

**High Tunnel Production of PrimeJim® and PrimeJan® Blackberries
Progress Report #1**

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This proposal is to establish a trial planting of both Prime Jim® and Prime Jan® primocane fruiting blackberries at the UMass Cold Spring Orchard Research and Education Center in Belchertown Massachusetts half of which will be grown in high tunnels and half under normal field conditions.

Objectives:

- to introduce primocane blackberry cultivars to New England growers
- to evaluate (in general) the differences between high tunnel and open field production of primocane blackberries (not a statistical comparison)
- to determine the best management practices for high tunnel and open field production of primocane blackberries

Proposed Procedure: Primocane blackberries will be planted in the spring of 2007 at the [UMass Cold Spring Orchard Research and Education Center](#) in Belchertown, MA. Rows will be planted at 8' between rows and 36" between plants in the row. Half will be covered with a high tunnel and half will remain in the open. Normal weed and pest management practices will be applied as needed based on scouting and recommendations. Scouting will be carried out and recommendations made by UMass Small Fruit Specialist Sonia Schloemann. Additionally, normal fertilization and irrigation practices will be carried out. Data on bloom period initiation and duration will be collected according to cultivar and growing system (open vs. tunnel). Fruit ripening, first harvest, yield and quality will also be recorded by cultivar and growing system. Data will be collected for 3 consecutive years and results disseminated via the Newsletter [Massachusetts Berry Notes](#) and at grower meetings and conferences such as New England Vegetable & Fruit Conference, Mass Fruit Growers Summer Meeting, UMass Extension Fruit Program Summer Twilight Meetings. Funding from [North American Bramble Growers Association](#) is requested to pay part of the establishment costs for the project. The [Massachusetts Fruit Growers Association](#) is being asked to cover the balance of establishment costs. All data collection and results dissemination will be carried out by Ms. Schloemann at no cost to the project.

Amended Procedure: Project objectives remain unchanged. However, funding received was \$1,200 less than requested so adjustments were made to the procedure. A used high tunnel frame was located and moved to the project site during summer '07. The span and length of the frame determined the dimensions of the planting. Two rows of each variety were planted. The pairs of rows were planted 5' apart in order to fit within the 15' span of the hoop frame. The pairs of rows were planted to allow for 15' between two tunnel sections, once constructed. Plant spacing of 4' in the row was used. A 25' buffer space was left unplanted between the section where the

high tunnel will be installed and the section of the rows that will not be covered. Black plastic mulch was used with drip irrigation beneath was installed to aid in weed management.

A delay in planting resulted from delayed delivery of plants from Norcal Nursery. The only plant material available was tissue cultured plugs. Plants were delivered in mid-June and initially set out in pots in order for them to size up a bit before planting in the field. Field planting occurred on July 25th. Trellis posts were installed during the month of August. Irrigation supply lines were also installed at that time. Growth and yield parameters will be measured in '08 as originally proposed.

Progress and Expenditures to date: Two small, used high tunnel frames were located at the UMass Agronomy Farm, disassembled, and moved to the UMass Cold Spring Orchard. The height (6') was determined to be too low for blackberries, so custom ground posts were manufactured to raise the height to 9'. This step added time to the process such that the hoop house construction was delayed. All components (except poly and wood framing material) is on site and construction will proceed as weather allows.

Site preparation was completed, plastic mulch w/ drip tape installed and plants planted as described above. Trellis posts were installed but no wires are up yet.

Due to the delay in planting, no fruiting occurred and therefore no data was collected for the project. However, plants became well established by the end of the season and data collection will take place in the '08 growing season.

Timetable:

	Proposed	Progress
Spring/Summer 2007	<ul style="list-style-type: none"> Establish and maintain planting; record growth and flowering data 	<ul style="list-style-type: none"> Site prepared Used tunnel located and moved Plants ordered
Summer 2007	<ul style="list-style-type: none"> Construct high tunnel, install trellis and irrigation; record fruit ripening data 	<ul style="list-style-type: none"> Black plastic mulch w/ drip tape installed Plants received, potted and transplanted Trellis posts installed Irrigation installed Open ground cultivated to suppress weeds (no herbicide used)
Late Summer/Fall 2007	<ul style="list-style-type: none"> Cover tunnel frame w/ poly; collect and record harvest data Offer growers opportunities to see trial in progress 	<ul style="list-style-type: none"> Manufacture custom 6' ground posts to add height to used tunnel frame
Revised		
Fall/Winter 2007/08	<ul style="list-style-type: none"> Prune Provide NABGA and MFG with progress report 	
Spring/Summer 2008	<ul style="list-style-type: none"> Finish tunnel construction Finish trellis construction Maintain planting Record growth and flowering data 	
Late Summer/Fall	<ul style="list-style-type: none"> Cover tunnel frame w/ poly 	

2008	<ul style="list-style-type: none"> • Collect and record harvest data • Offer growers opportunities to see trial in progress
Fall/Winter 2008/09	<ul style="list-style-type: none"> • Prune; • Analyze data • Present results in Massachusetts Berry Notes and at winter meetings • Provide NABGA and MFG with final report.

Budget:

High Tunnel Construction:		
	Proposed Cost	Amount spent to date (12/07)
Metal Frame:	\$1,400	\$0 + (\$1,008 custom 6' ground posts)
Poly Cover:	\$450	
End wall lumber:	\$300	
Irrigation:	\$150	\$0 donated materials
Construction labor - 60 hrs @ \$10/hr:	\$600	\$ in kind labor used
Total:	\$2,900	\$1,008
Blackberry Planting:		
100 plants of each variety – 200 plants @ \$2.25=	\$450	\$590 for tissue cultured plugs
Trellis posts and wire		\$0 donated materials
Planting labor -20 hrs @ \$10/hr:	\$200	\$0 in kind labor used
Total:	\$ 650	\$590
Maintenance/Harvest:		
Pesticides and Fertilizer:	\$100	\$0 donated materials
Harvest containers:	\$150	
Labor – 50 hrs @ \$10/hr:	\$500	
Total:	\$ 750	\$0
Grand Total:	\$4,300 (\$3,100 awarded)¹	\$1,598 (\$1,502 remain for '08)



¹ NABGA: \$3,000 (\$1,800 awarded)
 Massachusetts Fruit Growers Association: \$1,300 (\$1,300 awarded)