

Wildlife and Fisheries Management

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Region: SOUTH

Circle which primary base program it addresses - ANR

Section 1. Relevance

Relevance is included to provide the reason the educational program should be developed to address the identified issue. Within the relevance section, there are several questions that must be addressed. This section will seek to address these.

Wildlife and fisheries are an under utilized natural resource with potential to improve profitability of many landowners and communities. There is, however, a great need for improved knowledge and skills to effectively manage wildlife services.

Where did this issue surface?

- Texas Community Futures Forum - County Committees

What is the issue/problem?

Increased profitability, increased economic development, and improved habitat quality by teaching management strategies (habitat, genetics, density, etc).

Problem size and scope? *(How many people does it affect? How wide spread?)*

This is a big issue in the rural counties of South Texas.

Problem severity? *(How serious is this issue?)*

High

Wildlife and fisheries management and enterprises are a major source of income for rural counties both from a consumptive and non-consumptive use basis. Wildlife and fisheries brings in people from all over the country that in turn builds the economic stability of these rural counties.

Target Audience? *(Who does the problem impact and how many?)*

Producers, managers, landowners (local/absentee landowners), community leaders, tax entities.

What are some general characteristics of the audience this program targets? How will you market this program to others?

Larger landowners, rural communities, educational meetings and publications.

Section 2. Response

State the goal of the program. *This is a statement, usually general and abstract, of a desired state or outcome. It is usually one sentence.*
Increase profitability of the landowner

To improve the knowledge and skill required to effectively manage wildlife and fisheries to attract consumptive and non-consumptive users.

State the outcome objectives. *These are the objectives that describe the intended results of a program (e.g. attitudes, knowledge, skills, adoption of practice/technology, change of behavior). Examples include:*

Improve knowledge, skill attitudes, etc. associated with wildlife and fisheries management.

Client Change	At the end of this program, will....
<i>Knowledge</i>	increase knowledge on.... Habitat management Anatomy and Physiology Competition Aging Scoring Record Keeping Marketing (This includes Deer, Quail, Exotics, and Foil)
<i>Skills</i>	develop skills.... Aging Scoring Record Keeping Monitoring Skills (Density / Ratio)
<i>Attitude</i>	change their attitudes pertaining to... Diversifying wildlife practices
<i>Behavior Change</i>	adopt.... Management Strategies Cohabitation

<i>New Technology</i>	adopt.... GPS / GIS Wildlife Monitors (cameras / night vision)
<i>Best Practice</i>	adopt Adoption of Management Strategies

Program Design. In the space below, provide an explanation of the program design. Try to list the topics that could be addressed under this issue. For example, if this was an educational program for new ranch landowners, topics could include: pond management, introduction to beef cattle production, introduction to wildlife management, and general landscaping. How would you deliver the subject matter to address this issue? There are many strategies to deliver information. It could be a newsletter series, a workshop, and a meeting once a week for six weeks to name a few. It could also be a combination of all of these. Also, try and list resources that could be used to help develop or provide existing curriculum to address the issue.

Topic (Subject Matter)	Strategy to Deliver Content (Method)	Existing Resource(s)	Contact Person(s) (Includes CEA's Specialists, Commodity Reps)
Habitat Management		-Power Point --Publications -TWA	R. Griffin, Dimmit County Wildlife Specialist
Multiple Species Interaction		-Publications -TAMU-Kingsville-Ceasar Kleberg	Wildlife Specialist Texas Parks and Wildlife Wildlife Biologist
Anatomy and Physiology		-Publications -TAMU-Kingsville-Ceasar Kleberg	Wildlife Specialist Texas Parks and Wildlife Wildlife Biologist
Marketing Strategies		-Publications -TAMU-Kingsville-Ceasar Kleberg	Wildlife Specialist Texas Parks and Wildlife Wildlife Biologist
Record Keeping		-Publications -TAMU-Kingsville-Ceasar Kleberg	Wildlife Specialist Texas Parks and Wildlife Wildlife Biologist
Captive Breeding		-Publications -TAMU-Kingsville-Ceasar Kleberg	Wildlife Specialist Texas Parks and Wildlife Wildlife Biologist
Harvesting Strategies		-Publications -TAMU-Kingsville-Ceasar Kleberg	Wildlife Specialist Texas Parks and Wildlife Wildlife Biologist

Topic (Subject Matter)	Strategy to Deliver Content (Method)	Existing Resource(s)	Contact Person(s) (Includes CEA's Specialists, Commodity Reps)
Plant Identification		-Publications -TAMU-Kingsville-Ceasar Kleberg	Wildlife Specialist Texas Parks and Wildlife Wildlife Biologist
Predation		-Publications -TAMU-Kingsville-Ceasar Kleberg	Wildlife Specialist Texas Parks and Wildlife Wildlife Biologist
Animal Identification		-Publications -TAMU-Kingsville-Ceasar Kleberg	Wildlife Specialist Texas Parks and Wildlife Wildlife Biologist
Formation of Wildlife Cooperatives		-Publications -TAMU-Kingsville-Ceasar Kleberg	Wildlife Specialist Texas Parks and Wildlife Wildlife Biologist
Nutrition / Supplemental Feeding		-Publications -TAMU-Kingsville-Ceasar Kleberg	Wildlife Specialist Texas Parks and Wildlife Wildlife Biologist
General Nutrition Concerns		-Publications -TAMU-Kingsville-Ceasar Kleberg	Wildlife Specialist Texas Parks and Wildlife Wildlife Biologist

Section 3. Results

The last section deals with evaluation of this program. The evaluation content should mirror the objectives that are outlined in section two. Please try and list some specific questions that should be asked to the target audience to determine if the intended change took place. List as many potential questions as possible. The goal here is to create a question bank for each client change level so that the educator can review these questions to see if any of them are relevant to their program. If they are, then they can use them to measure change in their program. Remember, not all evaluation strategies have to be written questionnaires. They may also be interviews, direct observation, or focus groups. Please describe your method in this section where appropriate.

Client Change Level	Sample Questions (Review the objectives section to help place questions or statements in the space below)
<i>Knowledge</i>	What are 3 factors that determine antler size of deer? What season of the year is typically the lowest nutrition for deer? What is a forb? How much brush is required for deer management? How do you determine if your pond water is adequate for fish production?
<i>Skills</i>	How do you estimate the population of a deer herd? How do you estimate the size of a pond? How do you estimate the average depth of a pond? How do you estimate the age of a buck?

Client Change Level	Sample Questions (Review the objectives section to help place questions or statements in the space below)
<i>Attitude</i>	Based on info presented, what is your attitude about harvesting does? Based on info presented, what is your attitude about killing yearling bucks? Based on info presented, what is your attitude about leasing your property for recreational hunting/fishing?
<i>Behavior Change</i>	Based on info presented, will you begin keeping written records of deer harvested? Are you beginning to adopt wildlife and fisheries BMP's on your property?

Client Change Level	Sample Questions (Review the objectives section to help place questions or statements in the space below)
<i>New Technology</i>	Internet based marketing. Infrared cameras? GIS?
<i>Best Practice</i>	Let the yearlings walk? BMP's for pond management?

Economic Indicators. Are there economic indicators that can be measured concerning this issue?

YES & NO

Please list them below.

Improved revenues

Improved herd quality

Improved habitat / (W&F)

Interpretation. The last step in the process is interpreting the results to our stakeholders. List internal and external stakeholders that would be interested in the results of this educational program. Do not forget to think about other state agencies and groups that would be interested in these outcomes.

Internal to Extension Stakeholders	External Stakeholders
Administration CEAs	Government EDC TDA TPWD Grantors C of C Nature tourism groups

Additional Resources. What additional resources are needed to address this issue? In other words, what is needed to design innovative programs that will impact our audiences? Use the space below or the back if needed.

Sample Evaluation Questions

Perception of Knowledge

- Do you believe your knowledge about the merits concerning the practice of high fencing for white-tailed deer management was increased due to this seminar?
- Do you believe your knowledge about the drawbacks concerning the practice of high fencing for white-tailed deer management was increased due to this seminar?
- Do you believe your knowledge about habitat management for white-tailed deer was increased due to this seminar?
- Do you believe your knowledge about the importance of population management for white-tailed deer was increased due to this seminar?
- Do you believe your knowledge about the practice of supplemental feeding for white-tailed deer was increased due to this seminar?
- Do you believe your knowledge about marketing and the economics of white tailed deer enterprises was increased due to this seminar?
- Do you believe your knowledge about landowner's risk as it relates to a hunting enterprise was increased due to this seminar?
- Do you believe your knowledge about a landowner's liability as it relates to a hunting enterprise was increased due to this seminar?
- Do you believe your knowledge about the economics of brush management was increased due to this seminar?
- Do you believe your knowledge about the technology of brush management was increased due to this seminar?

Actual Knowledge Questions (Pretest Post Test Strategy)

- What are three factors that determine antler size in deer?
- What season is it when nutrition is most likely to be limited to the deer population?
- How much does the rut vary across the state?
- What is the most limiting nutrient for deer in south Texas?
- Is it possible for a doe to conceive twins with different sires?
- What age do bucks reach their full potential for antler growth?
- What age do bucks maximize his body weight?
- How many estrus cycles are does capable of having during one breeding season?
- Is significant weight loss common or uncommon in rutting bucks?
- Doe fawns are capable of conceiving, but are they capable of birthing or raising offspring?
- The four components to habitat are?
- Forbs are?
- Which forage class do white-tailed deer prefer the most?
- True / False - Lush, green vegetation does not help white-tailed deer meet their water requirements.
- Which of the following is the preferred hiding cover for fawns? (A) Dense Brush, (B) Patches of Prickly Pear, (C) Tall grass and forbs
- The percent of brush cover for ideal white-tailed deer habitat is:
- True / False - Roller chopping is generally an effective means of controlling prickly pear.
- True / False - Controlled burns usually result in at least 90% kill on mesquite.
- True / False - Vine ephedra and Texas kidneywood are highly preferred deer browses.
- Whitebrush and lantana are highly preferred deer browses.

Measuring Behavior Changes

For each of the practices, listed below, in the LEFT column, circle the ONE number that best reflects you before your participation in the wildlife program. Then, in the RIGHT column, circle the ONE number that best reflects you after the wildlife program.

NEVER 1	SELDOM 2	SOMETIMES 3	OFTEN 4		ALWAYS 5										
STATEMENTS						<u>BEFORE</u> Program					<u>AFTER</u> Program				
I maintain healthy rangeland on my ranch.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
I use visual appraisal to evaluate the range conditions.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
I consider wildlife concerns before making a management decision.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
I manage for native and improved grasses on my rangeland.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
I practice proper land stewardship.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
I manage for soil erosion properly.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
I practice proper livestock grazing management with wildlife and livestock.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
I understand the economics of brush management.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
I utilize water infiltration practices on my ranch.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
I practice wildlife habitat management.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
I test my wildlife water supplies annually.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
I increased my percent deer crop.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
I purchase hay and supplement my wildlife.	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5