

MOPUP

The Massachusetts Orchard Production Upgrade Program



A proposal to the Massachusetts Agriculture Innovation Center (AGR-AIC-08)

by the **Massachusetts Fruit Growers' Association (MFGA)**

Ken Nicewicz, President

P.O. Box 9632, North Amherst, MA 01059-9632

413-545-2963, 413-545-0260 (FAX)

nicewicz@nre.umass.edu

<http://www.massfruitgrowers.org>

Total Project funding AIC request:	\$95,000
Total proposed Project match:	\$95,000
Total Project budget	\$190,000

Project dates: April 1, 2008 through June 30, 2010

The situation and justification...

Massachusetts apple orchards have a long history of providing locally grown fruit, and a visit to an apple orchard is a fall tradition for many residents. But, increased land prices, development pressure, difficulty finding labor, and higher costs of fuel, fertilizers, and crop protection chemicals mean that Massachusetts apple growers must adopt new technologies to remain profitable so that the benefits of locally grown food and open space preservation provided by Massachusetts orchards can be sustainable.

Unfortunately, however, with a state-wide production average of just two hundred 40 lb. bushels of apples per acre in 2006 (NASS, 2006), Massachusetts apple growers may not be production-efficient enough to remain sustainable and truly profitable. In fact, and admittedly for more than one reason, from 1997 to 2002 apple orchard acreage has declined by 20% in Massachusetts. The need to adopt new orchard production technologies that will improve production, profitability, and pest management efficiency is an increasing necessity. For example, the ‘tall spindle’ apple production system which utilizes high tree densities on dwarf rootstocks and minimal pruning is capable of producing 700-800 bushels of high quality (McIntosh) fruit in the 4th leaf (four years from planting) and may be the most profitable system for Massachusetts apple growers. (NYFQ, 2006.) But, the high cost of planting a new tall-spindle apple orchard – upwards of \$17,000 or more per acre – has been a significant barrier to Massachusetts growers who may be unwilling to take the risk to be ‘early adopters.’

The Massachusetts Fruit Growers’ Association (MFGA) solution and proposal...

The MFGA Massachusetts Orchard Production Upgrade Program, MOPUP, proposes to help ten competitively selected, progressive apple grower/members (five in 2008, five in 2009) with the cost of planting, establishing, and maintaining one acre each (app. 10 rows, 400 feet long) of modern, high-density, ‘tall spindle’ apple orchard. (See Appendix B technical ‘White Sheet’ for details.) MOPUP will purchase trees, which are the single greatest expense in establishing a new high-density orchard or replacing an existing one, and provide some funds for technical support and outreach. Selected growers will supply labor, support system, irrigation, and deer fence (where necessary) as a match, plus pay a nominal administrative fee to MFGA to participate. Technical advice on establishing and managing the tall spindle apple orchard will be provided by UMass Extension (Clements and Autio, see 2-page Resumes) with nominal funding support (fee-based) provided by AIC. In addition, MOPUP growers will be asked to keep records on labor, material costs, pesticide applications, and production history for five years so that profitability (net gain, loss) can be measured. Such production records will be compared to more common ‘semi-dwarf’ orchards to see if fruit can be more economically produced and if pesticide use per unit of fruit production can be reduced. If these were the cases, then apple growers would realize both economic and environmental benefits. Similarly, technical assistance and guidance for record keeping will be provided by Clements and Autio.

The overall objective over five years will be to demonstrate whether the tall-spindle apple orchard is both profitable and can reduce inputs – including pesticides and labor – per unit of fruit production in Massachusetts orchards. And, once established, these orchards will be ‘case-studies’ for other growers to observe and evaluate. The orchards will be open by appointment and used as backdrops for various outreach activities, including fruit Extension twilight meetings

and industry orchard tours. Publication of results and observations will be in 'Fruit Notes' (UMass Extension) and other regional fruit publications and newsletters.

Note that public funded investment in orchard replacement is not without precedent. British Columbia, Canada apple growers have long-enjoyed Provincial and federal funding for orchard replacement, largely to keep their growers profitable and preserve agricultural land threatened by residential development. And just recently the Agriculture Innovation Center provided funding to Massachusetts cranberry growers to renovate and modernize selected, outdated bogs -- *exactly what MOPUP proposes to do for select Massachusetts apple growers orchards*. Already at least ten Massachusetts apple growers have expressed an interest/commitment to participating in the Program (Appendix A).

The outreach/extension effort...

In addition to the aforementioned traditional grower meetings and publications, planting, training, and other tall spindle orchard establishment details will be chronicled using video and text web-logs, a technology which Clements and Autio are already familiar with and have a proven record. Growers can actively comment and be provided with near real-time progress of MOPUP with their personal computer from home, including text, pictures, video, and feedback. Again, minimal support by AIC to provide this fee-based service is requested.

The Project tasks and deliverables...

In **2008** establish app. five (+/-) tall-spindle apple orchards in select Massachusetts orchards that *already have deer fence or limited deer browsing pressure* based on availability of quality, feathered (branched) nursery trees. Specifically:

- Select growers and advise on site preparation of one acre.
- Order 1,000 trees per grower and request delivery April 15.
- Plant trees between April 15-30 (early planting).
- Order and deliver tree support materials by May 1.
- Install tree support system by May 15.
- Install irrigation by May 30.
- Ongoing tree training and support during June-July.
- Keep records on material (including pesticide) and labor costs (inputs).
- Hold at least one twilight meeting with fruit growers at one or more Project location to discuss orchard establishment details.
- Select five growers for 2009, advise on site preparation and install deer fence during summer/fall of 2008.

In **2009** establishment of five more (+/-) tall-spindle apple orchards in select Massachusetts apple orchards that *already have deer fence* based on availability of quality, feathered (branched) trees for 2009. Specifically:

- Advise on site preparation for one acre with previously selected growers (ongoing from 2008).
- Order 1,000 trees per grower and request delivery April 15.
- Plant trees between April 15-30.
- Order and deliver tree support materials by May 1.
- Install tree support system by May 15.

- Install irrigation by May 30.
- Ongoing tree training during June-July.
- Keep records on material (including pesticide) and labor costs (inputs). For orchards established in 2008 keep production records for 2nd leaf as well as material and labor costs.
- Hold several twilight meetings/orchard tours with fruit growers at several location to discuss orchard establishment details and 2nd leaf crop for orchards planted in 2008.

In **2010**, ongoing record-keeping including inputs (materials and labor) and outputs (production). Tree training and pruning continues with technical support from Autio and Clements. Hold several on-site fruit grower twilight meetings at MOPUP plantings. Prepare final report and ‘recipe for success’ publication for Fruit Notes. Assess MOPUP success with individual Project growers. Include emphasis on comparing cost of production and amount of pesticide used per unit of fruit produced to more conventional semi-dwarf orchards.

The specific Project personnel...

- **Jon Clements, M.S.** is an Extension Educator at UMass Amherst who specializes in tree fruit horticulture and pest management. He has traveled to Europe, New Zealand, and numerous locations in North America studying hi-density apple planting systems. He also manages and collects research data on hi-density apple plantings at the UMass Cold Spring Orchard in Belchertown.
- **Wesley Autio, PhD.** is Professor of Pomology at UMass Amherst and has extensive knowledge of hi-density production practices including the use of rootstocks and growth regulators.

The Project Budget...

See attached ‘Budget Table for RFR#AGR-AIC-08’

The Project references...

NASS 2006. National Agricultural Statistics Service, Non-Citrus Fruits and Nuts Summary 2006, USDA National Agricultural Statistics Service.

NYFQ 2006. The Tall Spindle Apple Production System. York Fruit Quarterly, Vol, 14, No, 2, 2006.

Appendix A – Support E-mails

Appendix B – MOPUP Technical ‘White Sheet’

BUDGET TABLE FOR RFR#AGR-AIC-08

Name of Bidder: Massachusetts Fruit Growers' Association

Project Objective, task or item.	Requested Funds:	Dollar Match:	In-Kind Match: (Example: staff hours, other matching resources, etc.)	Total Project Budget: (Combined Funds of Requested & Matching)
Purchase trees (10,000 @ \$8.50 each, including freight, royalty)	\$85,000			\$85,000
Orchard planting and establishment (labor, trellis, supplies, irrigation, deer fence)			\$85,000	\$85,000
Administration (10 @ \$500)		\$5,000		\$5,000
Technical support and Outreach	\$10,000		\$5,000	\$15,000
Sub-total	\$95,000	\$5,000	\$90,000	\$190,000

Total Amount Requested for Proposed Project(s): \$190,000

Jon M. Clements

Contact Information

UMass Cold Spring Orchard
393 Sabin St.
Belchertown, MA 01007

(413) 478-7219
clements@umext.umass.edu
www.umass.edu/fruitadvisor/

Education

Master of Science - Plant & Soil Science - University of Vermont, 1998 (Thesis Title: 'Effect of Dormant Pruning Treatment on 'McIntosh' Apple Fruit and Spur Quality, Yield, and Pack-out')

Bachelor of Science - Wildlife Ecology - University of Vermont, 1977

Professional Experience

2000 - Present. *Extension Tree Fruit Specialist*. University of Massachusetts at Amherst, Amherst, MA

1998 - 2000. *Berrien County Extension Horticulture & Marketing Agent*. Michigan State University Extension, Benton Harbor, MI

1989 - August 1998. *Field Research Technician III*. University of Vermont, Burlington, VT

Selected Publications

Clements, J. 2005. 'Managing Production Risk' and 'Managing Environmental Risk.' Chapters in 'A Fruit Producers Guide to Risk Management.' Rutgers Cooperative Extension and the New Jersey Risk Management Initiative.

Miller, S.S., R.W. McNew, B.H. Barritt, L. Berkett, S.K. Brown, J.A. Kline, J.M. Clements, W.P. Cowgill, R.M. Crassweller, M.E. Garcia, D.W. Green, G.M. Green, C.R. Hampson, I. Merwin, D.D. Miller, R.E. Moran, C.R. Rom, T.R. Roper, J.R. Schupp, E. Stover, 2005. Effect of Cultivar and Site on Fruit Quality as Demonstrated by the NE-183 Regional Project on Apple Cultivars. *HortTechnology* 15(4):886-895.

Clements, J. 2005. '2002 Super-spindle Apple Planting.' *Fruit Notes* 70(3):8-9.

Clements, J. 2005. 'New Peach Variety Selection Plantings and Evaluation When Grown to the Perpendicular-V.' *Fruit Notes* 70(3):10-11.

Clements, J., and J. Krupa. 2005. 'Observations on Winter Flower-bud Damage and Crop Load of Several Peach Varieties.' *Fruit Notes* 70(3):12.

Autio, W., J. Krupa, J. Clements, and D. Greene. 2005. 'Controlling Growth in the Top of Dwarf Trees.' *Fruit Notes* 70(3):13-15.

Clements, J. 2005. '2001 Sweet Cherry Variety Trial on Gisela 5 and Gisela 6 Rootstocks.' *Fruit Notes* 70(3):17.

Autio, W., J. Krupa, and J. Clements. 2005. '1995 Massachusetts-Maine-Nova Scotia Scion/

Rootstock Trial: Several Rootstocks Evaluated with McIntosh, Pioneer Mac, Cortland, and Macoun as Scions.' Fruit Notes 70(1) 1-5.

Autio, W., J. Krupa, and J. Clements, J. 2005. '1996 McIntosh Rootstock Trial: A Look at the Vineland Rootstocks.' Fruit Notes 70(1) 6-7.

Autio, W., J. Clements, and J. Krupa. 2005. '1998 NC-140 Apple Rootstock Trial: G.16 versus M.9.' Fruit Notes 70(1) 8-9.

Autio, W., J. Clements, and J. Krupa. 2005. '1999 NC-140 Semidwarf Apple Rootstock Trial: CG.4814, CG.7707, G.30 and Supporter 4 versus M.26 EMLA and M.7 EMLA.' Fruit Notes 70 (1) 10-11. Clements, J, and W. Autio. 2005. '2002 Massachusetts-New Jersey Cameo Rootstock Trial: G.16 versus M.9 and B.9.' Fruit Notes 70(1) 16.

Cowgill, W., and J. Clements. August, 2004. "The Land of Milk and Honeycrisp." American Fruit Grower Magazine, Vol. 124, No. 8, Pg. 9.

Selected Presentations

Clements, J. 'Reflections on the Way They Grow Apples: Italy and Washington.' New England Vegetable and Fruit Conference, Manchester, NH, December 2005.

Cowgill, W., K. Holmstrom, A. Wyendandt, J. Clements and M. Maletta. 2005. Evaluation of Phostrol for downy mildew control on pumpkin (*C. pepo*). HortScience 40(4):1055. (Poster/Abstract).

Clements, J. 'Using Weather Stations and Modeling to Predict Disease Incidence in Grapes.' Southern New England Wine Grape Growers Association Spring Workshop, Westport, MA, April 2005.

Clements, J. 'Valuing Apple Production.' UNH Risk Management Workshop for Practitioners, Durham, NH, September 2004.

Clements, J. 'Dwarf Sweet Cherries in New England.' 2004 New England Stone Fruit School, Manchester, NH, December 2003.

Professional and Industry Awards

2006 Outstanding Service to the Industry & Organization Award, International Fruit Tree Association, Hershey, PA, February 2006.

2000 Award for Excellence, Northeast Regional Association of State Agricultural Experiment Station Directors, NE-183 Multidisciplinary Evaluation of New Apple Cultivars.

CURRICULUM VITAE

for

WESLEY ROBERT AUTIO

Department of Plant, Soil, & Insect Sciences, 205 Bowditch Hall
University of Massachusetts Amherst, Amherst MA 01003-9294 USA
Telephone: 413-545-2963, FAX: 413-545-0260, Email: autio@pssci.umass.edu

Education

University of Maine, Orono, September, 1975 to May, 1977.
Virginia Polytechnic Institute & State University, B.S., Horticulture (*summa cum laude*), 1979.
University of Massachusetts, M.S., Plant & Soil Sciences, 1982, *Effects of Aminoethoxyvinylglycine on Maturation, Ripening, and Storage of Apples*.
University of Massachusetts, Ph.D., Plant & Soil Sciences, 1985, *Chilling Sensitivity During Tomato Fruit Ripening*.

Experience

Professor of Pomology, University of Massachusetts, September 1, 1997 to present.
Extension Tree Fruit Specialist, University of Massachusetts, November 3, 1985 to present.
Extension Fruit Team Leader, University of Massachusetts, November 3, 1985 to present.
Coordinator of the Stockbridge Fruit & Vegetable Program, January 1, 1989 to present.
Agriculture & Landscape Program Co-director, University of Massachusetts, June 20, 2003 to December 31, 2003.
Agroecology Program Coordinator, University of Massachusetts, February 1, 1996 to August 31, 1998
Associate Professor of Pomology, University of Massachusetts, September 1, 1991 to August 31, 1997.
Assistant Professor of Pomology, University of Massachusetts, November 3, 1985 to August 31, 1991.

Refereed Articles (67 prior to 2007)

- Cooley, D.R., W.R. Autio, and J. Krupa. 2007. Calcium salts and alternatives to conventional fungicides for management of the apple summer disease complex. *Plant Disease Management Reports* (online). 2007, Report 1:PF051. DOI: 10.1094/PDMR01.
- Autio, W.R., T.L. Robinson, B.H. Barritt, J.A. Cline, R.M. Crassweller, C.G. Embree, D.C. Ferree, M.E. Garcia, G.M. Greene, E.E. Hoover, R.S. Johnson, K. Kosola, J. Masabni, M.L. Parker, R.L. Perry, G.L. Reighard, S.D. Seeley, and M. Warmund. 2007. Early performance of 'Fuji' and 'McIntosh' apple trees on several dwarf rootstocks in the 1999 NC-140 Rootstock Trial. *Acta Horticulturae*. 732:119-125.
- Autio, W.R., T.L. Robinson, B.H. Barritt, J.A. Cline, R.M. Crassweller, C.G. Embree, D.C. Ferree, M.E. Garcia, G.M. Greene, E.E. Hoover, R.S. Johnson, K. Kosola, J. Masabni, M.L. Parker, R.L. Perry, G.L. Reighard, S.D. Seeley, and M. Warmund. 2007. Early performance of 'Fuji' and 'McIntosh' apple trees on several semidwarf rootstocks in the 1999 NC-140 Rootstock Trial. *Acta Horticulturae*. 732:127-133.
- Robinson, T., L. Anderson, W. Autio, B. Barritt, J. Cline, R. Crassweller, W. Cowgill, C. Embree, D. Ferree, E. Garcia, G. Greene, C. Hampson, K. Kosola, M. Parker, R. Perry, T. Roper, and M. Warmund. 2007. A multi-location comparison of Geneva 16, Geneva 41, and M.9 apple rootstocks across North America. *Acta Horticulturae* 732:59-65.
- Reighard, G., R. Andersen, J. Anderson, W. Autio, T. Beckman, T. Baker, R. Belding, G. Brown, P. Byers, W. Cowgill, D. Deyton, E. Durner, A. Erb, D. Ferree, A. Gaus, R. Godin, R. Hayden, P. Hirst, S. Kadir, M. Kaps, H. Larsen, T. Lindstrom, N. Miles, F. Morrison, S. Myers, D. Ouelette, C. Rom, W. Shane, B. Taylor, K. Taylor, C. Walsh, and M. Warmund. 2007. Growth and yield of 'Redhaven' peach on nineteen rootstocks at twenty North American locations. *Acta Horticulturae* 732:271-278.
- Madeiras, A.M., T.H. Boyle, and W.R. Autio. 2007. Germination of *Phlox pilosa* L. seeds is improved by gibberellic acid and light but not stratification, potassium nitrate, or surface disinfection. *HortScience* 42:1263-1267.
- Rodriguez, A., W.R. Autio, and L.A. McLandsborough. 2007. Effects of inoculation level, material hydration, and stainless steel surface roughness on the transfer of *Listeria monocytogenes* from inoculated bologna to stainless steel and high-density polyethylene. *Journal of Food Protection* 70:1423-1428.

Non-refereed Articles (188 prior to mid-2006)

- Autio, W.R. and J. Krupa. 2006. Chemical thinning of apples using ethephon. *Fruit Notes* 72(2):11-14.
- Krupa, J. and W.R. Autio. 2006. Do surfactants affect response to chemical thinners. *Fruit Notes* 72(2):15.

- Cooley, D.R., W.R. Autio, A. Tuttle, and J. Krupa. 2006. Alternative fungicides for management of sooty blotch and flyspeck. *Fruit Notes* 72(3):1-3.
- Autio, W.R. and J. Krupa. 2006. Chemical thinning of apples using ethephon: Another unsuccessful year. *Fruit Notes* 72(3):4-6.
- Autio, W.R., J. Krupa, J.M. Clements, W.P. Cowgill, and M. Maletta. 2006. Naphthalene acetic acid and Apogee control growth in the tops of dwarf apple trees. *Fruit Notes* 72(3):7-10.
- Mendonca, R., F. Mangan, M. Moreira, A. Criswell, S. Nunes, W. Autio, F. Finger, G. Almeida, P. Allen, and T. Brashear. 2007. Evaluation of hard squash varieties for production in Massachusetts. *Vegetable Notes* 18(4):1-4.
- Clements, J., W. Autio, W. Cowgill, and D. Kollas. 2007. To prune or not to prune – what’s a grower to do? *Healthy Fruit* 15(1):1-3.
- Cowgill, W., J. Clements, and W. Autio. 2007. To prune or not to prune – abnormal warm weather. *Plant & Pest Advisory* 11(30):2.
- Cowgill, W. and W. Autio. 2007. Enhancing return bloom on apple with plant growth regulators. *Plant & Pest Advisory* 12(10):1-2.

Extension Publications (63 prior to 2006)

- Autio, W.R. 2007. *An Introduction to Growing Apple Trees in the Home Garden*. CD produced as support material for the 2007 Mass Aggie Seminars.
- Autio, W.R. 2007. *Growing Apple Trees in the Home Garden, Beyond Basics*. CD produced as support material for the 2007 Mass Aggie Seminars.
- Autio, W.R. 2007. *Small Apple Trees!* CD produced as support material for the 11th Annual Gardening Symposium.
- Autio, W.R. and W.P. Cowgill. 2007. *Late-season ‘Rescue’ Thinning with Ethephon*. University of Massachusetts Extension Factsheet F-129.
- Cowgill, W., J. Clements, P. Perdomo, and W. Autio. 2007. *Apple tree pruning and training, A few basic rules for apple pruning* (both in English and Spanish). University of Massachusetts Extension Factsheet F-130.
- Cowgill, W.P. and W.R. Autio. 2007. *Enhancing return bloom on apple with plant growth regulators*. University of Massachusetts Extension Factsheet F-131.
- Cowgill, W., C. Wyenandt, K. Holmstrom, and W. Autio. 2007. *Which pumpkin fungicide program gives you the best bottom line?* Rutgers Cooperative Extension Factsheet.

Abstracts (44 prior to 2006)

- Autio, W.R., J. Krupa, J.M. Clements, and D.W. Greene. 2006. Using naphthalene acetic acid, Prohexadione-Ca, ethephon, and scoring to differentially reduce vegetative growth in upper canopy of apple trees. *HortScience* 41:1030.
- Cowgill, W.P., W.R. Autio, and M. Maletta. 2007. Performance of four early ‘Fuji’ cultivars in New Jersey. *HortScience* 42:429.
- Cowgill, W., W. Autio, M. Maletta, J. Clements, and J. Krupa. Differentially reducing growth in the upper canopy of apple trees with naphthalene acetic acid and prohexadione-Ca. *HortScience* 42:908.
- Cowgill, W.P., W.R. Autio, and M. Maletta. Early ‘Fuji’ cultivar performance in New Jersey. *HortScience* 42:999.

Teaching Experience

Classes Taught:

PLSOIL S30	Orchard Management	1988- 1989 (Spring)	4 credits
PLSOIL S34	Plant Nutrients	1990-1991 (Spring)	2 credits
PLSOILIN 100	Botany for Gardeners	1991, 2004-2007 (Spring)	3 credits
PLSOILIN 235	Pruning Fruit Crops	1989-2007 (Spring)	2 credits
PLNTSOIL 661	Intermediate Biometry	1992-2007 (Fall)	4 credits
PLNTSOIL 691A	Proposal Presentation	2006-2007 (Spring & Fall)	1 credit
PLNTSOIL 697A	Data Analysis & Interpretation	2003-2007 (Spring & Fall)	1 credit

Graduate Program Director, Department of Plant & Soil Sciences, 2003 to present.

Stockbridge School of Agriculture Fruit & Vegetable Crops Program Coordinator, 1988 to present.

Major advisor for 115 A.S., 16 B.S., 5 Ph.D., and 4 M.S. students and served on 50 graduate student committees.

Have given more than 350 presentations to Massachusetts fruit growers and other Extension audiences.

APPENDIX A – MFGA E-mails of support

From: clements@umext.umass.edu
Subject: new tree planting?
Date: October 29, 2007 4:00:23 PM EDT
To: members@massfruitgrowers.org
Reply-To: members@massfruitgrowers.org

If I were to offer to buy you one acre worth of apple trees -- app. 1,000 trees, on dwarf rootstock, planted at app. 3 ft X 14 ft -- how many of you would be willing to supply the land, labor, cost of support ('trellis'), and irrigation? Estimated cost of trees \$8,000, estimated cost of your contribution app. equal. (Maybe more, maybe less depending on current conditions.) Your choice of cultivars. (Within reason and subject to availability.) Training system = tall spindle, with my help. Some basic data collection like time spent establishing, pesticide input, and yields for say, 5 years? I would help with that too. Objective to demonstrate how/if we can improve yield per acre, efficiency, and reduce pesticide use (per unit of fruit production) in a modern apple orchard production system.

Please respond ASAP if you would be interested -- no firm commitment need at this point.

:-)

Jon Clements
Extension Tree Fruit Specialist
UMass Cold Spring Orchard
393 Sabin Street
Belchertown, MA 01007
VOICE 413.478.7219
FAX 413.323.0382
IM mrhoneycrisp
Skype Name mrhoneycrisp

From: fcarlson@carlsonorchards.com
Subject: RE: new tree planting?
Date: October 30, 2007 3:18:19 PM EDT
To: members@massfruitgrowers.org
Reply-To: members@massfruitgrowers.org

Jon:
You can count on Carlson Orchards.
Thanks Jon,
Frank

From: kosinskifarms@comcast.net
Subject: Re: new tree planting?
Date: October 30, 2007 8:03:36 AM EDT
To: members@massfruitgrowers.org
Reply-To: members@massfruitgrowers.org

Jon,

We certainly would be interested. Our equipment would support that spacing since much of orchard is at closer than normal spacing. We are planting 9's at six ft this year.
Gene Kosinski

From: mac2go@net1plus.com
Subject: trees
Date: October 30, 2007 9:02:35 AM EDT
To: clements@umext.umass.edu

Yes Jon,

Lanni Orchards is interested in the apple tree project. We are excited to pick apples from those trees we planted this year, and would put more in anyhow this coming year, so count us in.

Pat Lanni

From: cookeeze4@hotmail.com
Subject: Re: new tree planting?
Date: October 30, 2007 7:55:48 AM EDT
To: members@massfruitgrowers.org
Reply-To: members@massfruitgrowers.org

Cider Hill Farm in Amesbury would jump on this offer.

Glenn Cook

From: jdinando50@gmail.com
Subject: Re: new tree planting?
Date: October 29, 2007 10:15:32 PM EDT
To: members@massfruitgrowers.org
Reply-To: members@massfruitgrowers.org

Sholan Farms is interested.

Thanks
Joanne DiNardo
978-870-5555

From: office@shelburnefarm.com
Subject: Re: new tree planting?
Date: October 29, 2007 9:53:43 PM EDT
To: members@massfruitgrowers.org
Reply-To: members@massfruitgrowers.org

Hi Jon,
I'm very interested. Sounds like a great project.
-Ted

From: clarkdalefarms@comcast.net
Subject: Re: new tree planting?
Date: October 29, 2007 8:28:10 PM EDT
To: members@massfruitgrowers.org
Reply-To: members@massfruitgrowers.org

Put Clarkdale down as interested too. If[we] are planting 500 honeycrisp on 26 this next year, but I don't plan to go that close together. We could compare plantings. Tom

From: arsenaultk@charter.net
Subject: New planting technology
Date: October 29, 2007 8:08:04 PM EDT
To: clements@umext.umass.edu

Jon,
It appears you have several takers for your offer. I believe I have a perfect location for that one acre planting. My plan was to remove five rows of M7's adjacent to my barn and parking lot. I want to develop a nice PYO area with a number of popular varieties. This past weekend a group of scouts were here and I was explaining amongst other interesting facts how trees are being planted closer together and kept from growing too tall for improved efficiency and quality of fruit. As the explanation went on I realized that the M9 plantings we have planted here over the past ten years are now old technology and what you are promoting is what we should be turning to. Last spring Bill at Wafler gave me a tour of his tighter plantings and showed how they are managing them quite successfully.
Let me know if you are interested. Certainly the proximity to you is an advantage.
Keith Arsenault

From: kellylew@metrocast.net
Subject: Re: new tree planting?
Date: October 29, 2007 7:02:15 PM EDT
To: members@massfruitgrowers.org
Reply-To: members@massfruitgrowers.org

I'll do it. Art Kelly

From: andre@tougasfarm.com
Subject: Re: new tree planting?
Date: October 29, 2007 6:48:18 PM EDT
To: members@massfruitgrowers.org
Reply-To: members@massfruitgrowers.org

I'm interested Jon

Andre

Massachusetts Orchard Production Upgrade Program (MOPUP)



Objective: establish 1 acre of high density apple orchard at 10 participating Massachusetts grower/orchards using modern production systems (tall-spindle), rootstocks, and varieties for demonstration and training in modern apple production systems.

Procedure: tree spacing 3 ft. between trees by 12-14 ft. between rows, 4-wire sup-

port, irrigation, and deer fence. Trees trained to tall-spindle. Varieties: Lindamac, Honeycrisp, Macoun, Cameo, Suncrip, Gala, Fuji (early strains) or selected by grower. Rootstocks M.9, B.9, G.41. Orchardist supplies labor, tree support, equipment, water supply, and deer fence (mandatory, potential USDA/NRCS cost-sharing). MOPUP purchases trees and provides technical support for first 3 growing seasons. Growers join International Fruit Tree Association and attend annual meeting/summer tour. Production objective of 600 boxes high quality fruit/ha in 3rd leaf, already exceeding the state-wide production average of 200 bushels/acre by three times.

Benefits: orchardist will learn first-hand modern, hi-density apple orchard production techniques; grower does not assume all the risk of planting new orchard; grower will be provided with technical support during orchard establishment; use of crop protection chemicals will be minimized on a per unit production basis; Massachusetts will be recognized as a participant in modern, hi-density apple production regions.

Budget: Orchard establishment: trees, support, irrigation @ \$14,000/acre X 10 = \$140,000; technical support: travel and supplies, salary support @ app. \$10,000.