

# **Wheat Production in Washington**

## **Summary Report**

**A Survey Designed and Conducted by  
Washington State University's**

**Winter and Spring Wheat Breeding Programs  
Department of Crop and Soil Sciences**

**Department of Community and Rural Sociology**

**Social and Economic Sciences Research Center**

**CSS Information Series No. 1202-06**

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## Wheat Production in Washington



This document reports responses to a mail survey of Washington wheat growers that was conducted from January through March, 2006. The survey's objective was to identify wheat growers' priorities in wheat breeding and related research programs at Washington State University (WSU). The survey was designed and sponsored by the Winter and Spring Wheat Breeding Programs in the Department of Crop and Soil Sciences and faculty in the Department of Community and Rural Sociology. The survey was conducted with the cooperation of WSU's Social and Economic Sciences Research Center (SESRC).

A total of 1,374 names were drawn from the list of members of the Washington Association of Wheat Growers. Three hundred and seven (307) individuals were excluded from the sample because of ineligibility, bad addresses, and other reasons. The result was a corrected sample of 1,067 growers. Of these, 553 wheat growers returned completed questionnaires. The completion rate for the survey was 51.8 percent.

Of those farmers who responded to the survey, less than 10 percent reported that they manage an agricultural business in addition to running their farm. Only 2 percent stated that they hire a management company to help run their farm. Respondents ranged in age from 26 to 96 years with an average age of 57 years. The average number of years of farming experience (as either a farm owner or manager) was 32 years. Over 96 percent of respondents were male.

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### Content

PART I.	EXPERIENCE WITH WASHINGTON STATE UNIVERSITY (WSU).....	2
PART II.	WSU WHEAT BREEDING PROGRAMS.....	3
PART III.	SUCCESSFUL WHEAT PRODUCTION AND MARKETING STRATEGIES.....	6
PART IV.	ORGANIC FARMING .....	8
PART V.	GENETICALLY MODIFIED WHEAT .....	9
PART VI.	GENERAL BACKGROUND INFORMATION.....	10

## **PART I. EXPERIENCE WITH WASHINGTON STATE UNIVERSITY (WSU)**

### **Growers' frequency of contact with WSU representatives during 2003 – 2005.**

	At least once a week (%)	At least once a month but less than every week (%)	More than once a year but less than once a month (%)	About once a year or less (%)	Not at all (%)
WSU Extension Specialists	0.4	7.4	33.8	31.0	27.3
WSU-Pullman Researchers	0.4	3.1	22.7	33.4	40.5
WSU Administration	0.4	1.9	6.4	13.5	77.8

### **Growers' satisfaction with their contact with WSU representatives during 2003 – 2005. (Data are for growers who had contact with WSU representatives during 2003 – 2005)**

	Very satisfied (%)	Somewhat satisfied (%)	Somewhat dissatisfied (%)	Very dissatisfied (%)
WSU Extension Specialists	57.8	33.4	5.2	3.6
WSU-Pullman Researchers	52.9	37.2	6.3	3.6
WSU Administration	32.1	45.7	13.6	8.6

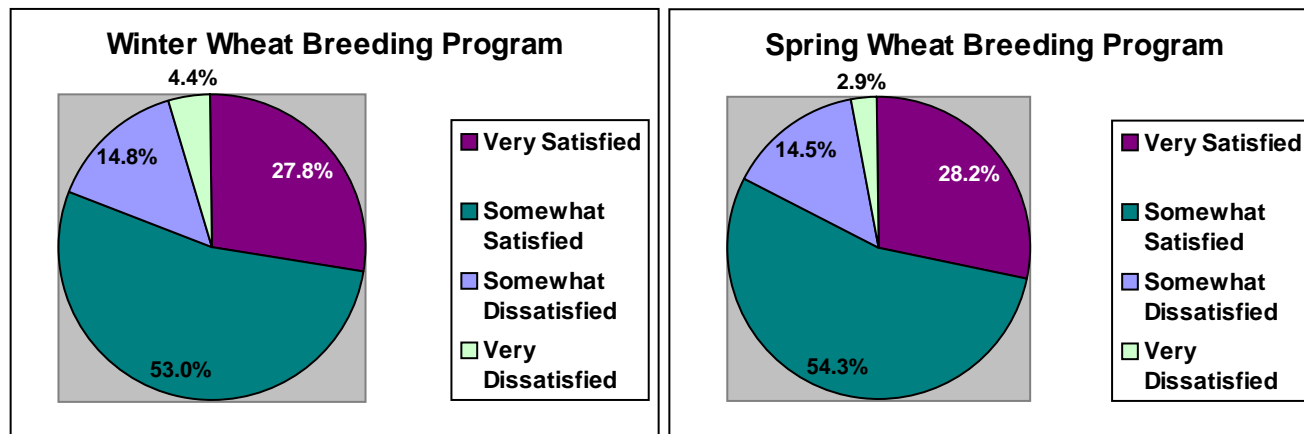
### **Growers' perceptions of the level of success of WSU representatives at serving the needs of wheat growers during 2003 – 2005.**

	Very successful (%)	Somewhat successful (%)	Somewhat unsuccessful (%)	Very unsuccessful (%)	Does not apply (%)
WSU Extension Specialists	29.3	45.3	10.4	2.8	12.2
WSU-Pullman Researchers	27.0	45.4	9.6	5.4	12.6
WSU Administration	8.2	23.1	15.4	5.4	47.8



## **PART II. WSU WHEAT BREEDING PROGRAMS**

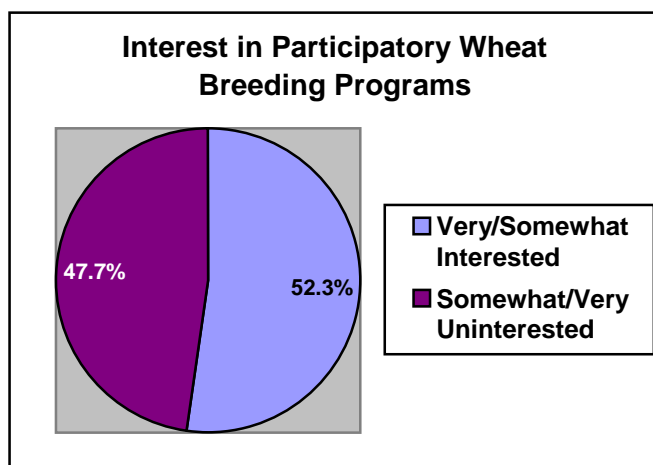
### **Growers' satisfaction with WSU's winter and spring wheat breeding programs.**



### **Growers' perceptions of how much priority WSU's wheat breeding programs should give to the following wheat characteristics.**

	High priority (%)	Medium priority (%)	Low priority (%)
Wheat requiring less nitrogen for given yield and protein content	68.3	30.0	1.7
Wheat with greater genetic diversity for pest and disease control	65.5	31.3	3.2
Specialized wheat for market segments	55.3	36.5	8.3
Herbicide tolerant wheat	45.5	44.0	10.5
Wheat suited for marginal production areas	37.7	35.6	26.7
Wheat with non-food uses (industrial, energy)	30.2	43.3	26.5
Perennial wheat	29.0	41.2	29.2

### **Growers' interest in working directly with WSU scientists in participatory wheat breeding programs within the next 1 – 3 years.**



*Participatory Wheat Breeding* uses both breeder and farmer expertise to develop varieties particularly suited to a specific set of environmental challenges.

**Growers' familiarity with WSU's effort to breed perennial wheat.**

	Very familiar (%)	Somewhat familiar (%)	Somewhat unfamiliar (%)	Not familiar (%)
Familiarity with WSU's perennial wheat breeding effort	6.2	41.0	23.2	29.6

**Growers' interest in planting perennial wheat with the following characteristics.**

	Very interested (%)	Somewhat interested (%)	Somewhat uninterested (%)	Very uninterested (%)
Mixes well with annual wheat, using the same equipment	52.3	33.2	8.6	5.9
Meets minimum yield requirement	48.8	35.4	8.6	7.2
Grows well in highly erodible areas	48.3	35.0	9.6	7.1
Works well under specific conservation programs or regulations	35.8	45.7	11.7	6.7
Suited for currently unproductive parts of fields	35.5	33.9	20.3	10.4

**Percentage of growers who planted private and public wheat varieties during 2003 – 2005.**

	2003 (%)	2004 (%)	2005 (%)
Private wheat varieties	40.4	43.8	44.2
Public wheat varieties	94.0	94.8	94.8

**Percentage of growers who saved private and public wheat varieties during 2003 – 2005.**

	2003 (%)	2004 (%)	2005 (%)
Private wheat varieties	9.4	8.8	7.8
Public wheat varieties	24.7	25.6	24.9

**Growers' frequency of planting wheat seed saved from their own fields.**

	Every year (%)	Every other year (%)	Sometimes but less than every other year (%)	Not at all (%)
Frequency of planting saved wheat seed	20.0	5.1	13.4	61.5

**Growers' perception of the importance of various factors when deciding whether or not to save their wheat seed.**

	Extremely important (%)	Mostly important (%)	Slightly important (%)	Not important (%)
Knowledge necessary to ensure quality	42.4	29.8	12.9	14.9
Extra storage capability	30.8	30.6	18.7	19.8
Time/management	30.3	36.0	17.4	16.3
Availability of necessary machinery	28.9	33.9	18.2	19.1

**Percentage of growers who save seed for crops other than wheat.**

	Yes (%)	No (%)
Save seed for crops (other than wheat)	19.7*	80.3

\* Seeds saved include barley, oats, lentils, peas, triticale and garbanzos.



### **PART III. SUCCESSFUL WHEAT PRODUCTION AND MARKETING STRATEGIES**

**Growers' perceptions of the importance of various factors in their efforts to make their wheat farm operations more successful.**

	Extremely important (%)	Mostly important (%)	Slightly important (%)	Not important (%)
Ensuring high yields	87.3	11.7	1.0	0.0
Lowering input costs	82.6	15.9	1.5	0.0
Increasing the number of buyers and markets for wheat	80.5	15.1	4.0	0.4
Developing alternative uses for wheat (e.g., bioenergy, industrial products)	56.5	30.0	11.9	1.5
Preventing pest resistance	51.2	42.6	5.6	0.6
Rebuilding regional storage and transportation networks	32.1	35.0	27.6	5.3
Increasing uniformity in the field	31.4	44.8	22.4	1.4
Promoting genetic diversity in wheat varieties	27.6	50.4	20.0	2.0
Emphasizing environmental conservation	26.2	45.4	25.4	3.0

**Growers' opinions about the future of wheat production in Eastern Washington.**

	Strongly agree (%)	Somewhat agree (%)	Somewhat disagree (%)	Strongly disagree (%)
Specific wheat varieties should be grown only in appropriate geographic areas due to quality concerns	26.8	57.8	13.1	2.3
All wheat varieties should meet minimum quality standards for seed to be sold in the state	61.5	31.3	6.5	0.7
Old wheat varieties should be taken off the market when new ones replace them	3.8	31.6	47.1	17.5
University plant breeding programs are a necessary component of a sustainable farm economy	79.5	19.4	0.9	0.2
Government supported agricultural programs should be targeted to benefit small and medium sized farms	42.8	34.8	16.5	5.9
Publicly funded agricultural research and extension should be expanded	49.5	45.6	4.5	0.4
Research and consultation by private agribusiness firms can replace most of the work done by university research and extension	1.1	14.2	48.3	36.4

**Growers' interest in various types of wheat marketing strategies.**

	Extremely interested (%)	Mostly interested (%)	Slightly interested (%)	Not interested (%)
Increased emphasis on delivering high quality clean wheat to domestic and overseas buyers, with premiums for growers who deliver above standards	68.1	26.6	4.3	0.9
Niche marketing of high-value wheat varieties or products	32.8	40.0	23.0	4.2
Rebuilding regional infrastructure for more local control of processing, distribution and marketing	24.2	47.9	24.0	3.8
Marketing club that pools specific varieties to sell directly to end users	21.5	44.7	27.9	5.9
Maintain current commodity system	16.2	51.7	27.5	4.6

**Growers’ perceptions of how much the following challenges negatively affected their farm operations during 2003 – 2005.**

	Highly affected (%)	Somewhat affected (%)	Hardly affected (%)	Not affected (%)
Low commodity prices	93.7	4.6	1.1	0.6
High input costs	88.9	9.8	0.8	0.6
Limited market opportunities	47.9	39.6	9.5	3.0
Federal agricultural policy and regulations	34.7	45.8	14.3	5.2
Too few companies buying commodities	32.1	45.7	17.2	4.9
Declining number of family farms	18.8	30.6	29.8	20.8
Declining population in small towns	15.6	27.3	31.6	25.6
Amount of land in CRP	9.7	22.8	34.3	33.2
WSU research not focused on farmer needs	9.0	37.7	35.1	18.2
Too few machinery dealers in my area	4.5	28.6	36.2	30.7
Too few input suppliers in my area	4.2	23.7	37.0	35.1
Access to loans	3.4	14.7	34.7	47.2





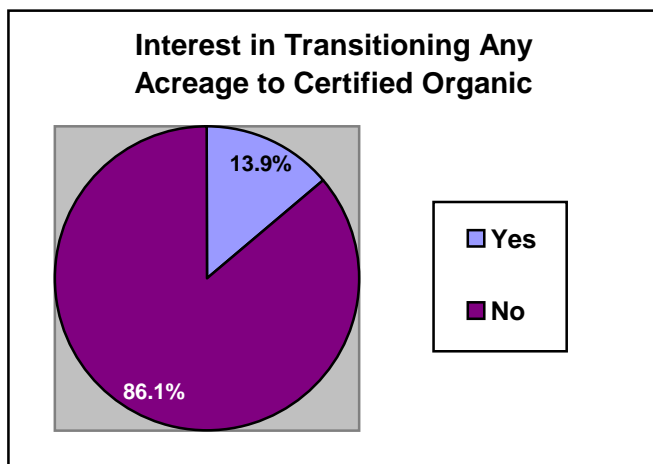
## **PART IV. ORGANIC FARMING**

Only three (3) growers reported that parts of their farms were certified organic. The survey asked all of the remaining growers the following two questions:

**Which of the following are your main reasons for NOT having any certified organic acres? Circle all that apply.**

	Percentage of growers who circled each reason (%)
Organic weed control methods are inadequate	69.3
Cannot get same yields with organic as conventional methods	59.3
Organic pest/disease control methods are inadequate	58.9
Not worth the time	43.4
Transportation and access to organic buyers are limited	36.3
Too difficult to get enough nitrogen	35.9
Need more information on organic production	33.2
Certification is too much trouble	24.3
Other reasons	17.8

**Within the last five years, 2001 – 2005, have you considered transitioning any of your acreage to certified organic?**



## **PART V. GENETICALLY MODIFIED WHEAT**

**Growers’ perceptions of the extent to which the requirement that growers sign “Technology Use Agreements” (that prohibit the saving and replanting of seed) would influence their decision about planting genetically modified crops.**

	Very high influence (%)	Somewhat high influence (%)	Moderate influence (%)	Somewhat low influence (%)	Very low to no influence (%)
Extent of influence	12.5	12.7	18.2	15.0	41.6

**Percentage of growers who agree/disagree with the decision by a private firm to suspend a request for government approval for the sale of Roundup Ready® wheat seed.**

Agree	47.4%
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*Of those who agreed...*

VIEWS ON RR® WHEAT SEED	%
Hope that non-GM herbicide tolerant wheat will be developed in the future	29.9
Hope that approval for Roundup Ready® wheat seed will be sought in future	27.1
Hope that approval for Roundup Ready® wheat seed will not be sought in the future	14.0
Other viewpoints	29.0

Disagree	52.6%
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*Of those who disagreed...*

VIEWS ON RR® WHEAT SEED	%
Roundup Ready® wheat seed is a technology that farmers currently need	70.7
A non-GM herbicide tolerant wheat is needed in the near future.	18.1
Roundup Ready® wheat seed is unnecessary technology	3.2
Other viewpoints	8.0

**Percentage of growers who would consider planting genetically modified wheat varieties on their farms.**

Yes	65.8%
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*Of those who would consider...*

REASONS FOR CONSIDERING	%
GM wheat has traits that would reduce input costs	49.2
GM wheat would make management easier	22.7
GM wheat has specific end-user traits that would result in a price premium	15.3
Other reasons	12.8

No	34.2%
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*Of those who would not consider...*

REASONS FOR NOT CONSIDERING	%
Too many uncertainties in the market	63.6
Too many issues with liability and patent ownership	10.3
Too many uncertainties about the environmental effects	7.9
Other reasons	18.2

## **PART VI. GENERAL BACKGROUND INFORMATION**

### **Average size (in terms of acres) of growers' farm/wheat operations.**

	Average across all growers
Acres currently farmed	3,145 acres
Acres of winter wheat (2005)	1,183 acres
Acres of spring wheat (2005)	280 acres

### **Growers' perceptions of the importance of various information sources on their decision-making about issues related to growing wheat.**

	Extremely important (%)	Mostly important (%)	Slightly important (%)	Not important (%)
Agricultural input supplier consultations	36.4	46.0	13.2	4.3
WSU research program field days	33.5	39.6	20.4	6.5
Spouse or business partner	31.4	29.6	20.4	18.6
Washington Association of Wheat Growers mailings	24.9	45.7	25.4	4.0
WSU Extension agent or scientist	21.8	43.0	28.4	6.8
WSU Extension bulletin	20.8	48.6	25.4	5.2
Washington Association of Wheat Growers meetings	12.8	27.2	42.5	17.5
Relatives	11.2	27.0	30.3	31.5
Agricultural input supplier magazines	10.5	34.2	42.7	12.7
Neighbors	10.1	35.6	36.6	17.8
Farm Bureau mailings	6.3	19.0	27.4	47.2
Farm Bureau meetings	2.5	11.0	32.7	53.8

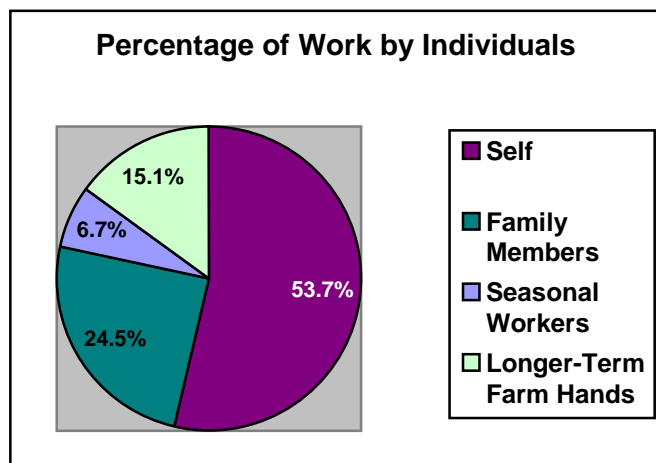
### **Total number of field days attended during 2001 – 2005 (average across all growers).**

	Average across all growers
Number of field days attended	3.0 field days

### **Percentage of growers with different types of farm business organizations.**

	Percentage of growers (%)
Family corporation	43.7
Single family or individual operation	29.1
Family partnership	22.1
Cooperative, estate, or trust	1.4
Non-family partnership	1.0
Non-family corporation	0.8
Other	2.0

**Percentage of work supplied by different individuals on growers' farms.**



**Percentage of income from off-farm employment (average across all growers).**

	Average across all growers (%)
Percentage of income from off-farm employment	22.0

**Estimated cost of production per acre in 2005 (including costs of seed, fuel, fertilizer, pest and weed control, equipment, taxes, labor, etc.).**

	Average across all growers
Estimated cost of production per acre	\$152

**Percentage of growers who reported the following total farm receipts for their farm businesses in 2005.**

	Percentage of growers (%)
Less than \$2,500 in total farm receipts	0.2
\$2,500 to \$24,999 in total farm receipts	4.4
\$25,000 to \$49,999 in total farm receipts	4.0
\$50,000 to \$99,999 in total farm receipts	7.7
\$100,000 to \$249,999 in total farm receipts	35.9
\$250,000 to \$499,999 in total farm receipts	30.5
\$500,000 or more in total farm receipts	17.3

**Percentage of growers who reported the following percentage ranges for their total household income derived from the farm operation.**

	Percentage of growers (%)
0 – 24% of household income from farming	14.4
25 – 49% of household income from farming	13.4
50 – 74% of household income from farming	19.6
75 – 100% of household income from farming	52.7

**Highest level of education completed by growers who responded to survey.**

	Percentage of growers (%)
Less than high school degree	1.4
High school degree	8.5
Some college	25.8
Vocational degree	10.0
College degree	40.6
Some postgraduate work	5.9
Postgraduate degree	7.9



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