

Deer Depredation Dilemma in the Panhandle

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Background

- Many landowners want wildlife on their property
- 58% of Floridians actively manage to promote wildlife
- 50% of Floridians have problems with wildlife
- Wildlife provide benefits, but may also become a nuisance



Wildlife as a source of conflict

- Owned by the public
- Capable of moving across ownership boundaries
- Stakeholders have competing objectives for the management of wildlife resources
- Those species that confer benefits and costs can lead to conflicts



Background – general perceptions

- wildlife damage to agricultural crops is steadily increasing
- damage is severe in certain areas, to certain crops
- white-tailed deer are the primary culprit
- wildlife are responsible for substantial income loss to farmers

Setting the Stage

- IFAS County Extension Director requested estimate of monetary losses from white-tailed deer in the 4 western-most counties
- Fact: the deer population in FL has nearly doubled during past 30 years
- Complex issue: deer are a natural resource owned by the public
 - desirable (hunting and wildlife viewing)
 - despicable (farming and gardening)
- Opportunity to put NRLI skills to use!

Setting the Stage

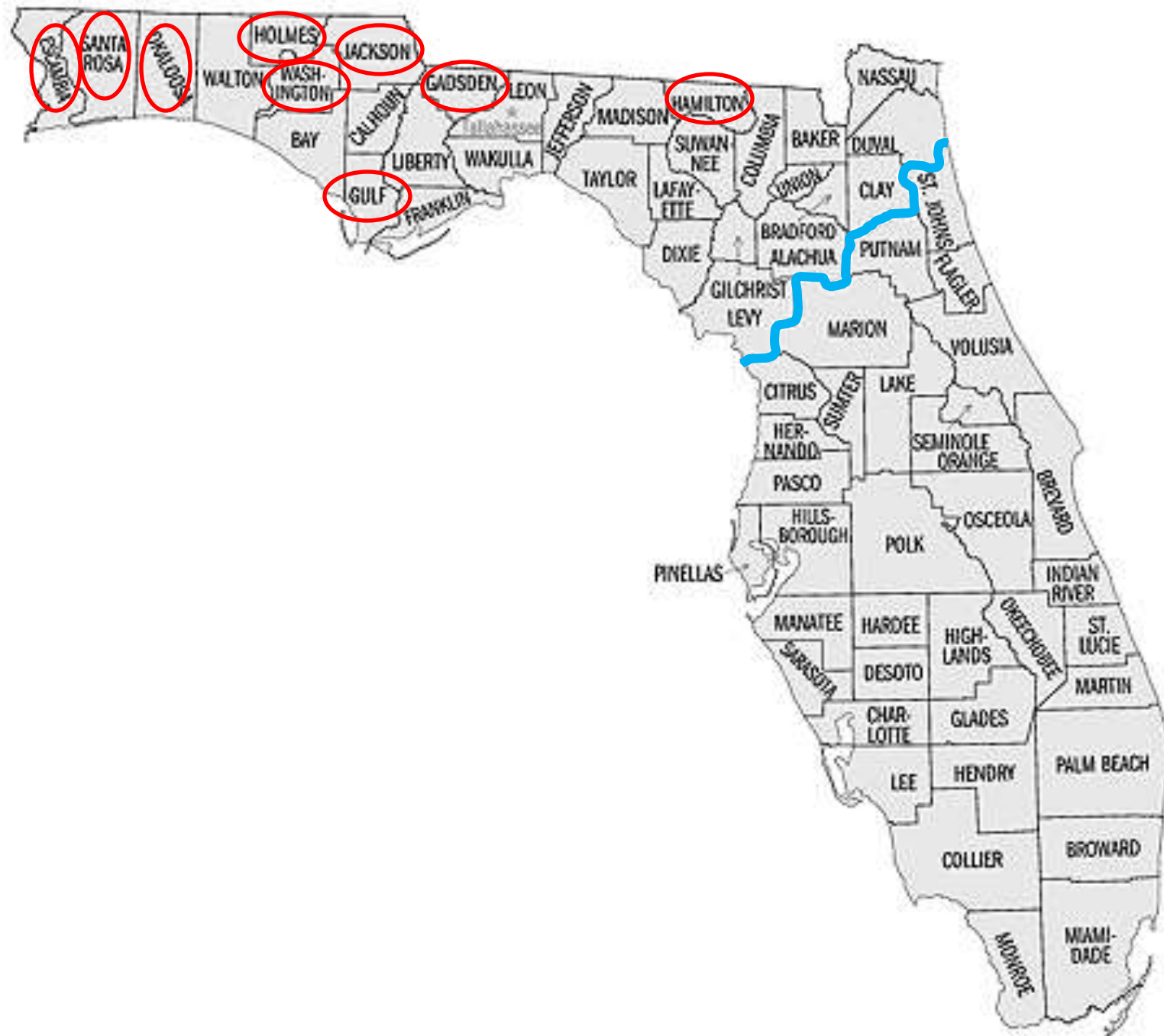
- IFAS County Extension Director requested estimate of monetary losses from white-tailed deer in the 4 western-most counties
- Expanding the scope:
 - Which wildlife species are most problematic?
 - Where, geographically, is damage most severe?
 - Has damage increased over time?
 - Which crops are suffering most?
 - How much \$ are farmers losing?

Practicum Objectives

1. To determine the extent to which farmers in North Florida have been impacted through crop depredation
2. To develop a thorough understanding of the interests and needs of the farmers affected by crop depredation
3. To identify ways to meet the needs of these individuals in a way amenable to other stakeholders with an interest in wildlife

Objective 1 – Damage Assessment

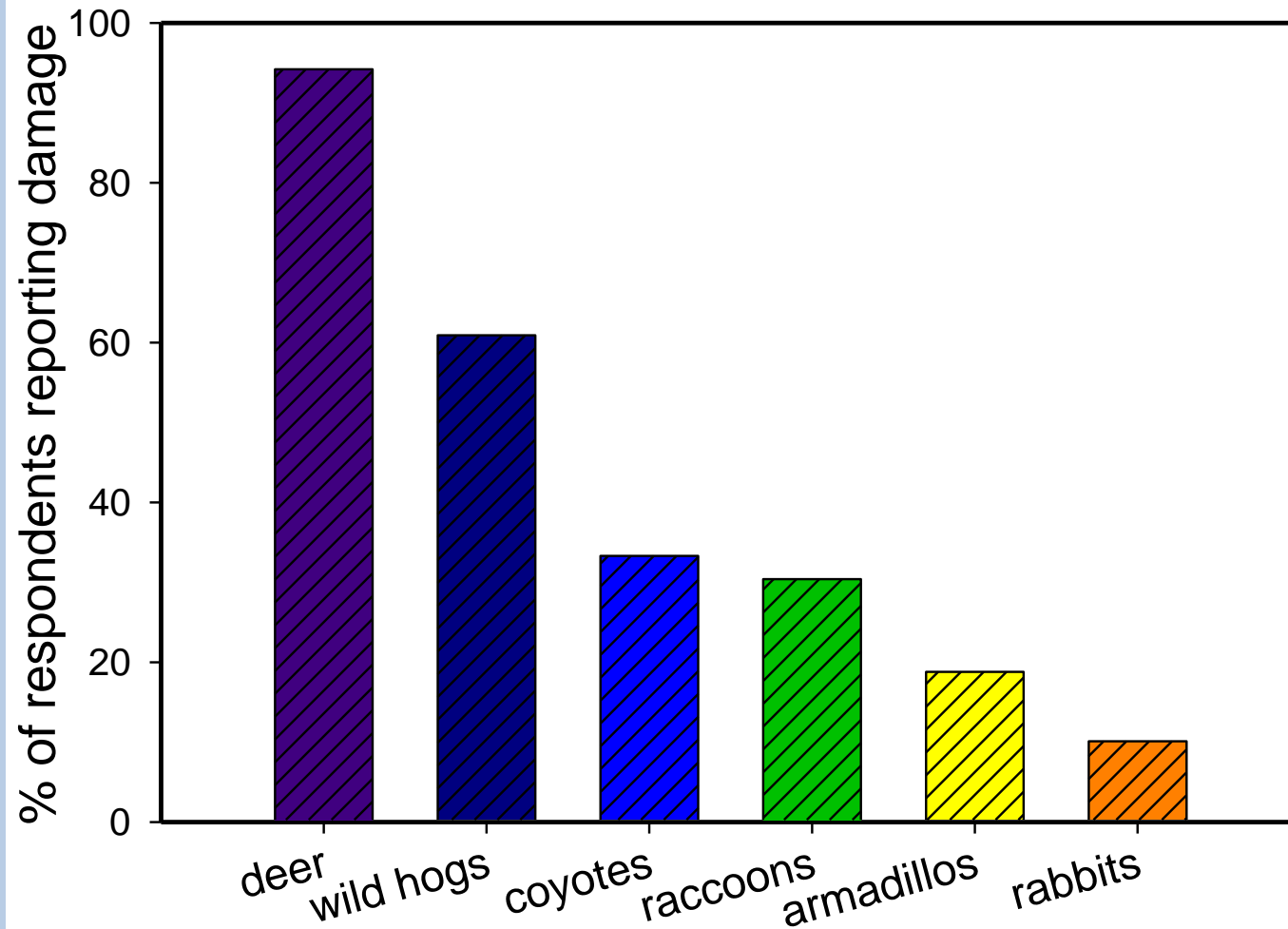
- 3 data options – differing levels of precision
- Gathered information directly from farmers
- Developed a survey questionnaire
 - 15 questions
- Asked Extension agents across all 29 counties in North Florida to engage 10 farmers each
- 9 agents assisted – 69 surveys were returned

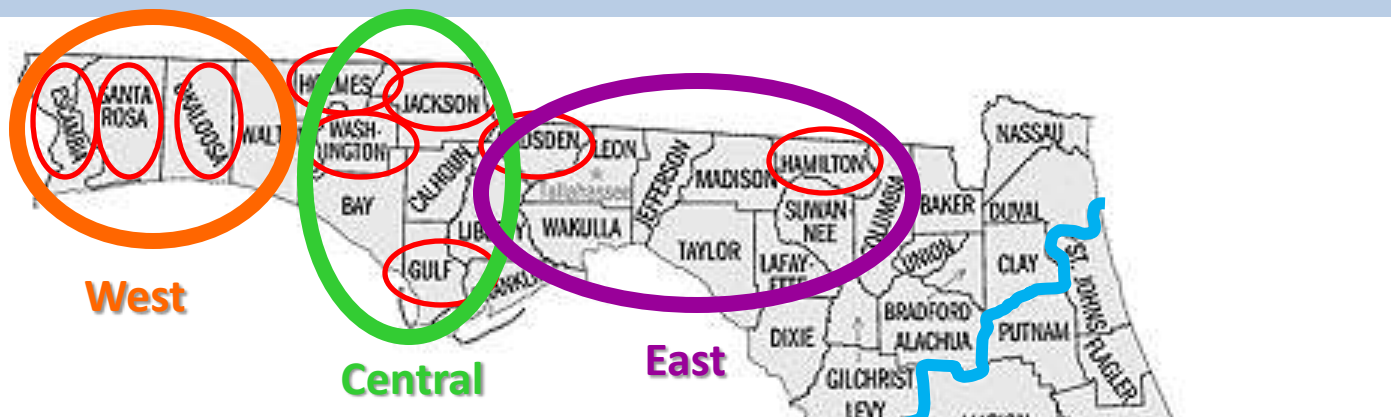


Respondent Characteristics

- Median size of farms: 450 acres
- Percentage who thought crop damage has increased in past 5 yrs: 86%
- Percentage who are actively doing something to deter the problem animals: 88%

Which Wildlife Caused the Most Problems?

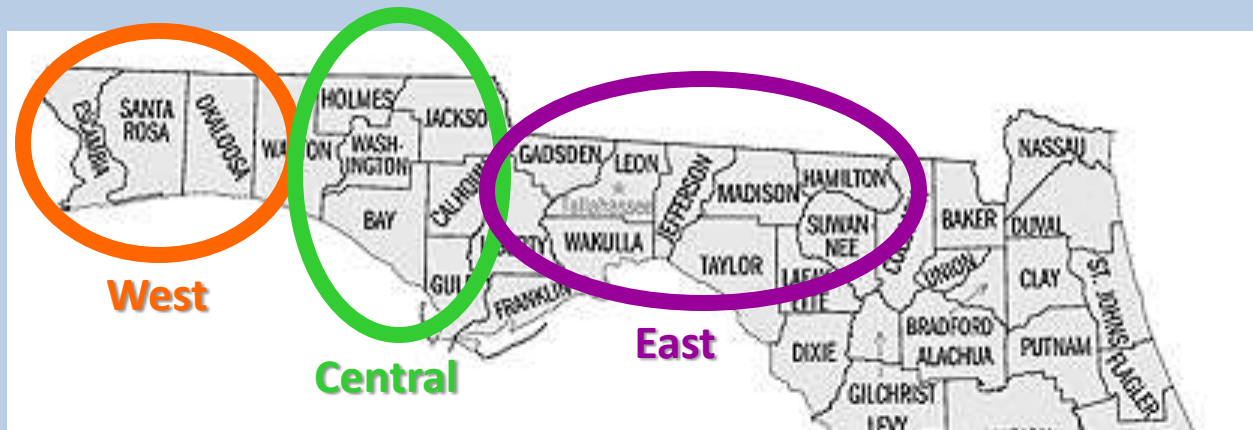




“Functional Economic Regions”

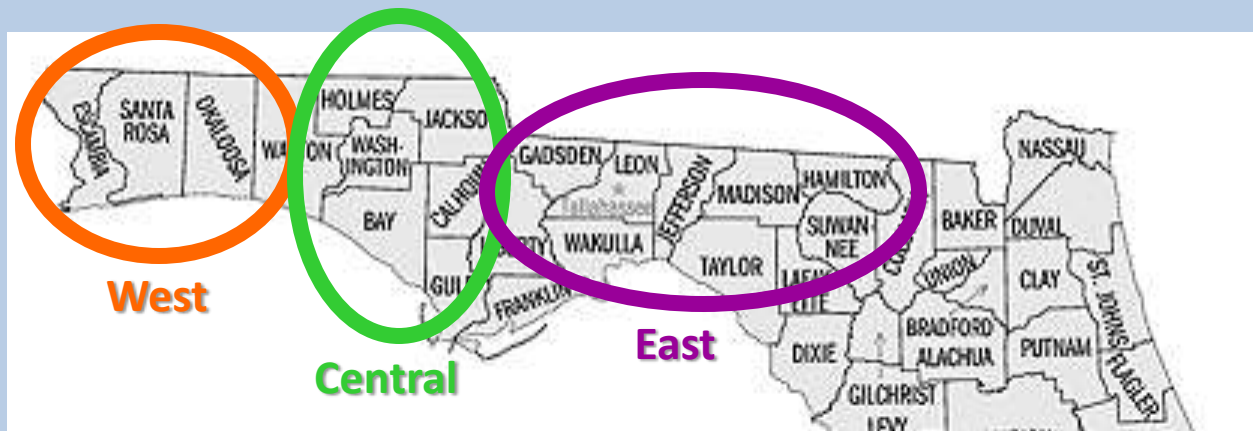
Where was deer damage greatest?

	Corn	Cotton	Peanuts	Soybeans	Peas	Wtmlns
high	west					
med	central					
low	east					



Where was deer damage greatest?

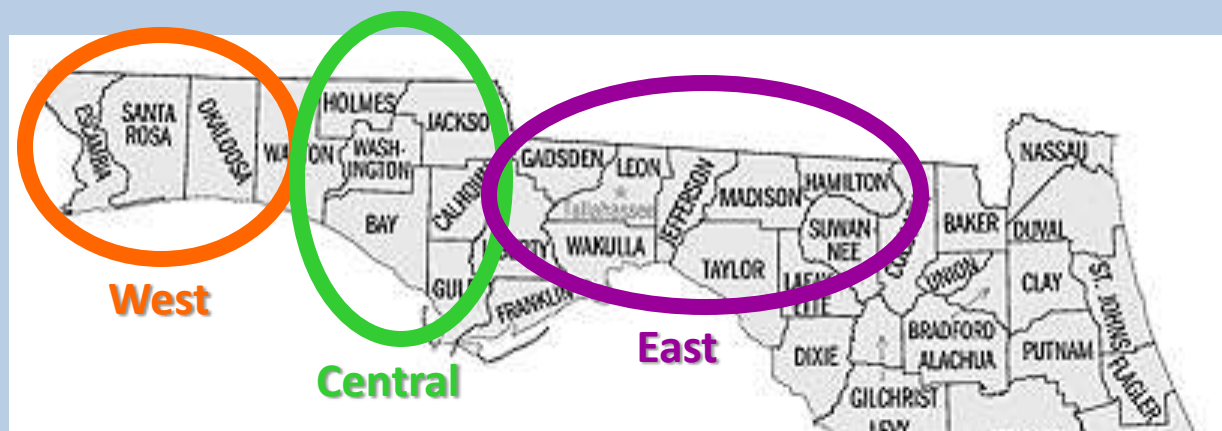
	Corn	Cotton	Peanuts	Soybeans	Peas	Wtmlns
high	west	west	west	west	central	east
med	central	central	central	central	west	west
low	east	east	east	east	.	central





Where was hog damage greatest?

	Corn	Cotton	Peanuts	Peas	Soybeans	Wtmlns
high	central	central	central	central	central	west
med	west	west	west	.	.	central
low	east	east	east	.	.	east



What Quantity of Crops Were Affected by Deer?

Crop	Total # of acres grown	<u>Acreage damaged by deer</u>	
		# of acres	% of acres grown
corn	8,649	266	3.1

(2009 and 2010)



What Quantity of Crops Were Affected by Deer?

Crop	Total # of acres grown	<u>Acreage damaged by deer</u>	
		# of acres	% of acres grown
corn	8,649	266	3.1
cotton	37,100	2347	6.3
peanuts	30,148	2081	6.9
peas	4,475	254	5.7
soybeans	9,663	929	9.6
watermelons	398	111	27.9

(2009 and 2010)



Annual Cost Estimates of Crop Damage from Deer



Monetary loss =

acres planted x crop yield x price received x % acres damaged

	# of acres planted in	Yield in	Price in	% of acreage lost to deer	Estimated value of losses
Crop	Panhandle	Panhandle	Florida		
Corn	26,400	114	\$4.00	3.2	~\$382,582

(2009 only)

Annual Cost Estimates of Crop Damage from Deer



Monetary loss =

acres planted x crop yield x price received x % acres damaged

Crop	# of acres planted in Panhandle	Yield in Panhandle	Price in Florida	% of acreage lost to deer	Estimated value of losses
Corn	26,400	114	\$4.00	3.2	~\$382,582
Cotton	82,000	723	\$0.66	7.2	~\$2,820,075
Peanuts	69,700	3,120	\$0.21	7.6	~\$3,432,034
Soybeans	37,000	38	\$9.50	10.9	~\$1,458,959
TOTAL					~\$8,093,650

(2009 only)

Annual Cost Estimates of Crop Damage from Hogs



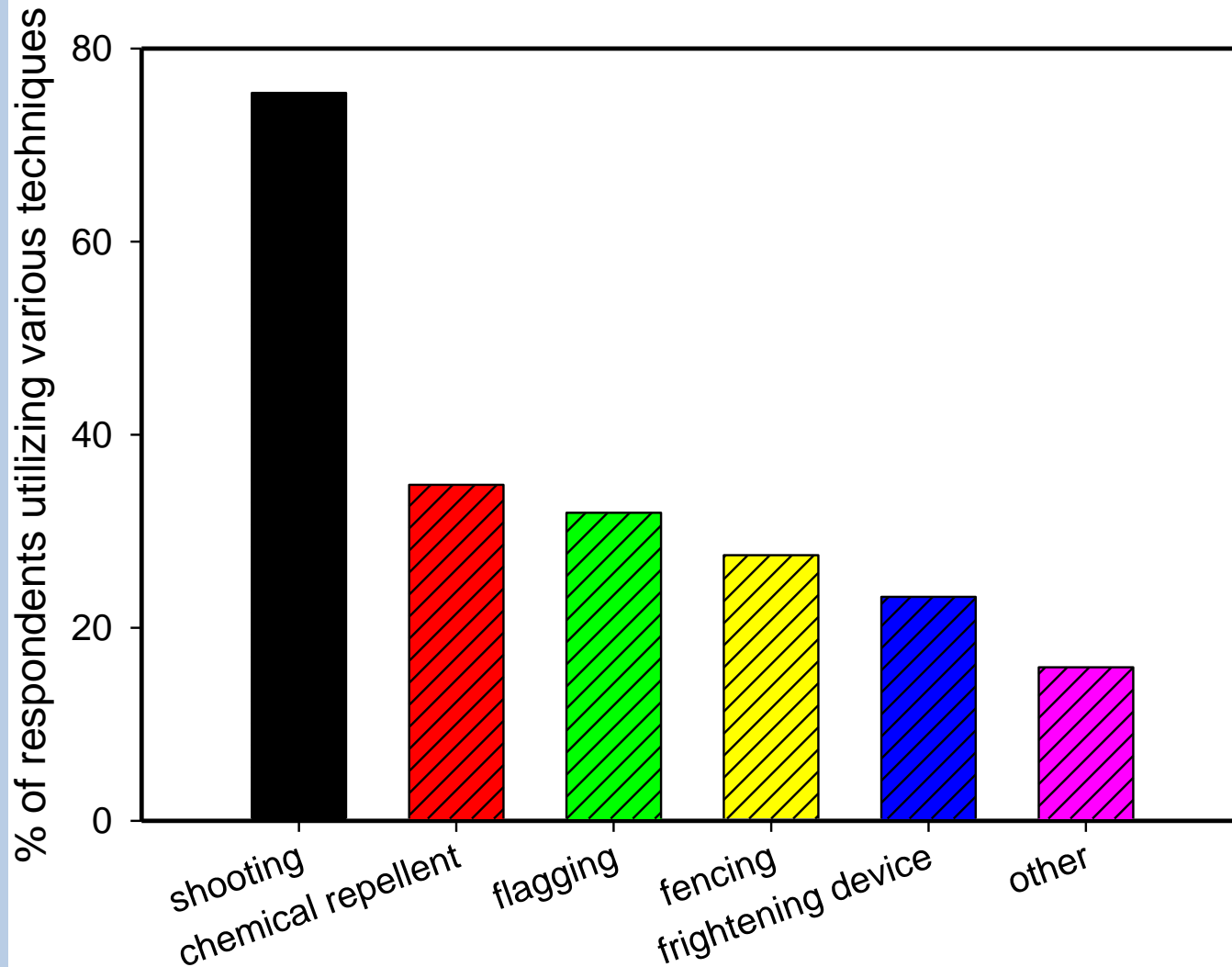
Monetary loss =

acres planted x crop yield x price received x % acres damaged

Crop	# of acres planted in Panhandle	Yield in Panhandle	Price in Florida	% of acreage lost to hogs	Estimated value of losses
Corn	26,400	114	\$4.00	2.6	~\$315,000
Cotton	80,700	720	\$0.66	0.8	~\$321,000
Peanuts	69,700	3,120	\$0.21	2.6	~\$1,151,000
Soybeans	37,000	38	\$9.50	0.2	~\$31,000
TOTAL					~\$1,818,000

(2009 only)

Wildlife Control Techniques



Wildlife Control Efforts

Depredation permits - deer

- 13 deer/farmer/year were removed

Hunting - deer

- 11 deer/farmer/year were removed

Hunting or trapping – wild hogs

- 8 hogs/farmer/year were removed

Objective 1: Implications

- Wildlife provide many benefits to private landowners
- Many landowners spend personal time and funds enhancing habitat for wildlife
- Deer are valued economically and recreationally by hunters
- Survey results suggest damage caused by deer to some crops may have surpassed tolerance thresholds for some farmers

Objective 2

Developing Understanding of the Issues

- Discussions with representatives from interested parties
 - IFAS Extension
 - Florida Farm Bureau
 - Florida Fish & Wildlife Conservation Commission
- Decision to hold meetings that allow for
 - constructive dialogue
 - generation of ideas
 - exchange of information

Objective 2

Developing Understanding

Focus groups

- discussions led by a facilitator who draws out in-depth input from stakeholders on specific topics
- 8 to 12 participants
- homogeneous group of strangers
- groups are selected so as to facilitate comparisons

Objective 2

Developing Understanding

Focus groups

- use open-ended questions that inquire about perceptions, opinions, preferences, rankings, etc.
- uncover not only WHAT participants think, but also WHY they hold these views
- uncover misperceptions

Focus Group Specifics

- Who: 12-15 invitees for each meeting
- When: Each meeting will be on a Tuesday, 6-8 pm
- Where: Meetings will take place at County Extension offices in Crestview, Marianna, and Jasper
- Personnel
 - Meeting leader
 - Moderator
 - Recorder
 - FWC regulatory representative

Focus Group Meetings to Discuss Crop Depredation in North Florida

Streamlined Process Agenda

Time	Responsible party	Activities and Objectives
6:00-6:10pm	Ober & Diersen	Welcome Explain meeting rationale and objectives Explain participant expectations
6:10-6:40pm	Diersen	Introductions and sharing of experiences regarding crop depredation
6:40-7:10pm	Diersen	Identify the primary challenges regarding crop depredation Identify strategies to address them
7:10-7:40pm	Ober	Discussion of more specific issues of greatest interest
7:40-7:55pm	Diersen & FWC rep	Question and Answer period
7:55-8:00pm	Ober	Wrap up Hand out postage-paid cards; solicit instant feedback

Focus Group Meetings to Discuss Crop Depredation in North Florida

Detailed Process Agenda

Time	ACTIVITIES and OBJECTIVES	Set up and materials
6:00-6:10pm Ober and <u>Diersen</u>	Welcome <u>Objectives:</u> <ul style="list-style-type: none"> Set meeting context - Ober Establish ground rules - <u>Diersen</u> <u>Activities/Interactions:</u> <p>6:00-6:05 Explain meeting rationale and objectives</p> <p>6:05-6:10 Explain participant expectations (engagement, confidentiality), review agenda, discuss ground rules</p>	
6:10-6:40pm <u>Diersen</u>	Introductions and sharing of experiences regarding crop depredation <u>Objective:</u> <ul style="list-style-type: none"> Engage each participant Identify common issues <u>Activities/Interactions:</u> <p>6:10-6:40 Go around the room once, allowing each participant to relate their personal experience with crop depredation (3 min limit per person). Info from each participant will be summarized briefly on a flip chart (offending species, crops affected, <u>trends</u> over time). Moderator will call attention to emerging patterns before moving on.</p>	easels w/ flip charts w/ pre-designed info tables, markers
6:40-7:10pm <u>Diersen</u>	Identify the primary challenges regarding crop depredation and identify strategies to address them <u>Objective:</u> <ul style="list-style-type: none"> Discuss the nature of the issue: what factors limit farmers' abilities to cope with depredating animals? Develop ideas on potential approaches to reducing crop losses <u>Activities/Interactions:</u> <p>6:40-6:55 Solicit details on the true nature of the depredation problems (lack of time, shortage of funds, need for more effective products, etc.). Each will be written on a flip chart.</p> <p>6:55-7:10 Solicit opinions on what types of change are most needed to get the problems under control (info on most effective products, assistance with harvesting, etc.). Each will be written on a flip chart.</p>	easels w/ flip charts, markers large sticky sheets w/ markers if needed

Practicum Timeline

Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
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- July 2010 – contacted by County Extension Director
- Aug 2010 – developed survey
- Sept/Oct 2010 – survey was administered by agents
- Nov/Dec 2010 – survey data was analyzed
- Jan/Feb 2011 – extension document was written
- Oct 2010-Apr 2011 – communications with FWC, IFAS, FFB
- May/June 2011 – focus groups

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