Massachusetts Agricultural Experiment Station & UMASS Extension

FY 2005-FY 2006 Plan of Work Update

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2005-2006 Plan of Work Update

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Summary

During the next two years, we will continue on the same path working to address critical issues related to agricultural competitiveness, innovative farming techniques, economic viability, water quality, soil management and plant and production practices with limited inputs.

The vitality of the economy and the quality of life in Massachusetts are heavily dependent on agriculture. As a highly urbanized state, it produces 15% of its food and retains a significant amount of open farmland and managed landscapes providing important habitat for wildlife, recharge zone for water supplies and recreational spaces for tourists and residents. Massachusetts's agriculture adds over $4 billion in sales to the economy and creates tens of thousands of jobs. In 2002, Massachusetts led New England in cash receipts from agriculture. Massachusetts's agriculturists purchased $170 million worth of materials for their businesses, pay property taxes of $ 24 million, disburse a payroll of $800 million, and pay $24 million in interest to Massachusetts and other financial institutions. Given the densely urban setting of the state agriculture is no longer simply farming. A broader agriculture includes parks, playing fields, golf courses, riding stable and backyards, which are also, managed landscapes requiring expertise in plant and animal production. Regulatory, land shortage, unskilled labor and public pressure are increasing the challenges of agricultural viability.

Massachusetts's agriculture shares with large scale national and global producers the need to keep up with advances in agricultural technology and implementation of intensive farm and business management practices. The complexity of agricultural decisions and methods today requites a whole systems approach that can integrate many perspectives into a dynamic, comprehensive whole. This is particularly true if agriculture is to be sustainable economically, environmentally, and socially. To remain healthy and successful, Massachusetts agricultural enterprises must continually adapt to a complex and changing situation, one that includes the local natural resource base, the social and political environment and the local, regional and global food and marketing system.

Agricultural Challenges in Massachusetts:

Land Use -- There is steady development pressure on open space particularly farmland. Farmland value in Massachusetts is ranked fourth highest in the nation, at $4,000 per acre. The temptation to sell farmland for development is unrelenting. Three areas in the state have been identified among the top twenty most threatened farmland areas in the country. The relative importance of preserving farmland is debated, but there can be little doubt that agriculture and horticulture contribute to the state economy, the quality of life, and the sustainability of the environment. Agricultural interest are often under represented before local boards that make decisions about municipal grounds management, wetland preservation, zoning, resource and conservation area management, a open space preservation issues that impact grounds managers and growers. New ways must be developed to facilitate the exchange of information needed when resolving agricultural land-use issues for the benefit of the whole community.

Marketing and Economic Development - The future of agriculture may high on successful marketing. Large-scale commodity producers outside of Massachusetts, for example the

Washington apple industry, can afford to pay to dominate supermarket shelves and advertising in the state. Agricultural products from Massachusetts must be cleverly and wisely marketed if they are to compete with products from other states, regions and counties.

Use of Chemicals - The public seems to like open s pace and local farms, but not necessarily all of the processes that are needed to operate profitably. Chemicals are often identified as a problematic issue. New technologies that can reduce chemical usage while allowing agriculture to operate profitable are needed to address this issue. Public policy regarding the use of chemical agents should reflect an understanding of agriculture's economic realities.

Production and Management Technologies -- Agricultural businesses need to be kept informed of advances in new technologies such as integrated pest, crop and livestock management, biotechnology, biological pest control, and soil and composting science.

Energy, Resources, and Waste Management - Ways need to be found to ensure the efficient and ecological management of wastes, energy, soil, water, and other resources which contribute to the profitability of agriculture and the green industry.

Labor - Agricultural production and green industry businesses depend upon reliable, skilled, and affordable labor. Low wages, hard work, and the seasonal nature of production agriculture labor make it unattractive those who have alternatives. Recent policies of the U.S. Department of Labor make hiring offshore laborers more difficult.

Community Education - Public support for farms, agribusinesses, urban forests and managed landscapes, and green industry services is essential for the vitality and long-term sustainability of agriculture and a protected environment in Massachusetts.

Programs and Project Update Information Listed by Goal

The Massachusetts Agricultural Experiment Station and UMass Extension will continue most of the activities described in the original 5-year Plan of Work. We describe below changes and additions to that Plan of Work as they pertain to each of the five national goals.

Goal 1
An agricultural system that is highly competitive in the global economy

Agency	Total Dollars Per year	FTEs Per year	MSR Projects/ Programs Per year	MSR Dollars Per year
MAES	$940,000	33	14	$259,000
UMEXT	$1,256,155	18	4	$ 40,000

Goal 1 Changes and Additions
We will be increasing efforts to develop new technologies for the conversion of agricultural waste into energy. These will focus on local farms and food converters. The emphasis on community supported agriculture and coordination with increasingly ethnic markets will also be expanded. New efforts will also be made to support the fledging aquaculture industry in Massachusetts. The following outcomes will be augmented from these increased efforts.

- New technology and management systems utilized in Massachusetts
- Plants and animals, new to Massachusetts, utilized for the production of high value products
- Appropriate traditional and ethnic food needs met by the Massachusetts farmer
- Development of management systems targeted at the expansion of the aquaculture industry

The following outcomes have either been achieved or are no longer supported within the revised plan of work.

- Genetic improvement of chestnut for pathogen management
- Increased milk production of cattle through genetic improvement
- Resistance of cattle to microbial infection enhanced

Goal 2
A safe and secure food and fiber system

Agency	Total Dollars Per year	FTEs Per year	MSR Projects/ Programs Per year	MSR Dollars Per year
MAES	$131,000	8	0	$0
UMEXT	$142,502	2	0	$0

Goal 2 Changes and Additions
We will be increasing our efforts in both food safety and food policy. There will be increased research in food safety to compliment ongoing educational efforts. The following outcomes will be augmented from these increased efforts.

- Development of new methods for the detection of pathogens in food and food processing
- Food borne illness is minimized

Goal 3
A healthy, well-nourished population

Agency	Total Dollars Per year	FTEs Per year	MSR Projects/ Programs Per year	MSR Dollars Per year
MAES	$198,000	7	2	$53,000
UMEXT	$183,115	2.6	0	$0

Goal 3 Changes and Additions
Our activities related to goal 3 will remain unchanged.

Goal 4   ***Greater harmony between agriculture and the environment***

Agency	Total Dollars Per year	FTEs Per year	MSR Projects/ Programs Per year	MSR Dollars Per year
MAES	$680,000	15	6	$233,000
UMEXT	$2,388,334	34	5	$65,000

Goal 4 Changes and Additions
Research and Extension programs will continue to address agricultural and broader environmental issues as defined by outcomes in the FY00-04 plan of work. Within Massachusetts, critical short term issues include developing economic and environmentally benign pesticide and farming practices, land use management and conservation; and ecosystem and water resources protection. The following outcomes will be augmented by these increased efforts.

- Sustainable agricultural systems that maintain healthy ecosystems and insure a safe and adequate water supply
- Land Conservation

Public concern for the environmental impact of pesticide and nutrient application is very high throughout the state. Continued emphasis will be placed on cultivation and management practices which minimize environmental impact in an economically competitive manner.

A second area of emphasis is development of a private well protection program designed as a cooperative effort of public agencies and non-profit groups to provide educational programs and materials to schools, businesses, and individuals to promote understanding of fragile water resources and change individual and group practices to protect groundwater. Education for private well owners will encourage regular water testing and better understanding of keeping well water safe to drink. Exhibits and educational activities/materials will be developed for community groups and the Groundwater Guardian team, and information will be provided on a variety of water quality issues to residents and businesses.

Development pressures for all land have increased dramatically since 2002 as a result of falling interest rates and economic recovery. These pressures continue to consume available farm land as well as impact farm and non farm ecosystems as well as water resources. In FY05-06 a land use conservation will provide education, outreach and facilitation to local and regional land trusts, town boards, community preservation act committees, open space committees, professional groups that provide services to the land protection community and other governmental entities and peer organizations on issues related to land protection, including issues relative to water resources, wildlife habitat, scenic views, valuable farmland and forest land and historic resources.

Goal 5
Enhanced economic opportunity and quality of life for Americans

Agency	Total Dollars Per year	FTEs Per year	MSR Projects/ Programs Per year	MSR Dollars Per year
MAES	$73,000	2.3	1	$13,000
UMEXT	$961,889	14	0	0

Goal 5 Changes and Additions

Research and Extension programs will continue to address economic opportunity and quality of life issues identified within the FY00-04 plan of work. Critical priorities include youth workforce readiness, youth science and technology literacy and improved youth economic opportunity via utilization of out of school time. Each of these areas, focused on youth, are viewed as essential to preparing youth to be productive and contributing citizens. The following outcomes will be augmented by these increased efforts.

- Quality of life and economic viability improved for rural populations
- Well-trained and skilled workforce

This goal will be addressed primarily by the Extension 4-H, and Communities, Families and Youth (CFY) programs. Due to budget reductions 4-H is focused specifically animal science and communications skill areas. This focus, combined with a CFY focus on limited income audience and youth of color will place particular emphasis on these three areas, utilizing the 4-H program as well as new initiatives of the Communities, Families and Youth program.

Stakeholder Input Process

The Stakeholder Input Process remains the same as in the original plan of work.

Program Review Process

No significant changes have been made to the review process since the 5-Year Plan of Work was written.

Evaluation of the success of Multi and Joint Activities

The Evaluation of success of Multi and Joint Activities remains the same as in the original plan of work.