

Water Stewardship Actions in Environmental Farm Plans

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Canada



Ontario
Farm
Environmental
Coalition



OFA



Ontario



Prairie Research Associates

Outline

- Research objectives and methodology
- What is an Environmental Farm Plan?
- Levels of Implementation of EFP Action Plans
- Differences between 1999 and 2010 surveys
- Next steps

Research objectives

- Assess the level of implementation of Environmental Farm Plan (EFP) Action Plans across Ontario
 - Important to measure progress of major policy tool
 - Move beyond participation levels
 - Comparisons between survey in 1999 and 2010
- Assess potential for ongoing measurement of progress in implementing EFP Action Plans
- Investigate services that might encourage farmers already participating in EFP to fully implement their EFP Action Plans

Who is involved in the research?

- Steering Committee:
 - Ontario Federation of Agriculture (OFA) on behalf of the Ontario Farm Environmental Coalition (OFEC)
 - Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA)
 - Agriculture and Agri-Food Canada (AAFC)
 - Ontario Soil and Crop Improvement Association (OSCIA)
- Consultant: PRA Inc. retained through a competitive process
- Interviewing team: OSCIA representatives

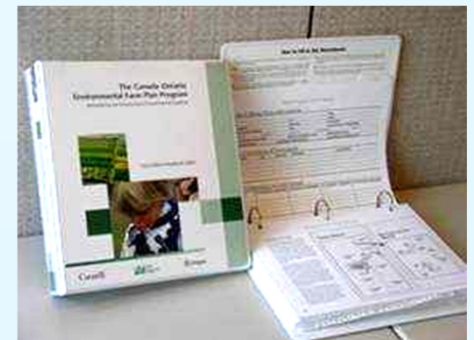
Research methodology

- Literature review
- Key informant interviews with OSCIA and EFP technical advisors
- Two-stage survey of 189 EFP Participants
 - Questionnaire on farm/producer characteristics
 - Interviews to review EFP Action Plans and how much of the plans have been implemented
 - Comparisons with EFP participant survey in 1999 (n=179)

What is an Environmental Farm Plan?



- Voluntary, confidential risk assessment prepared by each farm
- Builds farmers' environmental awareness
- Rank performance in 23 topic areas or Worksheets
 - Water, soil, air, nature
 - Up to 319 risk assessment questions
- Rank farm's performance on each topic
 - 1, 2, 3, 4 (Best)
- Action Plan: actions to improve all 1 and 2 ratings to at least 3 (good)
 - Short- and long-term actions, compensating factors, monitoring, barriers to action
- Peer review
- Ready to implement
 - Many projects eligible for cost shared funding
 - Other actions implemented through business activities



Worksheet #2 Water Wells

Rating	Best 4	3	2	1	Sites	A	B	C	D	E	
LOCATION OF WELL	(See Farmstead Sites chart on fold-out for question 2)										
1 Elevation of water well in relation to potential sources of contamination	Upslope from all sources of contamination,	Upslope from, or level with, any source of contamination,	Downslope from most sources of contamination,	Surface water runoff from any source of contamination reaches well,	Your Rating	1					

Action Plan

Timetable for addressing area of concern

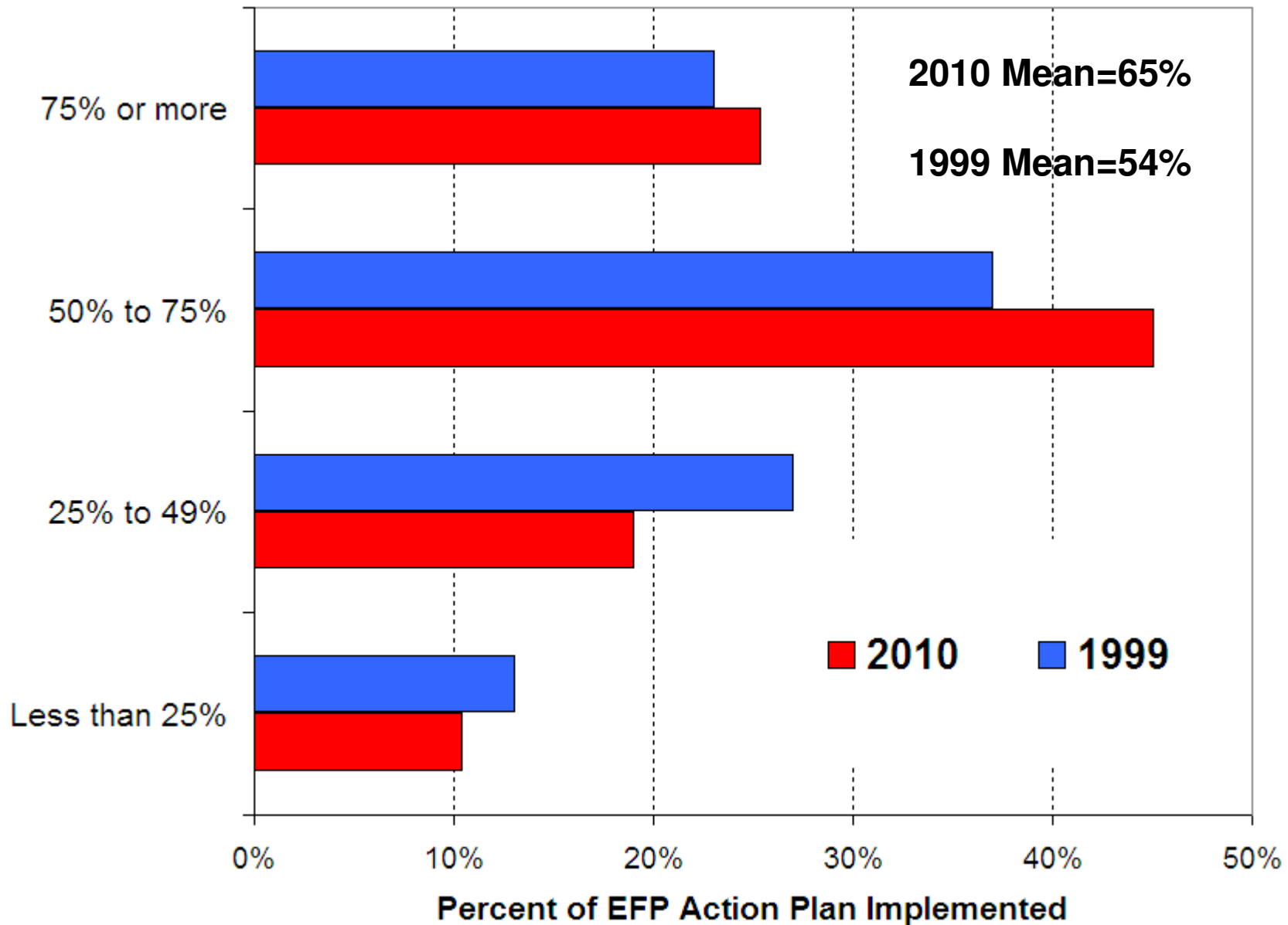
Date: January 11, 2006

Area of Concern	Short Term (within 2 yrs.)	Long Term (more than 2 yrs.)	Barriers to Short Term Plan	No Action	Completion Date
	ACTION/Compensating Factor/Monitoring	ACTION/Compensating Factor			
Worksheet = <u>2</u> Question = <u>1</u> Site = <u>A</u> Rating <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	Well is down slope from Manure Storage <input type="checkbox"/> within 8 mo. <input type="checkbox"/> within 2 yrs. <input type="checkbox"/> already being done	Move manure storage <input checked="" type="checkbox"/> 2-5 yrs. <input type="checkbox"/> 5 + yrs. (reassess)	1. <u>2</u> 2. <u>5</u>	<input type="checkbox"/> No Action	

Key Findings

- High levels of implementation 65% in 2010, up from 54% in 1999
- Significant investments in environmental projects \$69.6K average, up from \$10.8K in 1999
 - 77% of funds were farmers' own funding
 - 42% of actions taken had no reported costs
- Evidence of behaviour change, education influencing priorities (45% changed priorities after workshop)
- High satisfaction with EFP program (100% satisfied or very satisfied)
- About 3/4 perceived an improvement in environmental quality
- Participants took advantage of educational resources available
- Recommendations of new techniques for improvements

Level of EFP Implementation



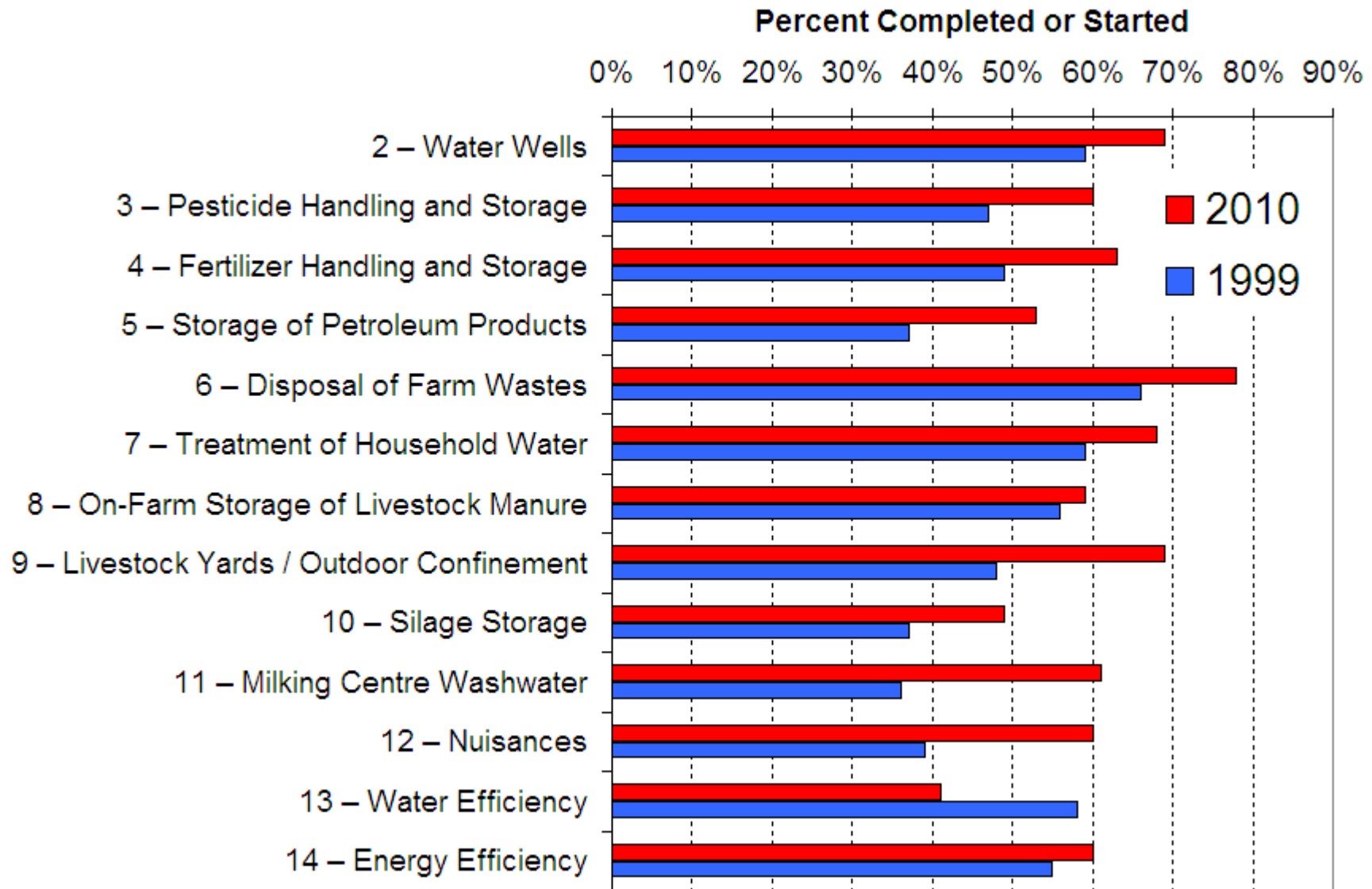
Different Issues for Different Commodities

- Crop producers most likely to identify activities for worksheets
 - Storage of Petroleum Products (88%);
 - Field Crop Management (79%);
 - Pest Management (79%); and
 - Pesticide Handling and Storage (77%).
- Livestock producers most likely to identify activities for worksheets
 - Storage of Petroleum Products (87%);
 - On-Farm Storage of Livestock Manure / Other Materials (84%); and
 - Use and Management of Manure / Other Organic Materials (83%).
- Horticultural producers most likely to identify activities for worksheets
 - Woodlands and Wildlife (100%) and
 - Pesticide Handling and Storage (81%).

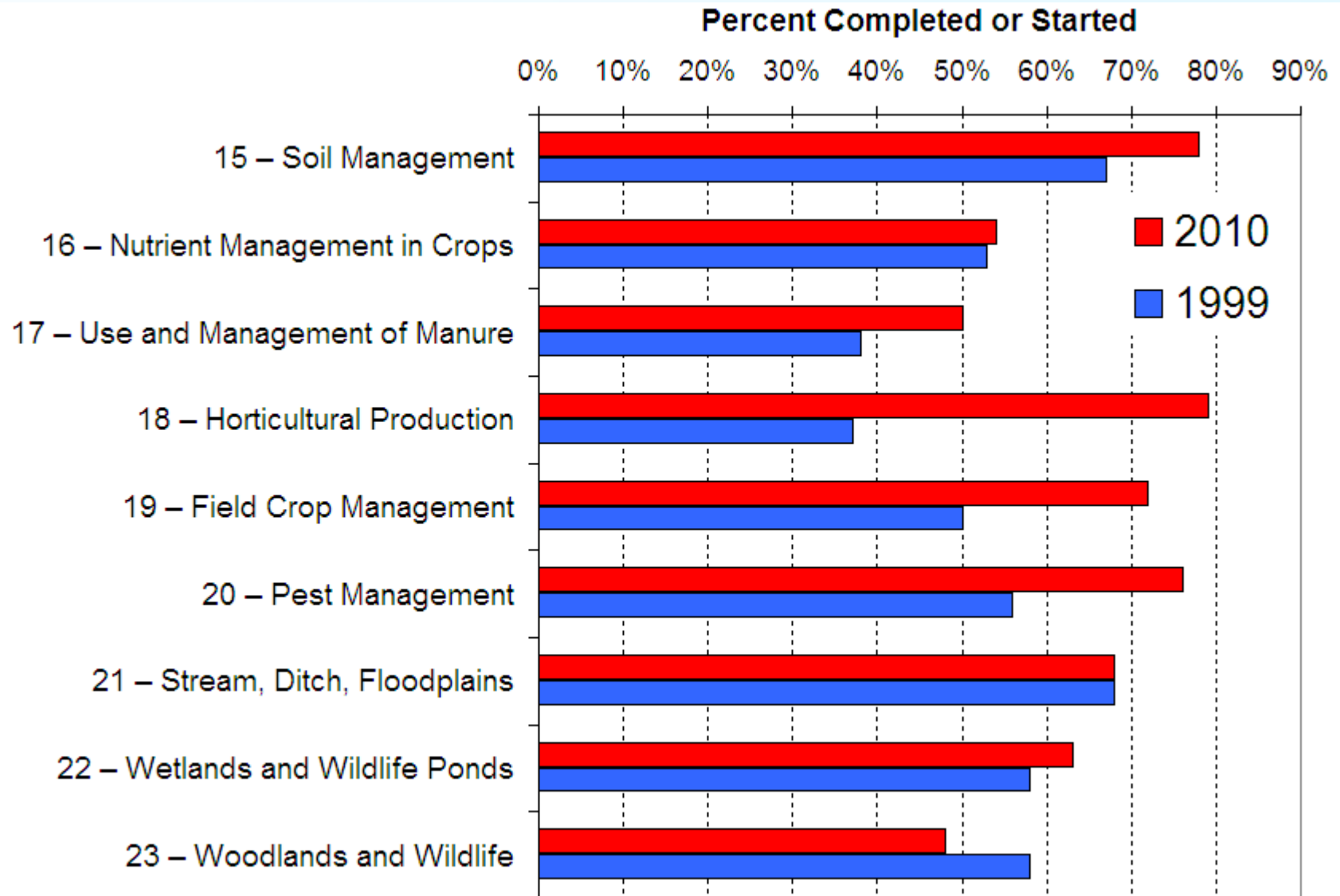
Other Factors Influencing Implementation

- Implementation level tends to be higher with
 - Higher number of years experience in farming
 - Years since completing the EFP Action Plan
 - Farms with higher farm revenue
- Also varies with amount of off-farm income
 - Higher implementation for those with moderate off-farm income
 - Lower for those with high off-farm income

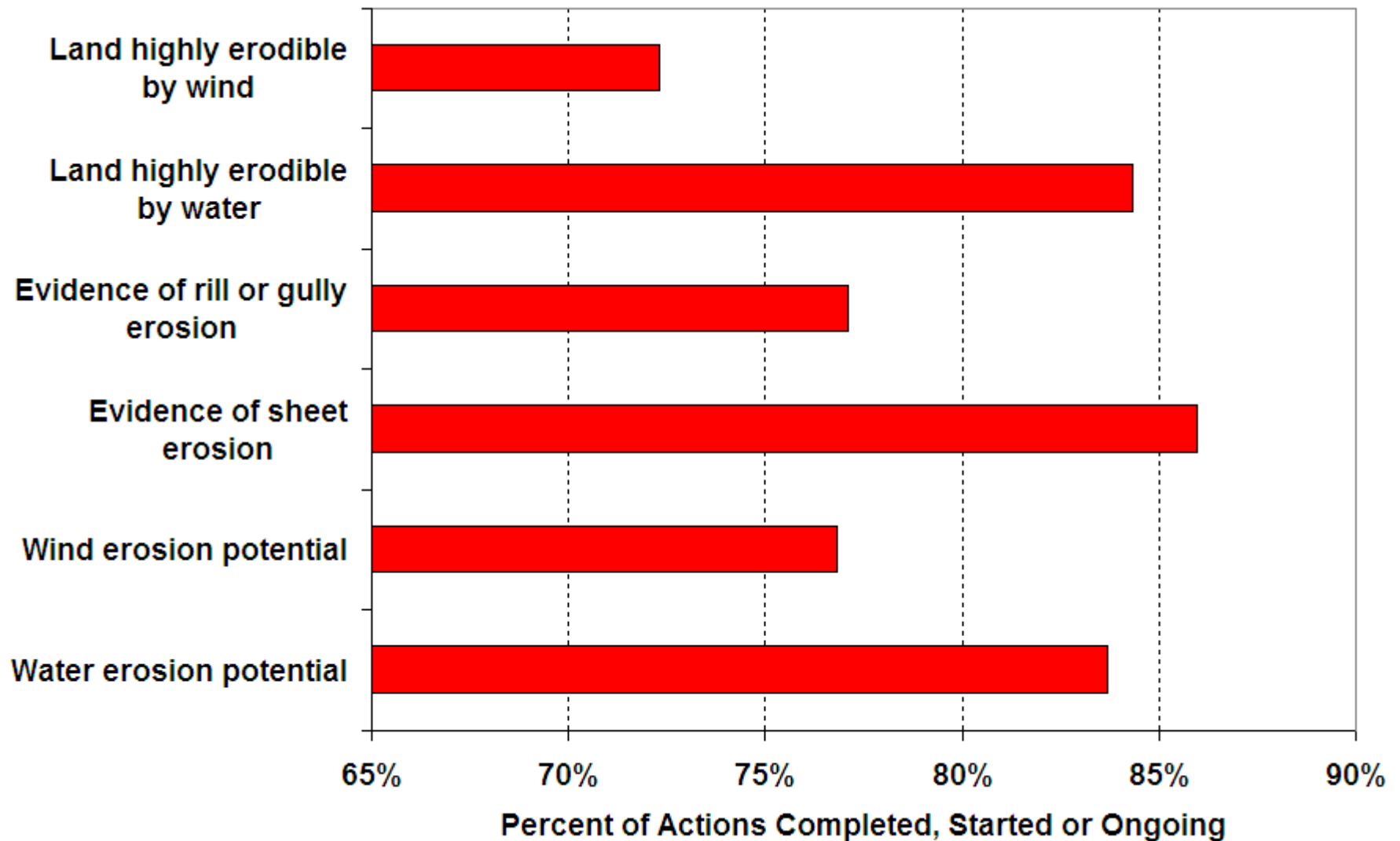
Detailed Assessment of Implementation by Worksheet – Farmstead Issues



Detailed Assessment of Implementation by Worksheet –Field and Natural Areas



Specific Soil Erosion Risk Assessments

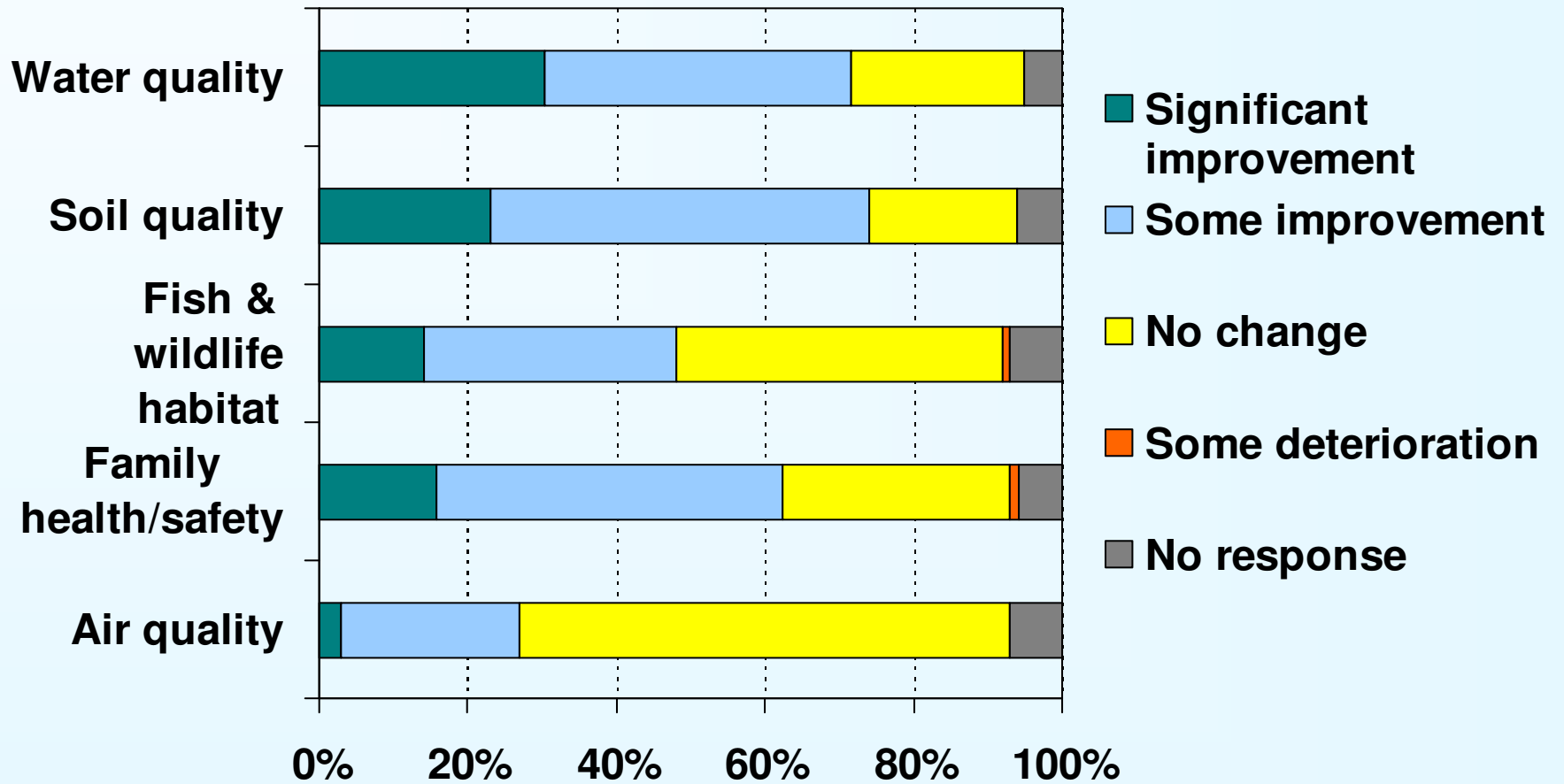


Time and Costs of EFP Implementation

	1999 All Farms	2010 All Farms	Crop	Livestock	Horticulture
Average Number of Hours in Implementation	53	163	184	131	248
Average total cost per farm	\$10,800	\$69,600	\$73,700	\$72,600	\$30,900
Average Percent self- funded per farm	-	77.4%	82.6%	72.6%	82.2%
Average Percent cost- share funding per farm	-	22.4%	17.4%	27.4%	18.1%

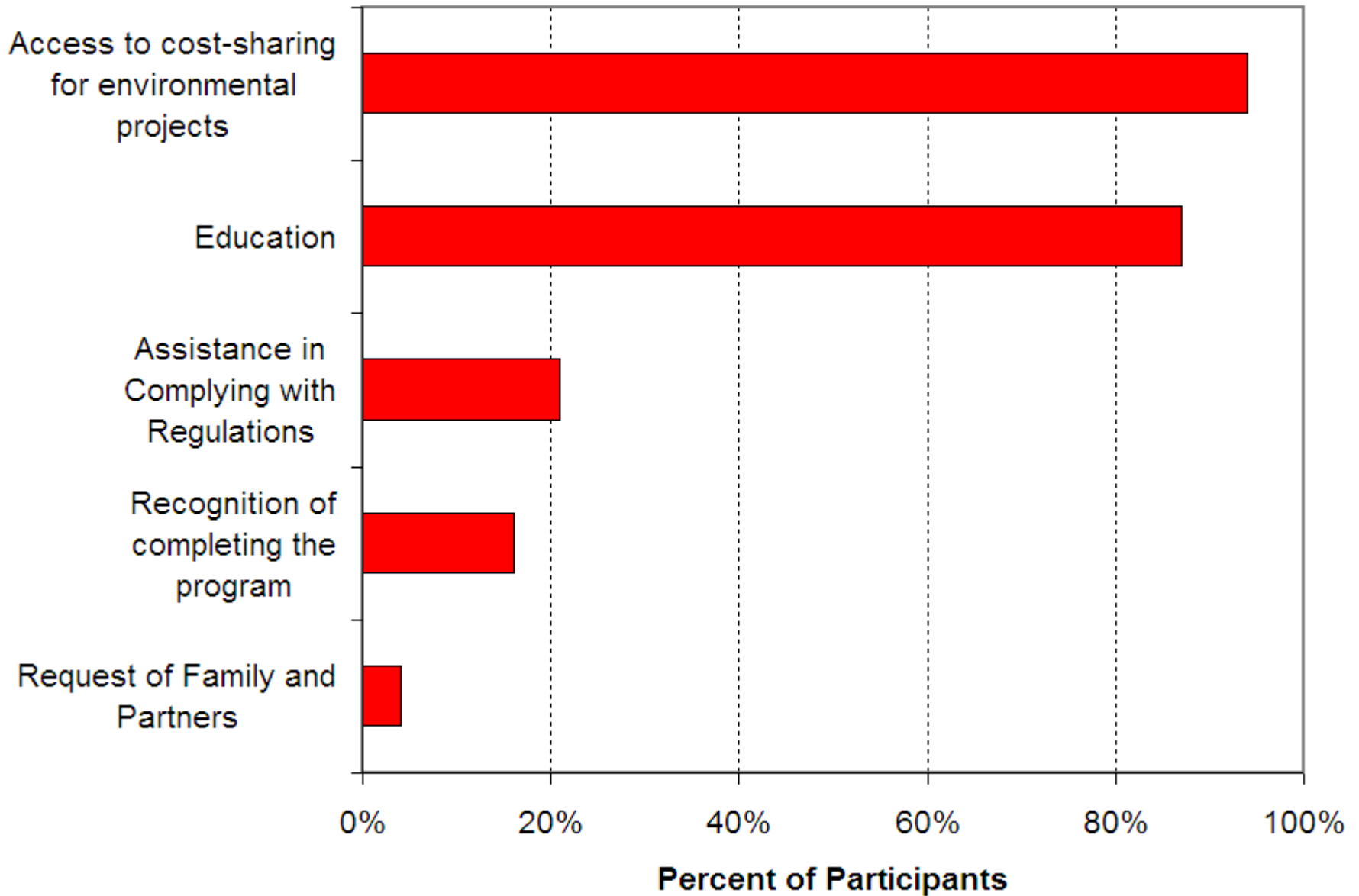
No significant differences between farm types for costs and hours

Reported Environmental Improvements



Those reporting improvements had significantly higher levels of implementation

Motivation for EFP Participation



Recommendations

1. Continue successful education through EFP Program
 - Remarkable satisfaction with workshop and services
 - Almost 50% changed their priorities as a result of workshop
2. Continue powerful linkage of education and cost-sharing
3. Offer more services tailored to needs of different types of producers
 - Tailor services to individual characteristics of producers
4. Consider additional ways to encourage implementation of EFP Action Plans
 - Tours, one-on-one advice, demonstrations, technical workshops
5. Consider additional services to enhance social interaction among farmers regarding EFP implementation
6. Revise EFP Action Plan to identify changes in risk ratings resulting from activities undertaken
7. Improve Performance Measurement
8. Research to identify ways to attract farmers not currently participating
9. Expand performance measures to show success of EFP
10. Use Action Plan data to document the value of EFP
11. Ongoing EFP performance measurement
 - Future surveys to document attitudes, motivation & action
 - Build on surveys in 1999, 2010

Next Steps



- Publicize the research results among stakeholders and within federal and provincial governments
- Feed into design of Growing Forward 2, 2013 and beyond
- Provide feedback into 4th Edition of EFP Workbook
- Ongoing continuous improvement of current programming
- Inform agri-environmental performance measurement
- Key to increasing impact - Conduct research to understand motivation of farmers not participating in EFP

Questions?