

Cold Spring



Orchard

Research & Education Center



Strategic Plan -- 2005-09



University of Massachusetts Cold Spring Orchard Research & Education Center

STRATEGIC PLAN for 2005-09

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A Strategic Plan for the University of Massachusetts Cold Spring Orchard Research & Education Center: 2005-09

History

In 1962, what is now the University of Massachusetts Cold Spring Orchard Horticultural Research and Education Center (CSOREC) was purchased by the Massachusetts Fruit Growers' Association and presented to the University of Massachusetts as a gift. The farm encompasses 215 acres of land. Currently, 50 acres are in cultivation, and another 30 acres are suitable for planting. The original farm included a three-bedroom house, a large barn, and one out-building that is used for storage. During the mid-1960's fruit growers lobbied the Massachusetts legislature and as a result the legislature appropriated special funds for the construction of a storage, research, and teaching facility. This facility, the John Chandler Laboratory, was dedicated in June of 1972. The 11,000-square-foot building contains five storage rooms with capacities ranging from 600 to 3000 bushels of fruit, a general-purpose research laboratory, a teaching laboratory, and an open area large enough to accommodate large or pilot-scale fruit-handling, grading, and packing equipment. A pesticide storage and handling building was recently constructed. The CSOREC is used primarily by the Department of Plant, Soil and Insect Sciences.

Trust Fund Agreement

In the early 1960's the University of Massachusetts Trustees initially decided to locate a medical school on the site of the campus research and teaching orchard. It was the desire of the Massachusetts Fruit Growers' Association to maintain a research and teaching facilities to study fruit at the University of Massachusetts. A committee consisting of Jesse Rice, George (Stacy) Gay, Elmer Fitzgerald, Derwood Frost, and Jonathan Davis was formed to locate a suitable place to relocate the orchard. A suitable location was found and a piece of property was purchased by The

Massachusetts Fruit Growers' Association from funds donated specifically intended for the purchase of this replacement orchard. Dr. Franklin Southwick, Head of the Department of Plant and Soil Sciences, was instrumental in guiding the selection, purchase, and ultimately donation of the property.

An agreement signed between the Massachusetts Fruit Growers' Association and the Trustees of the University of Massachusetts on 9 June, 1962 that turned over in trust the 215 acre parcel of land and buildings on Sabin Street, Belchertown, MA. A deed indicating this transaction was recorded on 20 June, 1962 in the Hampshire Registry Book No. 1384, page 51. In accepting this gift the University agrees :

1. To assume responsibility to provide professional maintenance staff and all other things that the Trustees deem necessary for the operation of this facility on the same basis as any other phase of work at the University, subject to appropriations made therefore.
2. To give first priority in the use of the land and facilities for tree and small fruit research; that once the land needs for pomological research are satisfied, to allocate any surplus land available to any and all other phases of horticulture (vegetable, floriculture, ornamental, and nursery crops) at the University which may require land for research and teaching purposes.
3. Income derived from the operation of this property will be held in trust by Trustees and expended for the furtherance of the research and teaching herein provided for.
4. That this land with buildings thereon and any additional facilities which may be established hereon on therein will be known as the Horticultural Research Center of the University of Massachusetts.

Policies

1. Orchard planting will be managed by a Planting/Tree Removal Committee, chaired by the Director. All efforts will be made by this committee to accommodate the needs of researchers and staff and provide a fair and equitable distribution to support new plantings.
 - A 5-year planting plan should be in place, and this will be updated yearly.
 - The planting plan should include provision for proper plot preplant preparations, such as plowing, cover cropping, soil analysis, soil amendments.
 - A planting proposal should be submitted for each proposed new planting. Forms will be available for this purpose. Included in this proposal will be justification for the work, a statement of purpose, amount of land required, and identification of source of funds to purchase trees, post, and plant trees. A projected time frame for the duration of each proposed planting should be included.
 - Normal plot maintenance will be provided. If maintenance above the base level is required, each proposal should include a clear indication of where additional these resources are going to come from for the duration of the life of the planting.
 - An orchard removal plan will be established and be part of the 5-Year plan.
 - This plan will be reviewed each year on a planting-by-planting basis.
 - Plantings will be assessed to determine if they are serving a cost-effective and achieving the mission of the CSOREC.

2. Since research is the primary mission of CSOREC, research plots will receive first and highest priority.

- It is the responsibility of the primary investigator to communicate resource needs to the orchard manager to adequately maintain research plots.
- Collection of data and application of treatments is the responsibility of the individual investigator.
- Researchers are expected to acquire outside support to fund activities beyond regular plot maintenance.

3. A Labor and Equipment Request Form will be used to effectively communicate with the CSOREC

manager and staff about special needs for research plot maintenance. Where requests exceed normal plot maintenance, arrangements will be made by the researcher for reimbursement for special plot maintenance. See Labor Request Form for details.

4. Farm Safety is a Priority. Compliance with all University, State, and Federal laws and regulations pertaining to employee and visitor

safety is required. Adherence to pesticide and food safety regulations should be monitored. Regular inspection of the pesticide storage areas will be done to make sure safety rules are being followed. During the spray season an updated chart will be maintained in the main storage area indicating material applied, when applied and when it is safe to reenter the sprayed block.

5. The CSOREC will be open to the public during normal business hours: 8:00 to 3:30. During this time open viewing of plots and research activities may be allowed if this activity is approved by the primary investigator. After hours viewing will be allowed only by appointment. Visitors will be required to follow all posted pesticide restricted entry intervals and regulations. Gates will be

Mission

The mission of the University of Massachusetts Cold Spring Orchard Research and Education Center is to generate knowledge and apply and disseminate that knowledge to fruit growers, students, and the general public.

closed and locked after hours.

6. Projects should avoid unnecessary duplication of research.
7. Research should be well planned, scientifically based, and make efficient and effective use of the resources at the CSOREC.
8. Efforts will be made to accommodate and answer questions posed by the public as long as it does not substantially divert individuals and resources away from the mission of the CSOREC.
9. All crops grown and not actively involved in a

research project will be sold by the CSOREC through its retail store, or to wholesale customers. Efforts will be made to avoid serious competition with regional growers and their markets.

10. The CSOREC will use state-of-the-art and cutting-edge production practices, and serve as an example to the industry. Consequently, production practices will be reviewed annually.
11. Annual reports of projects going on at the CSOREC should be submitted, and these will be reviewed, collated, and prepared as a report.

Strategic Analysis

Beliefs

1. Research is the Primary Function of the CSOREC.
2. Research will be directed at solving basic and applied problems of the Massachusetts and regional fruit industries to enhance their economic and environmental sustainability.
3. Facilities at the CSOREC will be available to instructors at the University of Massachusetts, graduate students and students enrolled in courses at the University for horticultural education.
4. CSOREC has an outreach/extension commitment to a diverse group of people including growers, the University of Massachusetts community, school groups, and the general public. If personnel and resources are available, programs and instructional assistance will be extended to these groups.
5. Outreach/extension programs will build long-term support and confidence in CSOREC among fruit growers, University personnel, and the general public.
6. CSOREC plays a key role in preserving space and the agricultural landscape of New England.
5. Extension personnel on site .
6. Dedicated staff support for maintenance, research.
7. Strong professional staff.
8. Motivation high for all involved at the CSOREC.
9. Benefits to local community and evolving fruit industry.
10. Some operating expenses paid by UMass Department of Plant, Soil, & Insect Science.
11. Significant grant support for the facility.
12. The ability to the CSOREC to generate significant amounts of support for the facility through fruit sales.

Weaknesses

1. Communication/understanding between researchers and staff can be improved.
2. Insufficient funds and staffing.
3. Inadequate awareness of CSOREC.
4. Need to upgrade some production practices.
5. UMass accounting procedures and associated inefficiencies.
6. Diverse client base.
7. Inability to address marketing issues.
8. Difficulty identifying and hiring part time help through the University system.
9. Conflict between research and sales.

Strengths

1. High land quality, quantity, aesthetic value.
2. Good facilities: Chandler Lab, barns/storage.
3. Proximity to UMass Amherst.
4. Strong support by Massachusetts Fruit Growers' Association.

10. Aging equipment and inability to maintain equipment and purchase new equipment.

Opportunities

1. Potential to lead fruit research in New England.
2. New crops/courses.
3. Ag Tourism/school tours.
4. Ability to build agriculture community support and grower confidence.
5. Be on the cutting edge of production systems.
6. Extension staff able to promote CSOREC activities.
7. Evolving industry could open more funding opportunities.

Challenges

1. Competition from other agricultural entities.
2. Evolving industry.
3. Global communication, ability of constituents to get outside information.

4. Rise above independence and complacency.

5. Declining or level funding.

6. Research can be conducted elsewhere.

7. Some growers lack the interest to support the fruit program.

8. Grower apathy.

Environmental Analysis

(Factors beyond CSOREC control)

1. Labor availability.

2. Pest control and pesticide regulations.

3. Other government regulations - zoning, FQPA, labor.

4. Money availability.

5. Markets for fruit.

6. High cost of labor.

7. Changing consumer preferences.

8. Weather.

9. UMass administration.

Objectives

- 1. To develop the highest quality research, teaching and outreach programs that will establish the CSOREC as the premier fruit research facility in New England.*
- 2. To provide a facility that will meet the educational needs of faculty, students, extension personnel and graduate students.*
- 3. To develop a strategy to establish and maintain a strong financial base for operation of the CSOREC.*
- 4. To maintain a close relationship between fruit growers and fruit grower organizations by conducting research teaching and outreach programs that meet the changing needs of the fruit industry.*

Action Plans

Objective 1. To develop the highest quality research, teaching and outreach programs that will establish the CSOREC as the premier fruit research facility in New England.

Title 1: Maintenance of grounds, plots, and trees at the CSOREC.			
Step	Description	Person(s) responsible	Due Date
1	Develop a monthly action plan that details specific needs for plot maintenance	Researchers J. Sincuk J. Krupa	March 1, yearly
2	Mowing, pesticide application, and general plot maintenance should be done in a timely manner. Research plot maintenance is the number one priority.	J. Sincuk, J. Krupa Researchers	Ongoing
3	Special needs such as individual pesticide application, fertilizer, or mowing should be communicated to the orchard manager in writing in a timely manner. Fill out a Work Request Form.	J. Sincuk J. Krupa Researchers	At least 5 working days prior to the work
4	Agreement between researchers and the orchard manager will be reached if unique treatments, not part of general maintenance. Application of unique treatments is not considered a part of general maintenance.	J. Sincuk Researchers	May 1, yearly
5	Researchers or individuals acting on behalf of the researchers and the orchard manager should critically view each plot at least once each 2 weeks to observe the status of plots.	J. Sincuk J Krupa Researchers	Done at 2-week intervals

Action Plans

Objective 1. To develop the highest quality research, teaching and outreach programs that will establish the CSOREC as the premier fruit research facility in New England.

Title 2: Maintenance of the CSOREC storage and laboratory building.			
Step	Description	Person(s) responsible	Due Date
1	Continuous maintenance, cleaning and regularly scheduled transport of trash and garbage to the dump.	J. Sincuk J. Krupa	Ongoing
2	Clean restrooms on a weekly basis.	J. Sincuk J. Krupa	Ongoing
3	Daily clean up of the classroom, washing of dishes and straightening up coffee and lunch area.	J. Sincuk J. Krupa	Ongoing
4	Weekly sweeping and straightening up of the storage and sales area.	J. Sincuk J. Krupa	Ongoing
5	Maintain, inventory, map and keep organized of each storage room.	J. Sincuk J. Krupa	Ongoing
6	Maintain on the classroom wall an official calendar of events that are scheduled at the CSOREC	J. Sincuk J. Krupa	Ongoing

Objective 1. To develop the highest quality research, teaching and outreach programs that will establish the CSOREC as the premier fruit research facility in New England.

Title 3: Tree removal, planting and replacement.			
Step	Description	Person(s) responsible	Due Date
1	A tree Removal/Planting Committee will be established as a permanent committee. Because of the importance of this committee, all Fruit Team members will be offered the opportunity to participate.	D. Greene (chair)	June 30, yearly
2	Researchers will communicate in writing needs/usefulness of all existing blocks and make suggestions for change.	Fruit Team	July 15, yearly
3	Proposed plantings will be submitted to the committee on a Proposed Planting Form. The form will include individual responsible, purpose, duration, proposed location, estimated yearly resources required, and potential sources of funding. The goal will be to remove at least 5% of total acreage each year and maintain at least 20% of the available land in cover crops or crop rotation.	Fruit Team	July 31, yearly
4	The committee will review responses from each researcher and make recommendations for removal and planting over a 5-year period.	Fruit Team	August 15, yearly
5	Individual will have an opportunity to respond or make counter proposals	Individual members	August 30, yearly
6	Tree removal plans and proposed new planting will be established	Fruit Team	Sept. 30, yearly
7	The five year plan will be reviewed yearly and revisions made where appropriate.	Fruit Team	Oct. 31, yearly

Action Plans

Objective 1. To develop the highest quality research, teaching and outreach programs that will establish the CSOREC as the premier fruit research facility in New England.

Title 4: Prepare an annual report for the CSOREC.			
Step	Description	Person(s) responsible	Due Date
1	A research report form will be developed that includes: Project title, funding source, year results, progress, usefulness of findings and projected completion date. Reports will be submitted to the Director.	Fruit Team	July 31, yearly
2	Researchers submit a report for each project being done at the CSOREC	Fruit Team	Jan. 1, yearly
3	An overview and description of generalized activities at the CSOREC will be drafted.	Fruit Team	Jan. 15, yearly
4	Reports will be collated and reviewed internally.	Fruit Team	Jan. 31, yearly
5	Report will be distributed to the research community, grower organizations, individuals who provide financial support to the CSOREC, and within the college and department.	Fruit Team	Feb. 15, yearly

Objective 1. To develop the highest quality research, teaching and outreach programs that will establish the CSOREC as the premier fruit research facility in New England.

Title 5: Determine specific research and educational needs of the industry.			
Step	Description	Person(s) responsible	Due Date
1	Meet two times yearly with the Fruit Advisory Committee and Trustees of the MFGA to present research results and obtain feedback on critical areas of research.	Fruit Team	April, Nov., yearly
2	Conduct periodic surveys of grower needs.	J. Clements W. Coli W. Autio S. Schloemann	Open

Title 6: Public recognition of CSOREC activities.			
Step	Description	Person(s) responsible	Due Date
1	Identify initiatives, projects, and events that will bring recognition to the CSOREC	Fruit Team	On going
2	Identify projects, initiatives and research activities that would have appeal to the general public. Write press releases. Each researcher would be responsible for writing at least one press release in their area of expertise.	Fruit Team	On going
3	Contact the University News Service and local newspapers to feature articles of scientific or seasonal interest.	D. Greene	On going

Action Plans

Objective 1. To develop the highest quality research, teaching and outreach programs that will establish the CSOREC as the premier fruit research facility in New England.

Title 7: Administrative communication.			
Step	Description	Person(s) responsible	Due Date
1	Establish and maintain open lines of communication of all researchers and workers.	D. Greene	On going
2	Meet periodically with workers at the CSOREC to provide encouragement and obtain feedback concerning all aspects of operation of the facility	D. Greene	On going

Title 8: Pesticide storage and inventory.			
Step	Description	Person(s) responsible	Due Date
1	Organize storage of new pesticides Erect shelves, clean and organize area in new pesticide building	J. Sincuk J. Krupa	April 15
2	Inventory pesticides. Complete inventory of all pesticides. Develop and inventory sheet with a log-in and out system.	J. Sincuk	Spring, yearly
3	Inventory pesticides in the fall and use this inventory as a basis for ordering pesticides during the winter.	J. Sincuk	Fall, yearly

Objective 1. To develop the highest quality research, teaching and outreach programs that will establish the CSOREC as the premier fruit research facility in New England.

Title 9: Improve written and visual identity of CSOREC.			
Step	Description	Person(s) responsible	Due Date
1	Establish a committee to oversee visual and written identity of CSOREC	W. Autio (chair) J. Clements D. Greene J. Sincuk	Feb. 29
2	Study current identity of the orchard signs, boxes, bins, bags, letterhead, invoices, etc.	W. Autio Committee	June 30, yearly
3	Present a proposed approach and develop appropriate and consistent forms, signs, and outputs. Include proposed cost and suggested source of funding.	W. Autio Committee	Aug. 30, yearly
4	Improve and update all forms of identity for CSOREC and move toward signage that is consistent with UMass Amherst identity	W. Autio Committee	Ongoing

Action Plans

Objective 2. Provide a facility that will meet the educational needs of faculty, students, extension personnel and graduate students

Title 1: Establish independent study projects for students to work directly at the CSOREC.			
Step	Description	Person(s) responsible	Due Date
1	Construct a list of research projects that could be conducted in the orchard	Fruit Team	Ongoing
2	Foster, encourage participation and oversee independent study projects conducted at the CSOREC	Fruit Team	Ongoing
3	Look for resources to fund a graduate student of help oversee many of the independent projects in conjunction with the sponsoring faculty.	Fruit Team	Ongoing
4	Establish 1 or 2 competitive internships that would be filled at the CSOREC. Students would be paid a stipend and write a report at the end.	Fruit Team	Ongoing
5	Create a presence on campus by establishing a sales strategy of fruit grown at the CSOREC.	Fruit Team	Ongoing

Objective 3. To develop a strategy to establish and maintain a strong financial base for operation of the CSOREC.

Title 1: Organize funding initiatives to start an endowment fund to support basic operations at the CSOREC.			
Step	Description	Person(s) responsible	Due Date
1	Establish a partnership among NRE Development Office, fruit growers, CSOREC, and the University to solicit funding for support of the operation of the CSOREC	NRE Develop. Fruit Growers Fruit Team University	Ongoing
2	Establish a partnership among NRE Development Office, fruit growers, CSOREC, and the University to solicit funds to support two endowed chairs	NRE Develop. Fruit Growers Fruit Team University	Ongoing

Title 2: Establish resource needs for each dedicated research planting and an estimate of projected costs over the life of the planting .			
Step	Description	Person(s) responsible	Due Date
1	Prior to planting determine first year costs including materials and trees and identify source of funds	All researchers	Yearly, before planting
2	Estimate material and labor costs on an annual basis. Identify where the labor will come from. Project costs to the CSOREC and income that can be expected from the sale of fruit. Identify source of grant funds if cost exceeds income.	All researchers	Yearly
3	Submit cost and projections to long term economic study committee (Objective 3.4)	All researchers	Yearly

Action Plans

Objective 3. To develop a strategy to establish and maintain a strong financial base for operation of the CSOREC.

Title 3: To establish and effective balance between growing fruit for sale and fruit for research for short term viability.			
Step	Description	Person(s) responsible	Due Date
1	Establish a program for each block that assures that appropriate maintenance for all research plots.	J . Sincuk J. Krupa Researchers	March 15 Yearly
2	Establish a yearly sales strategy that will maximize returns. Project cost/labor inputs for fruit crops, non fruit crops and cider to determine if cost effective and appropriate.	J. Sincuk D. Greene W. Autio J. Clements	March 15 Yearly
3	Develop a management and harvest plan with researchers that maximizes the quality of fruit harvested from research plots.	J. Sincuk, Researchers	March 15 Yearly
4	Develop a management and harvest plan for fruit from blocks not involved in dedicated research. Priority will be given to plots where data are being generated.	J. Sincuk, Researchers	March 15 Yearly
5	Merge short term sales/production plan with long term economic analysis (Objective 3.4)	Ad hoc long term economic study	2004

Objective 3. To develop a strategy to establish and maintain a strong financial base for operation of the CSOREC.

Title 4: Develop a financial management plan for the CSOREC.			
Step	Description	Person(s) responsible	Due Date
1	Establish an ad hoc committee to study the economics of production at the CSOREC and to develop a financial management plan	D.Greene (chair) W. Autio J. Clements J. Sincuk T. Clark F. Carlson R. Davis T. Smith	Jan. 30, 2005
2	Evaluate cost of production per acre. Estimate cost block by block and evaluate research vs. production for appropriate blocks. Tree age, size, density, cultivar, and yield will be considered.	Committee	Mar. 15, yearly
3	Evaluate the sales approach. Document sales to stores, wholesales, and other vendors. Determine returns based upon sales approach, cultivar and quality.	Committee	May 15, yearly
4	Determine the anticipated acreage needed for research for the next 10 years. Estimate cost per year and saleable yield per year. Size additional orchard to support itself plus the research acreage. Account for state-supported staff of 2.5 individuals plus a portion of the management of research blocks .	Committee	July 15, yearly
5	Present a report summarizing findings and putting fourth recommendations.	Committee	Nov. 15, yearly

Action Plans

Objective 4. To maintain a close relationship between fruit growers and fruit grower organizations by conducting research teaching and outreach programs that meet the changing needs of the fruit industry.

Title 1: Hold periodic and timely Extension/outreach meetings annually.			
Step	Description	Person(s) responsible	Due Date
1	Hold a spring/twilight meeting where topics will be pruning, and orchard systems will be discussed	J. Clements Fruit Team	Yearly
2	Host an apple variety showcase in late fall to display and discuss new and promising apple varieties	J. Clements D. Greene	Yearly
3	Host the Summer Meeting of the MFGA in alternate years	Fruit Team	Every other year
4	Host meetings on important topics when it is appropriate and as needed	Fruit Team	When appropriate

Title 2: Produce video of research activities at the CSOREC.			
Step	Description	Person(s) responsible	Due Date
1	Shoot digital video of seasonal research and maintenance activities.	J. Clements A. Tuttle	Mar. 31
2	Seek funding from the Trustees of CSOREC	J. Clements A. Tuttle	Feb. 28
3	Video will be edited, copied and produced for distribution	J. Clements	March 31

Objective 4. To maintain a close relationship between fruit growers and fruit grower organizations by conducting research teaching and outreach programs that meet the changing needs of the fruit industry.

Title 3: Elementary school education/tour program.			
Step	Description	Person(s)	Due Date
1	Distribute information to local elementary schools describing the fall program. Hire staff as needed, order supplies and materials, investigate collaborating with William Miller, EXT/FNP	J. Sincuk J. Clements	July 31, yearly
2	Fall/harvest school tours will run September/October. Increase number of tours, children, educators and adults from 2002	J. Sincuk J. Clements	Sept. 31, yearly
3	Prepare a final report on 2003 School Education /Tour Program and make recommendations for improvement	J. Sincuk J. Clements	Nov. 31, yearly

Estimated 2004-05 Budget

Full-time Labor

(orchard manager, three farm workers, research technician)

<i>Bases salary</i>	<i>Salary + benefits</i>	<i>Funding provided by CSOREC</i>	<i>Funding provided by UMass</i>
\$171,025	\$222,912	\$50,013	\$172,899

Part-time Labor

<i>Position</i>	<i>Description</i>	<i>Amount</i>
Spring / summer helper	1 Worker @7.50/hr for 37.5 hours for 10 weeks	\$2,800
Stand workers	3 Retail stand workers for 12 weeks	\$5,500
Harvest workers	5000 bushel @\$1.50 per bushel \$7,500 Moving bins from field to storage \$2000	\$9,500
Winter workers	Prune trees and pack apples	\$5,000
<i>Part-time labor total</i>		\$22,800

Non-labor Expenses

<i>Item</i>	<i>Description</i>	<i>Amount</i>
Chemicals and fertilizer	Pesticides - \$8,000 Fertilizer - \$3,000	\$11,000
Maintenance and repair	Parts - \$3,000 Labor - \$3,000	\$6,000
Fuel	Fuel for vehicles	\$3,500
Phone	3 phone lines	\$3,000
General expenditures	Tree, trellising materials, office supplies, hardware and other miscellaneous supplies	\$7,000
Stand packaging	½ peck, 1 peck, and ½ bushel bags, peach boxes, cider jugs, labels, postcards and stamps	\$5,000
Wholesale packaging	1 bushel waxed cardboard boxes	\$4,000
Trash removal	Bi-weekly removal of trash from rented dumpster	\$600
Equipment replacement	Replace trucks, sprayers, tractors, mowers, etc.	\$6,000
<i>Non-labor expense totals funded by CSOREC</i>		\$46,100
<i>Fuel oil, electricity, and repairs funded by UMass Physical Plant</i>		\$26,525

Income by Commodity

<i>Commodity</i>	<i>Yearly Income</i>
Apples	\$88,000
Peaches	\$3,000
Cider	\$8,000
Miscellaneous (pumpkins, squash, gourds, jam, and mums)	\$5,000
School Tours	\$3,000
Total	\$107,000

Income by Sales Type

<i>Commodity</i>	<i>Yearly Income</i>
Retail stand	\$42,900
Wholesale accounts:	
Bread and Circus	\$16,000
UMASS Dining Commons	\$14,700
Food Bank Farm	\$9,900
Brookfield Farm	\$4,000
Red Tomato	\$5,000
Other wholesale accounts	\$14,500
<i>Subtotal of wholesale accounts</i>	\$64,100
Total sales	\$107,000

Summary

<i>Item</i>	<i>UMass</i>	<i>Cold Spring Orchard</i>
Income		
Retail Stand		\$42,900
Wholesale		\$64,100
Total Income		\$107,000
Expenses		
Full-time yearly positions	\$172,899	\$50,013
Part-time seasonal positions	\$0	\$22,800
Non-labor operating expenses	\$26,525	\$46,100
Total Expenses	\$199,424	\$118,913

UMass Cold Spring Orchard Research & Education Center *Labor & Equipment Request Form*

Farm Manager must have this request as soon as possible, but at least 5 WORKING DAYS PRIOR TO TIME WORK NEEDS TO BE COMPLETED

Project No. & Title: _____

Date: _____ Date Needed: _____ Requested By: _____

Job Description (circle operations requested and describe in detail):

TILLAGE - FERTILIZE - LIME - PLANT - SPRAY - IRRIGATE - LABOR - MOWING - HARVEST - OTHER

Estimate of Hours Expected to Complete Job: _____

MAP (or further details and comments):

THIS SECTION TO BE COMPLETED BY FARM STAFF

Date Received: _____ Date Completed: _____

Operator: _____

Total of Hours Used to Complete Project: _____

Remarks: _____

UMass Cold Spring Orchard Research & Education Center
Planting Request Form

Project Title: _____

Date: _____ **Requested By:** _____

Year of Proposed Planting: _____ **Literature Search:** YES _____ NO _____

Proposed Location: _____ **Proposed Duration:** _____

Extramural Support (\$): _____ **Duration of Support (\$):** _____

Justification:

Description of project including number of trees, area required, replication, data to be taken, and a planting plan: