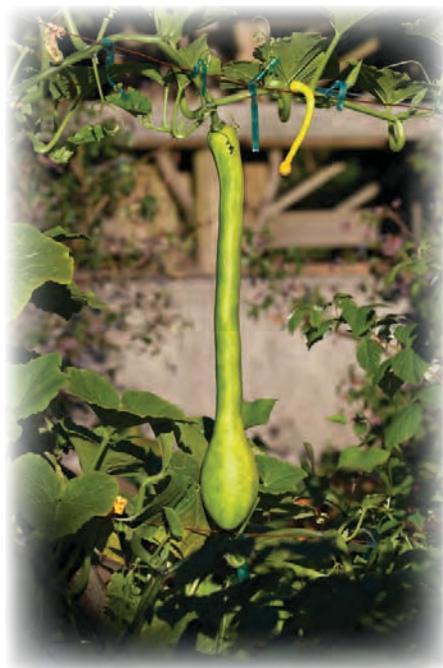
Zucchetta Rampicante

Zucchetta Rampicante is an heirloom climbing summer squash popular throughout Italy. Most summer squash have bush-habit growth form and most summer squash, such as zucchini and yellow crookneck, are Cucurbita pepo varieties. Zucchetta, however, is a variety of Cucurbita moschata and has a vigorous vining growth habit. Round C. moschata stems differ from the distinctly five-sided stems of C. pepo. Zucchetta Rampicante has been described both optimistically as 'robust' and pessimistically as 'aggressive', climbing up fences, walls, and arbors. Its prolific vines yield long cylindrical fruits reaching 3 feet in length and a single plant can produce over 20 squash. If vines are not trellised and remain on the ground, the developing fruits will curl around on themselves. Fruits of Zucchetta Rampicante have firmer texture and nuttier flavor than bush-habit summer squash varieties and range from pale green to beige depending on maturity.

Seeds are widely available throughout the Pacific Northwest and the United States, although they can be difficult to find because Zucchetta goes by so many different names: Tromboncino,

Trompetta di Albenga, Tromba d'Albenga, Zucchini Rampicante, and more. Seed sources include Territorial Seeds, Baker Creek Heirloom Seeds, The Cook's Garden, FedCo Seeds, Renee's Garden Seeds, and West Coast Seeds.

Zucchetta Cucuzzi



Zucchetta Rampicante, photo from Daniel Mosquin, UBC Botanical Garden.

Zucchetta Cucuzzi is another classic climbing squash popular throughout southern Italy and is known as the 'Serpent of Sicily'. Like Zucchetta Rampicante, it goes by many different names including New Guinea Bean, Cucuzzi Carvasi, Italian edible gourd, and, perhaps most revealing of its trellising past, Zucchetta da Pergola. This vegetable actually belongs to the hard-shelled gourd Lagenaria siceraria species. It closely resembles Zucchetta Rampicante in color, form, and vigor with fruits growing up to three feet long. Best eaten when still narrow and 6-18 inches long, fruits allowed to mature will develop into hard-shelled gourds usable for unique storage containers.

Other Vining Summer Squash Varieties



Historic illustration from the 14th century of trellised squash from the "Tacuinum of Vienna"

Additional vining varieties of C. pepo summer squash include 'Costata Romanesco', 'Black Forest' zucchini hybrid, 'Table Dainty', and 'Tatume'. 'Costata Romanesco' is an Italian heirloom prized for its nutty flavor and known for its prolific vining habit. It produces ribbed cylindrical light green fruits. The 'Black Forest' F1 hybrid is dark green and cylindrical and resembles the standard zucchini. 'Table Dainty' produces a rounder mid-sized fruit with alternating dark and light green stripes. 'Tatume' is popular throughout Mexico and produces small round light green fruits.

Luffa gourds

Luffa is another vigorous climbing cucurbit requiring trellising. There are two species of cultivated luffa gourds: angled luffa (Luffa acutangula) and smooth luffa (Luffa aegyptica). Mature fruits average 1-2 feet in length, but can grow much longer. The xylem tissue within the fruit forms a dense fibrous network that creates a support system for maturing seeds. If the hard outer skin and the seeds are removed from the dried luffa, the dense network of fibers functions as a natural scrubbing tool. Thus, luffa goes by many common names including dishcloth gourd, rag gourd, vegetable-sponge, and strainer vine.

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Luffa has been cultivated throughout Asia for centuries for use as a household



Smooth luffa, harvested young for vegetable mature for luffa sponge.
(Photo by Carol Miles)

cleaning agent, and due to the gently abrasive quality of the natural fibers, has become a popular exfoliating agent in the eco-friendly cosmetic industry. Angled luffa is also a common market vegetable throughout Asia. Its immature fruits resemble zucchinis in taste and texture and it is sometimes called Chinese okra due to a similarity in taste. The fruits must be harvested immature since mature fruits become inedible due to their extremely bitter taste. Mature dry fruits serve as sponges, although their angular shape



Angled luffa, harvested young for vegetable. (Photo by Carol Miles)

can make it difficult to remove the skin. Angled luffa is therefore more commonly grown for eating, whereas smooth luffa is more commonly grown for household cleaning.

Luffa species are heat-loving with similar growth requirements to melons. Research from Missouri and North Carolina suggest that commercial production of luffa in the United States could be economically viable. Techniques contributing to successfully growing luffa include using black mulch to warm soil temperatures and transplanting to increase the germination rate and extend the growing season. Crowded plants (spaced less than one foot) will produce fruit with lower fiber density and result in poor quality sponges. Vines are very prolific, growing 15 feet long, and will require a sturdy trellis to support their weight. Vines grown on the ground develop misshapen and discolored luffa which often rot.

Trellising cucurbits

Trellising controls the sprawling habit of most vining cucurbit varieties and maximizes garden space. Vining cucurbit varieties tending to curl on themselves when grown on the ground will grow straight if trellised. In addition to providing more uniform shapes, lifting fruit off the ground also reduces mold problems and discoloration on the underside of the fruits. Melons are an important exception because the fruit 'slip' or detach easily from the vine when ripe. While melons can be grown on a trellis, their fruit need to be supported to prevent slipping.

Cucurbit vines can be trained to any trellis or fence. Many cucurbit crops will need to be trained by weaving vines through the trellis until they begin to drape over the top of the trellis. Pruning off the first few lateral runners discourages the plant from vining on the ground. Remember that the weight of prolific cucurbit vines and mature fruits can become quite heavy, so they require a sturdy trellis. Appropriate trellis materials include wire fencing firmly attached to 8-10 foot tall metal fence posts placed in the ground 1-2 feet and spaced six

feet apart. Additional upright posts or supports may be added through the growing season if needed.

If individual fruits become too large and heavy as they develop, they may need additional support. Pantyhose or reused net produce bags (such as citrus or onion bags) work well by inserting the fruit and tying securely to the trellis. Cloth slings should consist of quick-drying fabrics such as nylon or cotton. Wet cloth slings can make fruit susceptible to mold problems. Developing fruits wedged between trellis supports or wires can warp the trellis and result in deformed fruit.

Resource Information

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Jarvis, B.R. *Trellises and Cages.* University of Minnesota Extension Service. <http://www.extension.umn.edu/yardandgarden/ygbriefs/H237trellis.html>

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Oregon State University. 2004. *Zucchini and Summer Squash.* Commercial Vegetable Production Guides. <http://hort-devel-nwrec.hort.oregonstate.edu/zuc.html>

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Wasatch Community Gardens. *Trellising.* <http://www.wasatchgardens.org/Library/TrellisingHandout1.PDF>

Organic Farming Sector



Grows in Washington State
David Granatstein & Elizabeth Kirby, CSANR, Wenatchee

Despite economic hard times, organic farming in Washington State experienced continued growth in 2008. While growth was less than in 2007 (+26%), the area of certified land grew 18% in 2008 to 92,500 acres, according to a [new report](#) from the WSU Center for Sustaining Agriculture and Natural Resources (CSANR). Each year, CSANR gathers data from certifiers working in Washington and makes a detailed summary of the data available to the public. This work is supported by the Organic Farming Research special funding (USDA) from CSANR.

In 2008, 689 Washington farms were certified organic, with another 53 in transition. These numbers were compared with results from the 2007 USDA Census of Agriculture which for the first time asked farmers about their organic production. The Census data for Washington State showed 1,207 self-identified organic farms. It appears that there are approximately 50% more organic farms than the

certification data account for, and they are likely exempt from organic certification requirements because their sales are direct and less than \$5,000 per year. However, these farms account for two percent of the organic land base in the state (less than 2,000 acres) and an even smaller share of the farm gate sales (less than 0.5%). For the first time, with the help of the Census numbers, it is possible to say that the data provided by certifiers accurately represent the land area and economic value of organic farming in the state even though a large number of exempt organic producers are not included.

The Census breaks data out by state. Washington ranked 18th nationally in terms of total 2007 Census defined organic land (64,830 acres, 15% less than the certifier data). However, the state ranked second in the nation for organic product farm gate sales value (\$159.9 million), behind California at \$656.8 million. Oregon had the third highest farm gate sales value, attesting to the economic importance of the specialty crops grown on the west coast. The Census organic sales estimate for Washington

was considerably lower than the \$213 million reported by the two main certifiers, suggesting that some portion of the higher value crop or livestock producers did not complete the product sales question or did not respond to the census. Therefore, the Census data should be considered as estimates.

Acreage

Three types of crops dominate organic acreage in Washington: forage, vegetables, and tree fruit (Table 1). In 2008, forage area represented 31% of the certified land in the state. Organic hay acreage grew 45%, driven by an increase of over 1,700 acres of organic alfalfa mostly in Grant and Benton counties. This should help offset the shortage of organic livestock feed that occurred after a number of new organic dairies came on-line in 2006.

Organic vegetable acreage in Washington, 21% of total organic land, grew dramatically from 2004-2007, but showed no increase in 2008. This may be partly explained by stiff competition for land in the past year for biofuel crops or other

Table 1: Washington State Certified Organic Acreage

| | Acres (C=certified; T=transition) | | | | | | % Growth 8-Jul | % of Total 2008 |
|---------------------------------------|--------------------------------------|---------------|---------------|---------------|---------------|--------------|-------------------|--------------------|
| | C 2004 | C 2005 | C 2006 | C 2007 | C 2008 | T 2008 | | |
| Forage | 8,400 | 7,907 | 17,321 | 26,091 | 30,031 | 1,552 | 15% | 31% |
| Vegetables | 9,971 | 10,985 | 15,466 | 20,042 | 19,836 | 27 | 0% | 21% |
| Tree Fruit | 9,468 | 8,955 | 10,110 | 10,959 | 16,983 | 6,721 | 55% | 18% |
| Grains, Dry Beans, Oilseeds | 5,435 | 6,347 | 5,240 | 5,276 | 8,508 | 31 | 61% | 9% |
| Small Fruit and Nuts | 2,528 | 2,535 | 2,847 | 3,014 | 3,205 | 534 | 6% | 3% |
| Herbs | 1,079 | 926 | 1,012 | 1,267 | 1,137 | 1 | 0% | 1% |
| Other crops | 372 | 665 | 821 | 730 | 787 | 1 | 8% | 1% |
| Fallow | 2,562 | 2,136 | 3,840 | 6,918 | 9,819 | 500 | 42% | 10% |
| Other non-crop land | 430 | 537 | 442 | 423 | 985 | - | 133% | 1% |
| Other land, undefined | 3,475 | 5,188 | 7,226 | 6,752 | 4,848 | 13 | | 5% |
| Total acres (with double crop) | 43,720 | 46,181 | 64,325 | 81,472 | 96,139 | 9,380 | 18% | |
| Total area (no double crop) | | 45,009 | 61,540 | 78,529 | 92,555 | 9,380 | | |

Totals may not add exactly due to decimal rounding. Vegetable category includes melons. Certified acreage total includes double cropped acres (3,584 in 2008), primarily peas-sweet corn. Total 2008 certified land area is 92,555 ac including 4,848 ac undefined WSDA-certified land either not cropped or from multiple small cropped sites not entered in database. 2004 data include WSDA, OTCO, and QAI. In 2005, ICS data added, and in 2007, CCOF data added. Data do not include non-certified exempt farms.

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conventional crops at historic high prices. The main organic vegetables are sweet corn, green peas, potatoes, green beans, and onions. Sweet corn and green peas make up 2/3 of the state's organic vegetable acreage; Washington is likely the leading U.S. organic producer of both crops. Much of this production goes to processing, especially for frozen products.

Washington State leads the U.S. in both conventional and organic apple, pear, and cherry acreage. Certified acres of apples and cherries each expanded over 60% in 2008. Organic apples now represent about eight percent of all apple acres in the state. Organic pear acreage expanded more moderately. Organic apple prices have declined for the 2008 crop, although sales are still growing, but not as fast as increasing supplies. The organic tree fruit portfolio in the state will become more diverse with over 1,200 acres of peaches, apricots, nectarines, and plums currently in transition.

While Washington State is a major wheat producer, organic production remains a challenge, particularly in the dryland region of eastern Washington. Organic wheat acreage rose substantially in 2008, but much of this growth appeared to be on irrigated farms as part of diversified crop rotations. Corn production steadily increased since 2004, and assuming most of it is harvested for grain and silage, this will help strengthen in-state feed supplies for organic livestock. However, less than 100 acres of organic oilseeds exist in the state, and by-products for feed from these crops (e.g., canola meal) will continue to be imported.

Organic farming occurs all around the state, but a few counties have no certified land. Seventy-one percent of organic acreage and 63% of organic farms were located in eastern Washington in 2008 and accounted for 80% of the farm gate sales value. Yakima County leads in the number of certified farms (108), while Grant and Benton Counties together have 34% of all certified acres in the state. King County certified acreage increased 139% to 3,040 acres, despite there being no transition acres reported in

2007. Whatcom, Skagit, and Lewis counties saw organic acreage increase 7-14%. Based on reported transition acreage, eastside counties will see continued, but slower growth. The majority of transition acres reported by certifiers were in tree fruit (6,721) and forage (1,552) crops, mostly in eastern Washington.

Farm Gate Values

Farm gate sales information from certifiers lags acreage data by one year. Total organic farm gate sales for 2007 exceeded \$213 million, an increase of over 40% from the previous year. The WSDA Organic Food Program also collects sales figures from handlers and processors, but it is not possible to calculate the total economic value from the organic sector since farm gate value cannot be separated from the processor or handler sales which include the farm gate price. An unknown amount of farm production is exported out of state for processing, and an unknown amount of organic products are imported by state processors. However, it seems likely that the combination of farm gate sales and value added processing and handling exceeded \$400 million in 2007. For example, fruit companies in the state sold at least 3.5 million boxes (40 lb) of organic apples at an average price of \$36 per box. This one organic crop alone would thus account for \$126 million of economic activity.

Industry data in the coming months will indicate how much, if any, organic food sales have slowed. However, slower growth and declining demand are not the same thing; coping with the former will be easier than coping with the latter. There may need to be adjustments to production area in the state, particularly plans for further expansion. But if growers have gone through the effort and expense of becoming certified, they may want to keep their organic status for a year or two more since organic prices could rebound rapidly in an improving economy.

Reusing Plastic Nursery



Containers

Lisa Friend, RE Sources,
Bellingham

A little backyard bartering is going on in Snohomish County and that is a very good thing when it comes to plastic nursery containers. WSU Snohomish County Extension joined with a half-dozen other agencies to sponsor an agricultural plastics recycling drive in 2008. Dozens of homeowners and businesses contributed garden pots along with farm plastics. The largest garden pots were scooped up by the high school horticultural program, which used them to grow starts for a community garden. Unfortunately, similar options are not available for gardeners throughout the Puget Sound and in some areas programs that were active in 2008 may not be available in 2009.

Decline in Recycling Programs

Recycling programs in many areas have been curtailed due to budget reductions. Many nurseries that once accepted pots for reuse or recycling have scaled back due to contamination concerns and a recent plunge in the value of recycled plastic. Recyclers in northwest Washington that used to pick up pots of all sizes for free have stopped doing so because of the reduced value of plastic. Companies producing pipes and electrical housings from recycled plastic are unable to sell to the construction industry since housing starts declined. Recycling on all levels



A Snohomish-County grower loads her truck with reusable pots during the community's 2008 recycling collection event. Photo courtesy of RE Sources.

Continued on next page

has been affected by the economic downturn.

This is bad news for the gardening industry which uses an estimated 320 million pounds of plastic to produce nursery pots, cell packs, and flats for the U.S. horticulture industry each year (according to a 2004 estimate by Penn State University's College of Agricultural Science). If the materials cannot be recycled, they often end up as expensive garbage.

Reusing Plastic Containers

Reusing an item is always a good choice and is preferable even to recycling. Recycling the product if it is no longer of use is the next best step in contributing to a sustainable use of resources. Reusing and recycling become very important sustainability issues when you consider 320 million pounds of plastic are involved each year. Some garden stores offer reuse opportunities to their customers, especially for larger pots. Many of these businesses save money on their garbage bills by reusing or giving away usable pots and flats.

Exchanging Plastic Pots in the Electronic Age

Popular websites have made exchanges of all kinds easier over the past few years. RE Sources staff tested several public and business internet exchange web sites and found many of them very user friendly. The two websites, Industrial Materials Exchange (IMEX) and King County's What do I do With site, are both useful resources, but neither provides the interactive opportunities that other internet exchange websites provide. The following summarizes the internet exchange programs we tested, "Your King County Exchange," Freecycle, Craigslist, eBay, and 2Good2Toss, which are active in 20 cities and counties in Washington.

[Your King County Exchange](#). To search, click on "Household Items" and select the "Garden/Landscaping" element. If you see something you like, click on it to get the contact information.

[Northwest Ag Plastics](#) has posted the 2009 pick-up schedule for recycling plastic agricultural crop protection containers (April-October) [Western Washington](#) and [Eastern Washington](#). Current support by chemical companies through the [Agricultural Container Recycling Council \(ACRC\)](#) sponsored program allows for expansion in collection activities this year.

To submit a listing, click on "Set up an Account" and register using your King County street address. Follow the on-line instructions to post your exchange items – this is an easy site to use. Listings are "live" for 30 days, unless you remove them sooner.

[Freecycle](#). Search for your city and click on its link. Only residents of the city served will be able to search for or post items to Freecycle in their area. Read the instructions, then click the "Join this Group" link at the bottom of the page. You will likely need a "Yahoo" e-mail address to do so. Follow the instructions on the page and, when finished, click "Join." To search for available materials, enter "Garden" or "Plant" in the search box and contact the lister, as appropriate.

Businesses that Recycle and Reuse Nursery Containers

RE Sources and Seattle Public Utilities developed a list, [Plastic Recyclers in the Seattle Area](#), of businesses that accept nursery containers for reuse or recycling. Along with McLendon Hardware stores in Puget Sound, many of the 21 businesses listed continue to accept nursery pots from the public for free, although some have ceased offering the service now that recycling is less available. Call each company first to see which materials they accept at no charge.

Once you have joined, you can post materials using the subject, "offered." Submit a short description of your offered item and provide your neighborhood in parentheses. For example: "Offered, square gallon pots (Ballard)". You will need to check your Yahoo account for responses to your listing.

[Craigslist](#). Under U.S. cities, select your closest urban area or try the "more" option at the bottom of the list for more choices. Choose the "Free" section or "Farm/Garden" (both under "For Sale") and enter "Garden" "Pots" or "Flower" in the search box. If you find an item, click on it to get the contact information

Posting is easy. To submit a listing, click on "Post" from any page. Select either "Free" or "Farm/Garden." After you have finished filling in the information, you will receive an e-mail confirmation. You must click on the url link attached to this confirmation and hit "publish." There is also an opportunity to edit or delete your listing at this stage.

[eBay](#). Find the "Home/Garden" section. Refine your search by choosing "Yard, Garden and Outdoor Living," followed by "Gardening and Plants." Finally, enter "Pots," "Used," or "Plastic" in the search box. You must provide your zip code, and eBay will then search for offerings in your area. You can also sort your search by selecting the "Sort By" element and choosing "distance," which will list the nearest offerings first. If you find something, click on it to get the contact information. Be prepared to pay for the item and shipping costs, but these costs are relatively low.

To submit a listing, go to the right-hand top corner of any page and click on "sell." Hit the blue "Start selling" button and, on the next page, "register." If you are already registered, log in and go from there.

[2Good2Toss](#). Select the city or county in which you reside, if available. If you do not have a street address in a participating community, you

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will be able to view listings, but not post them. Under "Search," enter "Garden", which will provide "Landscape and Garden" listings for the chosen community or all of 2Good2Toss if you search further. If you see a listing you like, click on the item and later on "contact details."

To submit a listing, click on "Register a New Account" and follow the sign-up instructions. Keep in mind that materials may not be sold on this page and that it is designed for use by not-for-profit enterprises. A bonus of this site is that it will automatically suggest possible matches for your listing after you have posted it.

Cleaning Used Pots

If you have used nursery containers, consider sterilizing them before reuse. Sudden Oak Death is a serious disease sometimes transmitted through contaminated soil. Other pathogens can also live on used pots. Heat or chemical treatments are most commonly used to sterilize pots (Robbins, 2008). First, wash the pots to remove any debris, focusing on the inside of the pot where plant roots may come into contact with any potential pathogens. For heat sterilization, Robbins recommends using 174°F water for at least 10 seconds or steam at 199°F for 1 minute. Chemical treatments can be used as a dip. Mix one of the following chemicals in warm water and hold the pot in the solution for at least 10 seconds: quaternary ammonium chloride salts, hydrogen dioxide, chlorine dioxide or chlorine bleach. Chlorine bleach is the most commonly available chemical and so is frequently used to sterilize pots.

Some grades of plastic pots will not be able to withstand many high heat or chemical treatments and so may only be suitable for reuse once or twice. If the pot is weakened and not suitable for reuse, recycle it so that the plastic can be completely broken down and reformed.

What the Future Might Hold

While the nursery supply industry experiments with compostable pots and debates whether to standardize pot

sizes, home gardeners and landscapers are left with plastic to reuse or recycle. Starting seeds at home and reusing containers help prevent some waste. Electronic exchanges such as those listed above are improving reuse opportunities throughout Puget Sound.

There will always be cracked and broken pots, however, for recycling when markets improve. Fortunately, some area manufacturers are looking to buy more recycled material for use here in the U.S. and international plastic recycling markets are predicted to improve by late spring of 2009.

References

Robbins, Jim. 2008. *The Real Green Industry: Plastic alternatives*. GreenBeam Pro, Friday, 18 April 2008. www.greenbeampro.com/content/view/1337/44/



Farm Succession Planning Diana Roberts, Agronomist, Washington State University Spokane County Extension

The average age of farmers in the US has increased to 57 years, according to the US Census. And 60% of them will die without a will (or a succession plan for their farm), according to data collected in Montana. A survey of farmers in Spokane and Lincoln Counties in Washington showed that they considered farm succession planning a high educational priority.

Acting on this information, a team of WSU and OSU Extension faculty won a grant from the WSU Western Center for Risk Management Education to conduct farm succession planning workshops across eastern Washington and eastern Oregon.



Workshop Offerings

From November 2006 through January 2008, we held three workshops at each of six locations in the region. Workshop topics included:

- Realizing the need for developing a farm succession plan,
- Communicating successfully with all the family members involved,
- Identifying appropriate professional input,
- Understanding relevant state laws.
- Understanding estate laws and writing wills,
- Conducting successful family meetings,
- Overcoming challenges encountered in the process.
- Making good use of attorney time,
- Specifying inheritance of treasured personal items,
- Making provisions for the family and business in the event of a sudden death,
- Discussing the obstacles & getting motivated to complete the plan!

The interest in the workshops exceeded our expectations, demonstrating the need for this education. Following the first two workshops, families who committed to completing a succession plan for their farm were offered the free services of a coach who would help encourage them through the process. The coaches were six professionals with backgrounds in agriculture, business, or banking. They had received training from WSU in an earlier project designed to help orchardists and diary farmers in Washington state decide whether to remain farming or how to exit with a plan if farming were no longer a viable option.

The coaches were not licensed to provide legal advice to the families, which was frustrating to some of the

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project participants, but this was an unavoidable facet of university-based educational programs. The coaches provided the farm families with:

- encouragement via regular phone calls
- help with goal setting
- meeting facilitation
- resource materials
- useful contacts
- encouragement to complete project evaluations.

Project Summary

The number of families (86) who signed up to receive coaching exceeded our expectations, and ultimately, our budget. We also recognized that farm succession planning can be a lengthy and arduous process for families and it was challenging for many of them to finish within the time frame of the grant funding. However, many of them completed important steps in the process, such as:

- setting goals and priorities for farm succession,
- discussing the workshops with a family branch or generation who didn't attend,
- holding a family meeting,
- consulting an attorney or an accountant or a financial planner,
- updating their wills.

Available Information Resources

Most of the workshop presentations and handouts are [available on the internet](#). The workbook used for the project is *Ties to the Land: Your Family Forest Heritage: Planning for an Orderly Transition Intergenerational*

Family Forest Project" by Clinton Benz et al. and is available from the [Austin Family Business Center, OSU, Corvallis, OR](#) at 800-859-7609.



Events

Range Riders: Supporting the Coexistence of Wolves and Livestock

"How can increasing wolf populations and successful livestock operations coexist?" This is the question to be posed at a three-day workshop scheduled for late May. The Madison Valley Ranchlands Group and Keystone Conservation are offering a forum for sharing information about ranching near wolves and an orientation to range riding for livestock producers and riders. By gathering people raising livestock near wolves and biologists intent on making coexistence work, the orientation offers the chance to gain insight into wolf/livestock interactions and share experience on successful (and unsuccessful) practices.

Wolves represent a major new challenge to livestock production in Montana, Wyoming, and Idaho. In an attempt to reduce conflict between wolves and livestock, the Antelope Basin Range Riders program began in 2004, as a collaborative effort of the Madison Valley Ranchlands Group and Keystone Conservation. Each summer, Range Riders Jim and Marilyn Powers patrol 35,000 acres of public land in Antelope Basin, near Henry's Lake on the Montana/Idaho border. The Riders pursue the task of keeping wolves and cattle apart through a combination of vigilant observation, tracking, herding, and non-lethal hazing techniques. They have shown exceptional skill at their work. Very few cattle or wolves have been lost during their tenure, despite growing numbers of wolves. This camp will provide an opportunity for others to learn from their vast experience, as well as a forum for a wide variety of participants to share their expertise.

The Range Riders Orientation Camp will take place on May 28-30, 2009, at the Wall Creek Wildlife Management Area, south of Cameron, Montana. The Program will include time afield alongside Range Riders Jim and Marilyn Powers, as well as in-camp presentation and discussion

sessions devoted to understanding wolf ecology and the variety of tools and practices that can be applied to reduce wolf/livestock conflict. For more information, livestock producers or riders interested in attending the orientation camp should contact [Cecily Costello](#), Keystone Conservation, 406-284-3477, or [Lane Adamson](#), Madison Valley Ranchlands Group, 406-682-3259.

[The Madison Valley Ranchlands Group](#) works to protect the ranching way of life and the biologically healthy open spaces on which ranching depends. [Keystone Conservation](#) has worked to protect and restore native predators and their habitats in the Northern Rockies since 1991. Keystone Conservation explores solutions that help people and wildlife coexist.

Water and Land Use in the Pacific Northwest: Integrating Communities and Watersheds

The WSU Water Research Center is organizing a conference on Water and Land Use in the Pacific Northwest: Integrating Communities and Watersheds. This conference will be held at the Skamania Lodge, in Stevenson, Washington, on November 4-6, 2009. Further details about the conference can be found the [WRC website](#). For questions about the conference, contact [Diane Weber](#) at 509-335-5532.

Tidbits

Oregon Friends of Family Farmers' Land and Resource Connection Service

[Attra](#). Friends of Family Farmers is happy to announce the official launch of [iFarm Oregon](#), a land and resource connection service with an online database for young and beginning farmers. As the average age of Oregon farmers reaches nearly 58 years, iFarm Oregon is intended to connect new farmers with experienced farmers and those preparing to exit agriculture. The [online database](#), allows the user to search for listings, which include: agricultural services,

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land for sale, land wanted, unique leasing arrangements, partnership options, mentoring and internship programs, educational opportunities and financial resources.

Ballard Farmers Market Blog

Launched the first week of April, the [new blog](#) offers information about the Market: products sold, vendors, preparation tips, and Market happenings.

Journalist Follows Steer From Field to Plate

Attra. Journalist Mark Neuzil, with [MinnPost.com](#), recently [documented](#) the process of acquiring local, organic beef. His article, along with photos, follows a steer from the field to slaughter and processing. He outlines the steer's production, along with challenges to purchasing local meat.

Researchers Evaluate No-till Production for Carbon Sequestration

[eXtension](#). No-till is recognized globally as an ideal means of conserving soil and water while also storing soil carbon, but the agricultural practice may not be applicable under all environmental conditions. Ohio State University soil scientists measured carbon levels in no-till fields throughout seven states and found that soil texture, moisture, temperature, and terrain parameters affected the amount of carbon stored on the soil surface. "The message here is that no-till is not applicable everywhere as a means of practicing carbon sequestration. There are situations where other carbon sequestration methods would be more effective," said Rattan Lal, a soil scientist with Ohio State's Ohio Agricultural Research and Development Center.

Corn and Climate Report

The [Great Plains Institute](#) has released The [Corn and Climate Report](#), (17 Mb) in partnership with the National Oceanic and Atmospheric Administration, Iowa State University, and the North Central Bioeconomy Consortium. The report is a collection of essays transcribed from presentations given by climatologists

at the 2008 ISU Biobased Industry Outlook Conference's Corn and Climate Post Conference Workshop. These essays combine basic climate science that underscores the reality of human-caused global warming with practical advice that farmers can use to help mitigate their greenhouse gas emissions, prepare for a cap and trade system, and adapt to the greenhouse gases already in the atmosphere. A 24-page [Executive Summary](#) (6 Mb) is also available.

Can Buying Local Mean Clean Water Too?

[AFT](#). Buying locally from nearby farmers who care for the land can provide consumers with more than fresh food. Residents of the New York City metropolitan region who buy [Pure Catskills](#) branded products are also supporting the farmers who keep their drinking water clean. During the past decade, Catskill farmers have worked in cooperation with the [Watershed Agricultural Council](#) on a unique land protection and environmental stewardship program that keeps the watershed's streams and reservoirs pristine—the same watershed that supplies drinking water to millions of New York City residents. Now, through a local food map and other resources, the new Pure Catskills initiative is helping consumers [locate products](#) from the farms that grow wholesome local food and clean water.

Wisconsin Governor Ties Farmland Protection to Economic Sustainability

[AFT](#). While budget cuts in many states pose a threat to key farmland protection programs, Wisconsin is starting a new initiative. Governor Doyle announced the inclusion of the [Working Lands Initiative](#) in his budget. "Wisconsin's farms are an essential part of our economy. Under the working lands program, this budget will slow the loss of good farmland." He also listed the working lands program among several steps the state will take to strengthen itself in key economic areas. The Working Lands Program is a [budget-neutral package](#) of incentives to

promote farmland protection and future investments in agricultural enterprises in the state.

Resources

Restorative Commons: Creating Health and Well-being through Urban Landscapes, Edited by Lindsay Campbell and Anne Wiesen

[IFCAE](#). Published by the U.S. Forest Service Northern Research Station (NRS), this book is a collection of 18 articles inspired by the [Meristem](#) 2007 Forum "Restorative Commons for Community Health." The [volume](#) (25 Mb) explores the multifaceted relationship between human health and the urban environment, drawing attention to sites and programs that feature creative design, foster civic stewardship of natural resources, and promote sustainability. It includes academic writing of researchers in the fields of medical history, evolutionary psychology, and urban planning. And it couples this writing with practitioners' experiential knowledge presented as case studies, thought pieces, and interviews. The book is suited for use in graduate and undergraduate education in a variety of disciplines including public health, urban planning, architecture, design, environmental studies and ecology. It is meant to share lessons learned from the fields of urban natural resource management and design with other practitioners, policymakers, and the general public.

The book includes 278 pages, full color with 100 photographs and 12 illustrations and can be requested or downloaded at the [NRS site](#) or email [NRS](#).

Organic Alfalfa Management Guide

A newly published [Organic Alfalfa Management Guide](#) is now available. Email author [Pat Fuerst](#) for a hard copy.

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Benefits of Organic Dairying Covered in New Publication

Attra. A calculator has been developed to help consumers, dairy farmers, and food companies estimate the avoided environmental, public health, and animal welfare impacts associated with shifting dairy cows from conventional to organic management. The design of the calculator, the equations in it, and sources of input variable values are described in the [Shades of Green](#) (PDF/862KB) report.

Report Outlines Local Food Distribution Models

Attra. [Recent research](#) assessed the performance and success of distribution models for moving food in a local network. The research included interviews with more than 50 chefs, farmers and distributors about what they think works best for moving local food effectively, and what they wish worked better. Geographically, the research focused on large urban markets with partial-year (rather than year-round) growing seasons and sought out examples of models that deviated from the conventional wholesale distribution system.

Research Shows Diversified Cropping Systems Can Be Profitable

ASA. University of Wisconsin's College of Agriculture and Life Sciences and Michael Fields Agricultural Institute agronomists established the Wisconsin Integrated Cropping Systems Trial (WICST) in 1990 to study various cropping systems. Their [findings](#) indicate that diverse, low-input cropping systems can be as productive per unit of land as conventional systems. However, these systems are associated with more variability in yields, primarily due to the difficulty of mechanical weed control in wet springs. Full research results from this current study are presented by Chavas et al. in the 2009 March-April issue of *Agronomy Journal*.

Guide Explains Meat Labels

Sustainable Table has published a [Glossary of Meat Production Methods](#)

(PDF/2.3MB) for consumers to use while shopping. This guide covers meat labels such as biodynamic, cage free, and heritage.

Meat & Poultry at Farmers Markets

While operating under a much different state regulatory environment, the [New York Small Farms Livestock Processing Work Team](#) announced two new publications. [Meat and Poultry at the Market: What a Farmers' Market Manager Needs to Know](#) and [Meat and Poultry at the Market: What a Farmer Needs to Know](#) cover many specific details on what is required of farmers in order to sell at the farmers' market.

New Tillage Publication

A new University of California online publication outlines strip-tillage, a management practice with potential to save farmers money in fuel, labor, and equipment costs while decreasing the amount of soil disturbed and dust generated as fields are prepared for planting. The eight-page publication, [Strip-Tillage in California's Central Valley](#) (2.5 Mb). Strip-tillage is a form of conservation tillage that breaks up subsoil layers while leaving the soil surface and crop residue relatively undisturbed. "Less disturbed soil allows beneficial soil food web communities to thrive, which can improve soil conditions and potentially reduce herbicide use," said Dennis Bryant, a co-author of the publication.

Washington State Forestland Database

WSU. We are happy to announce the availability of a report, statistics, maps and data from the 2007 Washington State Forestland Database. The [Washington State Forestland Database](#) combines land ownership, land use, and assessment information with physical characteristics of the land to develop economic, social, and

environmental metrics about the forest land base. The spatially explicit information in the database allows for analysis at the watershed, county and state level. This high resolution dataset can produce maps, statistics and models at multiple scales.

To map and quantify the location and features of forestlands, parcel data, and assessor's attributes from the state's 39 counties were collected and normalized into a common statewide format. In counties where no GIS parcel data exists, GIS "pseudo parcels" were developed from assessor's legal descriptions. The three million individual parcels in the normalized database were then compared to forestland cover maps developed from Landsat satellite imagery as part of the National Land Cover Dataset. In addition to the land cover assessments, assessor's tax rolls were used to identify forested land uses as well as participation in forestland tax programs. Forest land parcels as small as one acre were included in the database.

Three primary products were developed: the Washington State Forestland Database, statistics on the numbers and acres of forestland parcels, and maps of the distribution and extent of private forestlands. Statistics derived from the Database reveal that 215,000 small forest landowners own 5.7 million acres of forestland, half of the 11.6 million acres of private forestland in the state. Over 89,000 of those small forest landowners have ownerships greater than 10 acres and 55,000 own more than 20 acres. The maps of the distribution of forestlands in the State of Washington show that small forest landowner properties, often adjacent to suburban and exurban lands, provide a critical buffer between upland industrial forestlands and lowland residential areas.



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Updated Research, Education and Economics Information System

USDA. Secretary of Agriculture Tom Vilsack [unveiled](#) an updated version of USDA's [Research, Education and Economics Information System \(REEIS\)](#), which allows the public to measure the impact and effectiveness of the Department's research, education, and extension programs. The latest version adds additional data sources, opens data to Google Search and provides for extended data analysis.

"The new version of the USDA's information system provides the public with access to up-to-date research information and tools to understand how their funds are being used to advance our knowledge of agriculture," Vilsack said. "This is another step President Obama and USDA are taking to provide transparency and accountability to the American taxpayer."

REEIS version 5.0 includes the following new features:

Project information will now include data from 2007 Accomplishment Reports from the Plan of Work System, and active and recently completed projects in the Current Research Information System (CRIS) database;

More than 40,000 new and recently completed research projects and more than 1,000 planned programs are now easily accessible through Google Search; and

Extended data analytics provide new reports and charts that focus on formula grant rankings and project trends by state, region, institution and knowledge area.

Examples of previous research funded by CSREES, which would now be included in REEIS include an environmentally-friendly wood adhesive made with renewable resources; an edible vegetable- and fruit-based film that is used to provide a layer of protection for meats, fruits and vegetables from E. coli and other bacteria and research

that identified a gene in rice that allows it to survive flooding, saving the world's poorest populations \$1 billion a year in lost rice crops.

Since its initial development in 2002, REEIS has grown and expanded its data repository. REEIS currently houses information from several government agencies, including the Agricultural Research Service, CSREES, Economic Research Service, National Agricultural Statistics Service and U.S. Forest Service.

REEIS offers information ranging from agricultural and forestry research projects, to state accomplishment reports, statistics on funding, publications, institutions, faculties and students.

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