

Commodity Crop Production

Commodity Crop Production

V(A). Planned Program (Summary)

1. Name of the Planned Program

Commodity Crop Production

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
201	Plant Genome, Genetics, and Genetic Mechanisms	10%		10%	
204	Plant Product Quality and Utility (Preharvest)	20%		20%	
205	Plant Management Systems	20%		20%	
206	Basic Plant Biology	10%		10%	
211	Insects, Mites, and Other Arthropods Affecting Plants	10%		10%	
212	Pathogens and Nematodes Affecting Plants	10%		10%	
213	Weeds Affecting Plants	10%		10%	
216	Integrated Pest Management Systems	10%		10%	
Total		100%		100%	

V(C). Planned Program (Inputs)

1. Actual amount of professional FTE/SYs expended this Program

Year: 2008	Extension		Research	
	1862	1890	1862	1890
Plan	11.9	0.0	98.2	0.0
Actual	20.6	0.0	161.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c 294140	1890 Extension	Hatch 1720512	Evans-Allen 0
1862 Matching 1137734	1890 Matching 0	1862 Matching 13280831	1890 Matching 0
1862 All Other 131637	1890 All Other 0	1862 All Other 13863417	1890 All Other 0

V(D). Planned Program (Activity)**1. Brief description of the Activity**

Experiment Station:Progress was made in several research areas related to commodity crops this year.Among them:

•New information was attained on the impact of moisture during grain filling on the accumulation of deoxynivalenol in Fusarium-infected wheat. •Two new cultivars, Tom (wheat) and Rasmuson (barley), were released, both of which have improved resistance to Fusarium head blight. •The first study of the characteristics of the soybean sudden death (SDS) syndrome pathogen in the northern U.S., was completed, which has led to increased awareness of this serious disease and to proactive actions by seed companies and soybean producers that will result in improved management of SDS •The economic feasibility of shifting Minnesota pasture and cropland from current land uses to energy crops was analyzed in a set of enterprise budgets, providing needed information in this newly emerging field.

More research results are reported under the Outcomes section.

Extension:In 2008, Extension regional and local educators were focused on:

1) providing core services, including education and consultation to farmers due to significant weather-related threats.

2) changing and adapting programmatic strategies. Pesticide safety certifications, for example, have moved from on-line to face-to-face certification coursework to strengthen two-way communication with farmers who alert researchers to new concerns that require future educational and research responses. Small grains educational initiatives reached out to new areas of the state to add small grains as a new rotational option.

3) The team strengthened its response to environmental concerns about drainage systems. Test sites around the state are now examining methods to control the flow of drainage, or to capture drainage and break down nitrogen content before it enters Minnesota's abundant lakes and rivers.(For more information, visit [http://www.extension.umn.edu/CommodityCrops/.](http://www.extension.umn.edu/CommodityCrops/))

2. Brief description of the target audience

UMN Extension's 2008 organizational network study of the Crops team identified significant efforts committed to: 1) private businesses (34.1% of contacts), county governments (14.6%) and trade associations (11%) as the primary recipient of Extension outreach. To these organizations, significant efforts provided expert advice (34.1% of efforts); and partnerships around a joint effort for mutual benefit.(29% of efforts). Over 15% of efforts were engaged in on-going work to influence other organizations' outcomes and processes.

V(E). Planned Program (Outputs)**1. Standard output measures**

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	54300	20000	0	0
2008	32340	71185	3407	0

2. Number of Patent Applications Submitted (Standard Research Output)**Patent Applications Submitted**

Year	Target
Plan:	2
2008:	11

Patents listed

Biological Control of Nematodes with *Hirsutella minnesotensis* (Patent # 7,284,629)

Also these new varieties: 'Tom' new barley variety; two new soybean varieties for general release--a maturity group 0 conventional cultivar (MN0107) and a maturity group 0 conventional cultivar with soybean cyst nematode resistance (MN1710CN). Five soybean food type cultivars were also released and licensed in 2008. Two were small seeded types and three were larger seeded higher protein types.

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

	Extension	Research	Total
Plan	10	120	
2008	7	137	144

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

Conduct regional and local events to provide producers with latest applied research for improved crop management. (Target expressed as number of events)

Year	Target	Actual
2008	810	1576

Output #2

Output Measure

On-farm research will be conducted and result in findings that will inform producers about best management practices.

Not reporting on this Output in this Annual Report

V(G). State Defined Outcomes

O No.	Outcome Name
1	Participants will gain research-based knowledge in crop and water management and workplace safety. (Target expressed as the number of direct person contacts reporting new research-based knowledge.)
2	Participants will act on university-based research they learned. (Target expressed as the number of direct person contacts from meetings who acted on or have made plans to act on information associated with their Extension learning.)
3	Research to manage soybean aphids will provide knowledge for producers to reduce pesticide use and improve profitability.
4	Research in biomass will provide information to help make ethanol production more profitable.
5	Research will provide information to help control new wheat diseases.

Outcome #1

1. Outcome Measures

Not reporting on this Outcome for this Annual Report

2. Associated Institution Types

3a. Outcome Type:

3b. Quantitative Outcome

Year	Quantitative Target	Actual
------	---------------------	--------

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
---------	----------------

V(H). Planned Program (External Factors)

External factors which affected outcomes

Natural Disasters (drought,weather extremes,etc.)

Economy

Appropriations changes

Public Policy changes

Government Regulations

Competing Public priorities

Competing Programmatic Challenges

Populations changes (immigration,new cultural groupings,etc.)

Brief Explanation

V(I). Planned Program (Evaluation Studies and Data Collection)

1. Evaluation Studies Planned

After Only (post program)

Retrospective (post program)

Before-After (before and after program)

During (during program)

Case Study

Comparisons between program participants (individuals,group,organizations) and non-participants

Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

Comparison between locales where the program operates and sites without program intervention

Evaluation Results

Key Items of Evaluation