

# Bramble Variety Trials in Utah to Reduce Disease, Increase Production and Enhance Profitability

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Title: Bramble Variety Trials in Utah to Reduce Disease, Increase Production and Enhance Profitability

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With a short shelf life, brambles are well suited to local production and consumption.

## Situation:

Brambles, including raspberries and blackberries, are a high-value crop with a short shelf life, making them well suited to local production and consumption. In Utah, raspberries have succeeded in the northern part of the state, alongside tourism. Otherwise, production is limited to a handful of growers scattered around the state.

Raspberry production in northern Utah has been devastated by an outbreak of Raspberry Bushy Dwarf (RBDV), a pollen-borne virus, largely because growers had relied on a virus-susceptible variety, Canby. Meanwhile, a number of new varieties, some resistant to RBDV, have been developed that offer adaptability to a wide range of climates.

Population growth in recent years has pushed development in Utah and other Intermountain states onto what had been the best farmland, often leaving small parcels (1-20 acres) typically underutilized and infested with weeds. Properly managed, these small parcels are ideally suited to produce a rich variety of high-value crops, including brambles, sold directly to consumers at the farm gate, farmers markets or Community Supported Agriculture.

## Objectives:

- Conduct bramble trials on farmer fields across five climate zones in Utah and at one university research station
- Using trial results, develop lists of appropriate cultivars and cultural practices for the various climate zones
- Conduct field days and develop fact sheets and articles to disseminate research results to growers in Utah and other Intermountain states
- Conduct follow-up surveys of field day attendees to assess what information was important to them and what varieties or practices they may have adopted



Raspberries make an ideal crop for small parcels of productive cropland.



Attendees at a field day inspect the variety Caroline.

## Actions:

Under a previous grant (from the Utah Community/University Research Initiative) in 2006, bramble plants, irrigation systems and the needed equipment and supplies were purchased and five fields were planted, both organic and conventional.

This Western SARE Professional + Producer Grant is being used to:

- maintain the planting at the five small-farm test locations
- collect necessary data on variety performance and cultural practices
- disseminate the results to commercial growers

Each plot is one row wide and 12 feet long. Control comparisons (in red on the table) are a subset of varieties that have been planted at all locations. To assist with irrigation, Watermark sensors have been purchased and deployed at each site.



Participants learn about new raspberry varieties that may be adaptable to Utah and other Intermountain states.

## Results:

- Fall-bearing raspberries, with proper irrigation management, performed well at several sites. Some irrigators worried about watering too much, but sensors and education helped improve irrigation applications in mid and late season 2007.
- Summer-bearing raspberries were frozen out in 2007. As of spring 2008, it was too early to assess their performance.
- Trials in Cache and Washington counties encountered weed problems, a particular challenge in the Certified Organic plots in Washington County. Steps are being taken to help growers improve weed management.



Rich	Cache	Davis	Utah	Washington
Florican				
Boyne	C. Bounty	C. Bounty	Canby	Canby
C. Bounty	C. Dawn	C. Dawn	Cowichan	Cowichan
Canby	Canby	Canby	Georgia	Georgia
Coho	Chemainus	Chemainus	Lauren	Lauren
Cowichan	Coho	Coho	Mautere	Magana
Encore	Cowichan	Cowichan	Tulameen	Mautere
K-81-6	Encore	C. Delight		
Killarney	Georgia	Georgia		
Latham	Killarney	Lauren		
Mautere	Latham	Mautere		
Nova	Mautere	Reveille		
	Nova	Royalty		
	Reveille	Saarnich		
	Saarnich	Titan		
	Tulameen	Tulameen		
WDNV2	WSNV2			
	Willamette			
Fall				
Caroline	Anne	Anne	Anne	Anne
Heritage	Caroline	Caroline	Autumn Bliss	Autumn Bliss
Polana	Heritage	Heritage	Autumn Britten	Autumn Britten
Summit	Himbo top	Himbo top	Caroline	Caroline
	Jaelyn	Jaelyn	Heritage	Heritage
	Joan J	Joan J	Himbo top	Himbo top
	Polana	Polana	Jaelyn	Jaelyn
	Ruby	Ruby	Polana	Polana
	Summit	Summit	Summit	Summit
	Polka			

Note: Varieties in red were kept common across locations as "internal controls."

## Potential Benefits:

Fall raspberries at Kaysville put on a light crop in 2008, and plants in all trial plots are expected to bear fruit in 2008.

To date, the project team has made useful observations in comparing the extent of winter injury among cultivars, which will be useful in developing variety recommendations.

In the long run, this project is expected to provide:

- Opportunities for agricultural diversification
- Technology that will allow small-parcel farms to become economically viable
- Regionally appropriate information on a new crop that can satisfy needs for a locally grown, nutritious food
- Information to develop a regionally appropriate organic fruit production system, which, in turn, will reduce the use of toxic materials