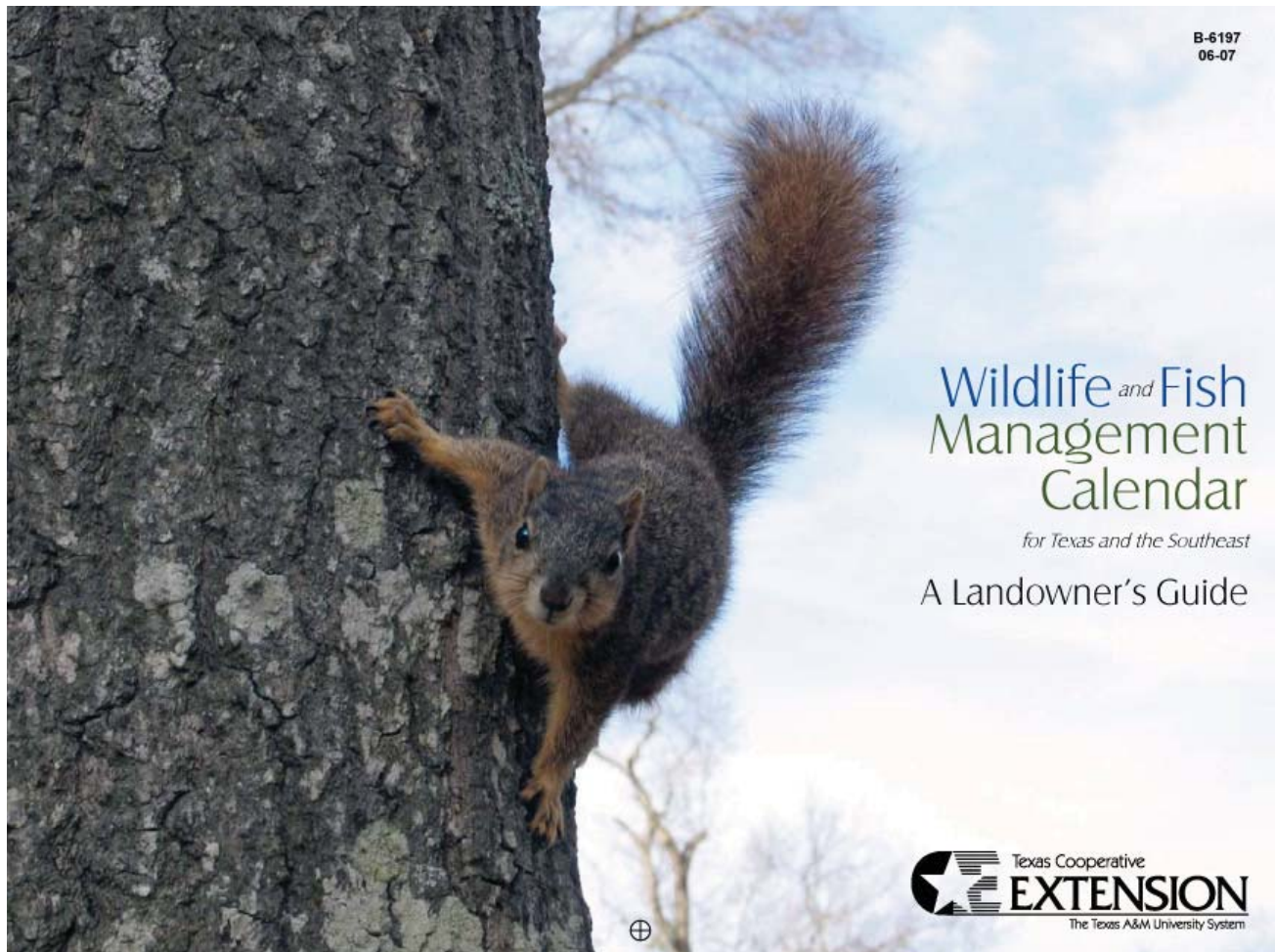


**Measuring Impacts of Educational Outreach Publications:
A Case History of AgriLife Extension's Wildlife and Fish Management Calendar**



Billy Higginbotham
Professor and Extension Wildlife and Fisheries Specialist
Texas AgriLife Extension Service

October 10, 2008

FAST FACTS

- Purpose: To determine the impacts of the Texas AgriLife Extension Service 2007 publication entitled *Wildlife and Fish Management Calendar*.
- A total of 404 individuals purchased 804 calendars between July 1, 2007 and June 30, 2008. 186 surveys were received and analyzed for a return rate of 46%.
- Survey Respondents: 75% were absentee landowners and 52% listed their primary land use as personal/recreation while another 41% listed both personal/recreational and commercial as rationales for owning their properties.
- 56% of respondents ordered their calendars online via the AgriLife Bookstore. 98% of these on-line purchasers were pleased with their website experience.
- Eight attribute ratings of the calendar on a 1 to 5 scale (1 = poor and 5 = excellent) all had mean values ranging between 4.2 and 4.5.
- Purchasers responding to an economic impact question reported a mean savings/earnings of \$2,321 each (\$83,550 total) due to the calendar. This resulted in a benefit to cost ratio of \$211.50 for each \$1.00 invested in the calendar.
- Of 27 possible practices listed, the 186 respondents gained an average of 10.4 new management/conservation ideas as a result of the calendar. An average of 8.8 practices had already been adopted before their calendars were purchased.
- 55% of the respondents reported implementing practices as a direct result of their calendars. Of these, 75% implemented 1-5 practices, 23% 6-10 practices and 2% 11-15 practices. Overall, the 186 survey respondents implemented an average of 2.1 new practices due to the information provided in their calendars.
- Of the 27 potential practices listed, length of time of calendar ownership did not significantly impact the number of practices implemented.
- Absentee landowners were more likely to implement the use of prescribed fire, attend a wildlife/fish management program or work with a youth conservation group than full time residents.
- The likelihood of respondents recommending the calendar and/or the Texas AgriLife Extension Service as a source of wildlife and fish management information was 8.9 on a scale of 0 (not likely) to 10 (likely).
- A Net Promoter Score of 59.3% was indicative of a high degree of customer satisfaction with the calendar and the Texas AgriLife Extension Service as information sources on fish and wildlife management.

Table of Contents

Introduction	1
Methods	2
Results	4
Respondent Information	5
Calendar Effectiveness	6
Calendar Impacts	6
Customer Satisfaction	9
Summary	9
Acknowledgements	9
References	9
Appendices	10
Landowner Survey	11
Survey Respondent's Comments	15
Net Promoter Score	19
Calendar Advertisement Flyer	20

Measuring Impacts of Educational Outreach Publications:
A Case History of AgriLife Extension's *Wildlife and Fish Management Calendar*

Billy Higginbotham
Professor and Extension Wildlife and Fisheries Specialist

INTRODUCTION

Numerous local, state and federal agencies and non-governmental organizations produce and distribute thousands of copies of natural resources management publications to clientele annually. These publications contain information such as species descriptions, life history, habitat requirements and habitat/population management techniques. With 95% of Texas under private ownership, the primary target audiences for these publications have historically been traditional ranch and farm landowners. However, additional audiences consisting of landowners acquiring rural properties strictly for recreation, hunters, anglers and other outdoor enthusiasts also utilize and benefit from the conservation and management information disseminated.

What are the purposes of producing outreach publications? First and foremost, publications are intended to be tools for enhancing awareness and/or disseminating research-based information to targeted audiences or the general public, depending upon the subject matter. Ancillary benefits from generating these publications include: 1) fulfillment of grant contracts, 2) enhanced credibility of authors as authoritative personnel on the subject(s) presented, 3) increased likelihood of promotion (i.e. university faculty), 4) becoming famous and 5) perhaps also becoming rich (well, maybe not!).

Although an ever-increasing amount of information is available electronically via the Internet, considerable time and funding continues to be directed toward the development, production and distribution of printed copies of many publications. Furthermore, while the majority of Texas homes and businesses now have Internet access, not all publications are available electronically or can be conveniently accessed when needed. Because of the time and cost associated with producing quality outreach publications, agencies and organizations are often limited in the number and types of publications that can be produced. Therefore, it makes good sense and demonstrates wise fiscal stewardship to measure impacts of these products in order to justify the time and cost investments involved and answer an elementary question-- "Did this publication make a difference"?

With that said, how can the impacts of these in-print publications be measured? Historically, the sole measure of a publication's worth has simply been to record the number of copies disseminated. Unfortunately, this metric seldom provides insight into the true demand for or impact of a publication. Impacts, when provided, have been largely limited to individual (and often oral) feedback. Formal survey methodology is rarely used. We have simply assumed that the content and format are acceptable and valued by the targeted clientele. In other words, "print it and they will read it and learn from it"!

METHODS

The *Wildlife and Fish Management Calendar* is an in-depth sequel of two previously developed AgriLife Extension publications: The *Farm Pond Management Calendar* (1985) and the *White-tailed Deer Management Calendar* (1989). Each of these early calendars provided basic management information delineated by month and formatted on the front and back of a single page.

For the current *Wildlife and Fish Management Calendar*, Agrilife Communications provided layout and editing services. The calendar targeted wildlife (i.e. deer, turkey, doves, ducks, quail and miscellaneous) and fish species (i.e. largemouth bass, bluegill, channel catfish) that are both widely distributed across the state and recreationally/commercially important on private lands.

The format utilized was a 12 month calendar with each month depicting a three-quarter page color image of a featured species above with a three-quarter page calendar below (Figure 1). The calendar section of each month was undated – the user could choose to “code in” dates of the month or use it in a perpetual format to record management notes and continue to use and reference the same calendar from one year to the next. Text accompanying each month included: 1) time sensitive management information by species, 2) a “Did You Know” management fact and 3) a “Management Tip of the Month”. Calendar appendices included four “how to” sections designed to provide detailed supplemental information on: 1) Fish Management, 2) Deer Management, 3) Managing Feral Hogs and 4) Forage Plants for Wildlife (Figure 2).



Figure 1. Example of the calendar format.

Each person who purchased a calendar in the first year received a survey via mail designed to assess the impact of the *Wildlife and Fish Management Calendar* (see Appendix). Each survey was accompanied by a cover letter explaining background and rationale and included a self-addressed stamped envelope for returning the survey. Non-responders were sent a follow-up letter as a reminder to return their surveys.

Survey data were entered into a Web database created and maintained by AgriLife Information Technology. Data were analyzed using Chi-square and Fisher's Exact Test with all levels of significance set at $p \leq 0.05$.

The survey requested information about the survey respondent including occupation, landowner status (full time vs. absentee), primary land use, how the calendar was obtained and time length of calendar possession.

The respondents were then asked to rate eight attributes of the calendar from 1 (poor) to 5 (excellent). Attributes included timeliness of information, message usefulness, appropriateness of information, readability, effectiveness, calendar format, appendices and perpetual format.

Respondents were also asked the number of acres impacted, estimated dollars saved or earned as a result of practice adoption from the calendar, number of different people using the calendar, number of different people implementing practices attributable to the purchaser's copy of the calendar and additional comments.

Appendix 2: Deer Management

Conducting a Deer Census

Biologists often refer to deer populations or densities in terms of "acres per deer" or "deer per square mile." These data come from conducting censuses. A census is not an absolute count of the deer on your property but an estimate. By conducting your census in the same way, at the same time of year, and under the same conditions year after year, you can determine long-term trends in the population and will know whether the population is increasing, decreasing or remaining stable. More importantly, census data (along with harvest data) helps you establish your management plan. There are two common methods of conducting a deer census. To be effective, both require that bucks be hand antler.

Spotlight census. The spotlight census is done at night in pre-season (September or October) and again in post-season (January or February) but before antler casting. It works best with a driver and two observers stationed in the back of a pick-up truck. The observers have hand-held spotlights and each observes one side of the route. The driver drives an established route through all types of habitat found on the property. The visibility every 0.10 mile can be estimated beforehand, or it can be done during the census by having the observers take turns estimating how far they can reliably see deer at right angles to the track out to a maximum of 200 yards. The visibility distance at each 0.10 mile is recorded. The driver records the length of the route, using the truck's odometer. As the route is driven, the observers record all the deer sighted as bucks, does, fawns or undentifiable.

When the census is completed, the length of the route is multiplied by the average width of the visibility strips and this number is converted to acres.

For example: If the average strip width was 94 yards on the left side of the truck and 117 yards on

the right side, the total average strip width would be 211 yards. If the route was 3 miles long, the area covered would be 230 acres. (Total average strip width in yards x yards in a mile x miles in the route) = square yards in 1 acre = acres covered.

$$(211 \times 1760 \times 3) \div 4,840 = 230 \text{ acres}$$

If 36 deer were observed along the route, there would be 6.38 acres per deer.

$$(230 \text{ acres} \div 36 \text{ deer}) = 6.38 \text{ acres per deer}$$

NOTE: Check your state game and fish regulations to be sure spotlighting deer is legal. Even in states where it is legal, contact your game warden or conservation officer before conducting a spotlight census.

Camera count. Remote-sensing cameras are often used to obtain estimates of deer populations. Cameras are set up for 14 days, with one camera for every 160 acres. They should be evenly spaced across the property. Counts are made in September or October and again in January or February before antler casting. Piles of corn or automatic feeders attract deer to the camera sites. As the pictures are reviewed, deer are classified as bucks, does or fawns. The pictures of bucks are re-examined to determine the number of different bucks photographed.

The doe: buck ratio and the fawn: buck ratio are determined. These ratios are then multiplied by the number of individual does and fawns observed. The number of bucks, does and fawns are totaled to estimate the deer population in acres per deer.

For example: Photographs collected over a 14-day period on a 1,000-acre property revealed 29 bucks, 79 does and 51 fawns. Examination of the 29 buck photos revealed that there were eight individual bucks.

$$\text{Doe: Buck ratio} = 79 \div 29 = 2.72 \text{ does per buck}$$

$$\text{Fawn: Buck ratio} = 51 \div 29 = 1.76 \text{ fawns per buck}$$

Aging White-Tailed Bucks in the Field

If you want to increase the age structure of a buck herd, an important management skill is being able to age bucks before a harvest decision is made. After all, the easiest way to double a 1½-year-old buck's antler score is simply to let him grow 1 year older! Careful field judging also can prevent the harvest of buck fawns, which is important if protecting future bucks is a goal.



½ year of age (5- to 8-month-olds). Buck fawns are often the first antlerless deer seen because they are less wary. A clear view from the side with good optics will reveal the presence of pedicles or antler bases covered with skin. A buck fawn's head is flatter on top than a doe fawn's head. Both buck and doe fawns have short noses and their body shape is square as compared to the rectangular shape of adult deer.



1½ years of age. Yearling bucks look somewhat like does with antlers. Their legs are long and thin and they lack muscle development in the neck. The hindquarters look thin and the rump is slightly higher than the shoulders. The waist arrow is narrow. The skin on the face and neck is taut. Bucks of this age will appear submissive in the presence of older bucks. The inside spread of antlers is inside the ear tips in an alert position.



2½ years of age. The body is more filled out and the neck becomes heavily muscled during the rut. However, there is a clearly discernible juncture where the neck meets the shoulders. The chest appears deeper than the hindquarters, which have become more rounded than the 2½-year-old's. The brisket is much more pronounced. Antler inside spread may now exceed the distance between ear tips in the alert position.



3½ to 4½ years of age. Bucks of this age have reached their peak. The neck remains heavily muscled during the rut. The belly and the back appear to sag. The face skin may appear to be wrinkled and the eyes are not as round as in younger age classes.



2½ years of age. The buck's neck is more developed than in yearlings, especially during the rut. The legs still appear rather long for the size of the body. Hindquarters have a more angular and "flicked out" appearance. The skin on the face and neck remains taut. The brisket area appears thicker or wider than the neck.



4½ years of age. Bucks of this age class are considered to be physically mature. The neck is fully muscled and blends smoothly into the shoulders. The waistline has become as deep as the chest. The legs appear to be in proportion to the body or slightly short compared to the body. The hindquarters are fully developed.



7½ years of age and older. These bucks move in a deliberate fashion. Loose skin is evident on the face and neck. The bucks may have swayed backs and "potbellies." Antler size should begin to show signs of decline from previous years.

Aging deer in the field is not an exact science, but practice can help you protect your bucks, which improves antler quality.

Figure 2. Calendar appendix describing deer census techniques and tips on aging bucks in the field.

Also requested was information on purchaser's landowner and/or conservation organization affiliations (e.g., Farm Bureau, Ducks Unlimited, Texas Wildlife Association) of the purchaser. We also asked the survey respondents to rate the likelihood on a scale of 0 to 10 (0 = not likely, 10 = likely) of recommending the calendar and/or the Texas AgriLife Extension Service to their family, friends and colleagues as a source of wildlife and fisheries management information. Customer satisfaction was also measured using a Net Promoter Score (NPS) to determine the percentage of net promoters of this product and/or AgriLife Extension (see Appendix).

Finally, respondents were asked to categorize 27 distinct management and conservation practices as 1) new ideas but not yet implemented, 2) implemented specifically because of the calendar or 3) previously implemented. The management and conservation practices were grouped into three categories: 1) fish management, 2) wildlife management and 3) conservation education and information.

The fish management category included practices specifically to benefit private water fisheries, such as building new ponds, pondwater testing, fish stocking, aquatic weed control, maintenance of angler catch records, pond fertilization, supplemental feeding and predator/pest control.

The wildlife management category featured practices specifically benefitting wildlife, including mechanical manipulation timber or brush, use of prescribed fire, establishment of food plots, supplementary feeding, maintenance of harvest records, construction of nest boxes, installation of water control structures for waterfowl, construction of water sources, conducting population censuses, wetlands restoration, rotational grazing of livestock, conversion from agriculture to wildlife tax valuation and development of a written management plan.

The conservation information and education category included selected activities that would inform and/or educate others about wildlife and fish management. These included allowing access by the public for recreational purposes, attending a wildlife/fish management program, reporting illegal activity, reporting wildlife/fish die-offs, working with youth conservation groups and contacting a natural resources conservation agency about fish and wildlife management.

RESULTS

The publication was printed and available for purchase beginning July 1, 2007. After 1 year of availability, 404 clientele had purchased calendars by accessing Texas AgriLife Extension Service's AgriLife Bookstore website (<http://agriflifebookstore.org>) or by calling the Bookstore toll free (888-900-2577). The customers purchased a total of 804 copies of the calendar. The cost of the calendar was \$7.95 each (\$3.50 each for orders of 50 or more) plus tax and shipping. Generally, for orders placed in-state, the total purchase price of a single copy was \$10.97.

In July 2008, all names and addresses of the first year purchasers (n = 404) were downloaded from the AgriLife Bookstore Web site and each was mailed one survey packet,

regardless of the number of calendars purchased. A cover letter was included in each packet explaining the reasons for the survey. A follow-up letter was sent to non-responders 3 weeks after the initial mailing. As an incentive for completing and returning the survey, each respondent was offered a complimentary copy of the calendar to be sent to an addressee of choice. Of the 404 surveys mailed, 186 completed surveys were received for a return rate of 46%.

Respondent Information

The primary occupation of respondents was “other” (42%), with business owner (33%) identified as the second most common occupation. Ranchers (11%), professional biologists (6%), and educators and farmers (both 4%) made up a minor component of the occupations listed.

Seventy-five percent of respondents listed themselves as absentee landowners while 25% listed themselves as full time residents of their property. This may partially explain the small percentage of individuals identifying themselves primarily as ranchers or farmers.

The majority (52%) of respondents listing their primary land use as personal/recreational. This trend has been evident for several years in Texas as an increasing number of landowners purchase lands specifically for this purpose. Only 7% indicated the primary land use was commercial, while 41% listed both personal/recreational and commercial as reasons for owning their properties.

Most respondents obtained their calendar by ordering online (56%) or by calling (32%) the AgriLife Bookstore. An additional 12% (n = 22) reportedly obtained their copies from another source (e.g., gift); however, further examination of the survey data revealed that in most of these cases (16 of 22), calendars were also obtained via the AgriLife Bookstore.

The vast majority (98%) of the respondents who ordered their calendar online via the AgriLife Bookstore Web site (n = 101) were pleased with their purchase experience ($\bar{x} = 4.3$ on a 1 to 5 scale). On-line purchasers rated their website experience as “more than friendly” (47%), “very friendly” (44%) or “friendly” 7%, as compared with only 1% each for the category headings of “less than friendly” and “not friendly”.

Since calendars were ordered over an entire 12-month period, survey respondents were categorized into three distinct groups. Almost half (49%) indicated they had their calendars for > 8 months, 38% had their copies for 4 to 8 months and only 13% for < 4 months.

Respondents were members of numerous landowner and/or conservation-related organizations with the National Rifle Association as most frequently listed (n = 78). Others cited by respondents included Ducks Unlimited (63), Texas Wildlife Association (30), Texas and Southwestern Cattle Raisers Association (23), Quail Unlimited (22), National Wild Turkey Federation (20), Quality Deer Management Association (17) and The National Wildlife Federation (5). No respondents indicated membership in Farm Bureau, The Audubon Society or The Nature Conservancy.

Calendar Effectiveness

Respondents rated the eight attributes of the calendar from 4.2 to 4.5 (Table 1). Readability ranked the highest among all attributes. All attribute ratings ranged between the “Good” and “Excellent” categories.

Table 1. Survey respondent calendar attribute ratings (1 = poor, 2 = fair, 3 = fair, 4 = good and 5 = excellent).

Attribute	n	\bar{x}
Timeliness of monthly information	175	4.4
Message usefulness	174	4.4
Appropriateness of information	176	4.4
Readability	175	4.5
Effectiveness	174	4.3
Calendar format	175	4.3
Appendices	171	4.2
Non-year specific	161	4.3

Calendar Impacts

Survey respondents (n = 181) indicated that a mean of 1,398 acres would be impacted through the management techniques discussed in the calendar. Respondents also estimated that 2.7 (n = 176) different people would use their calendar copy and 3.2 (n = 150) different people would implement management practices after using/reading the respondent’s calendar copy.

Nineteen percent (n = 36) responded to the economic impact question and estimated they would each save/earn a mean of \$2,321 (\$83,550 total) as a result of implementing practices discussed in the calendar. This equates to a benefit-to-cost ratio of 211.5 to 1.0 or \$211.50 return for every dollar invested in the calendar. When calculated for all 186 survey respondents using data generated only by the 36 economic question responders, the benefit-to-cost ratio was still 40.9 to 1.0 or \$40.90 for every \$1.00 invested. This latter case analysis is, of course dependent upon the assumption that all non-responders (n = 150) to this question would have indicated \$0 earned or saved because of the calendar, which may not have been the case.

Survey respondents (n = 186) each implemented an average of 1.0 fish management practices, 0.9 wildlife management practices and 0.2 conservation education and information practices for a total of 2.1 each (Table 2). Overall, the majority (55%) of survey respondents implemented one or more management and/or conservation practices. Of those respondents (n = 102), 75% implemented from 1-5 practices, 23% 6-10 practices and 2% 11-15 practices.

The top three practices implemented because of management and conservation information provided in the calendar were keeping angler catch records (24% of respondents),

adopting aquatic weed control (23%) and supplemental feeding of fish (19%; Table 3). Additional commonly adopted practices were aquatic predator/pest control and establishment of food plots (both 18%), keeping wildlife harvest records (16%), pondwater testing (14%), supplemental feeding of wildlife (13%) and visiting an agency about management information (11%). The practices least implemented included working with a youth conservation group and converting from agriculture to wildlife tax valuation (both 1%), construction of new ponds (2%), restoration of wetlands (3%) and use of prescribed fire (4%).

Ownership status (absentee vs. full time resident) did not significantly affect practice implementation for 24 of the 27 practices. However, absentee landowners were more likely to utilize prescribed fire, attend a wildlife/fish management program and work with a youth conservation group than full time residents.

Analyses of practice implementation rates by time of possession (< 4 months, 4 to 8 months or > 8 months) were conducted to determine potential effects. However, there were no significant differences in implementation rates for any of the 27 practices based on length of time of calendar ownership.

The wildlife and fish calendar also served as an awareness instrument by encouraging landowners to seek more detailed information on various species and management topics. Survey respondents (n = 186) indicated that each obtained an average of 10.4 new ideas as a result of the calendar, with the most new ideas per respondent (4.9) categorized as wildlife management practices (Table 2).

An assessment of new ideas generated because of the calendar revealed the most frequently identified topics were allowing access for recreation by the public (90% of respondents), reporting wildlife/fish die-offs (84%), working with a youth conservation group (82%), restoring wetlands and installing water control structures for waterfowl (both 82%) and converting land from agricultural to wildlife tax valuation (60%; Table 3).

Most respondents had already implemented an average of 8.8 practices listed before they obtained their calendars (Table 2). Most respondents had already implemented supplemental feeding of wildlife (73%), built ponds (67%), reported illegal activity (66%), stocked fish (62%), established food plots (61%), mechanically manipulated timber or brush (59%), practiced rotational grazing of livestock (55%) and kept wildlife harvest records (50%) before purchasing their calendar (Table 3).

Table 2. Mean number of practices that were new ideas, implemented due to the calendar or were already implemented prior to the calendar purchase.

Management Practice Classification	New Idea	Implemented Because of Calendar	Already Implemented
Fish Management	2.9	1.0	2.7
Wildlife Management	4.9	0.9	4.7
Conservation Ed/Information	2.6	0.2	1.4
Totals	10.4	2.1	8.8

Table 3. Survey respondents (n and %) reporting whether 27 specific practices presented in the calendar were new ideas, implemented because of the calendar or were already implemented.

Management or Conservation Practice	New Idea		Implemented Because of Calendar		Already Implemented	
	n	%	n	%	n	%
<u>Fish Management</u>						
Build new pond(s)	48	31	3	2	106	67
Pondwater testing	87	54	23	14	50	31
Fish stocking	44	28	16	10	97	62
Aquatic weed control	70	47	34	23	46	30
Keep angler catch records	79	55	34	24	31	21
Fertilize pond	90	60	15	10	44	30
Supplement by feeding fish	60	39	29	19	65	42
Practice predator/pest control	64	42	28	18	61	40
<u>Wildlife Management</u>						
Mechanically manipulate timber or brush	51	31	17	10	99	59
Use prescribed fire	85	57	6	4	59	39
Establish food plots	35	21	30	18	100	61
Supplementally feed wildlife	24	14	21	13	120	73
Keep wildlife harvest records	53	34	24	16	78	50
Provide nest boxes	94	89	15	9	52	32
Install water control structures for waterfowl	116	78	8	5	26	17
Build ponds for water source	57	37	7	5	89	58
Conduct population census	79	53	14	9	56	38
Restore wetlands	100	78	4	3	25	19
Practice rotational grazing of livestock	43	36	10	9	65	55
Convert from agriculture to wildlife tax valuation	77	60	1	1	50	39
Develop a written management plan	86	55	13	8	57	37
<u>Conservation Education and Information</u>						
Allowed public recreation access	101	90	-	-	11	10
Attended wildlife/fish management program	83	56	13	9	53	35
Reported illegal activity	43	32	3	2	91	66
Reported wildlife/fish die-off	103	84	7	6	12	10
Worked with youth conservation group	107	82	1	1	22	17
Visited agency about management	63	44	15	11	65	45

Customer Satisfaction

Lastly, respondents were asked the likelihood of their recommending the calendar and/or the Texas AgriLife Extension Service as a source of wildlife and fish management information to family, friends and colleagues. On a scale of 0 to 10, respondents provided a mean rating value of 8.9 (n=184). The calendar received a Net Promoter Score of 59.3% (n = 184). A NPS \geq 50% is considered to be indicative of a high degree of customer satisfaction.

A total of 84 respondents provided supplemental comments regarding the calendar (see Appendix). Almost all comments were positive, although a few respondents would have preferred for the calendar to be in a year-specific format.

SUMMARY

The *Wildlife and Fish Management Calendar* appears to have been positively received and was an effective tool for increasing awareness via new ideas and facilitating the implementation of management and conservation practices for wildlife and fish resources on private lands in Texas. Impacts on acres affected, implementation rates of management practices, increases in dollars saved or earned as a result of practice implementation and collateral clientele reached further demonstrate the publication's effectiveness.

ACKNOWLEDGMENTS

Funding for the publication of the *Wildlife and Fish Management Calendar* and survey administration was provided by the Texas AgriLife Extension Service and the CSREES - Renewable Resources Extension Act. Special thanks to Judy Winn and Tammisha Farmer in AgriLife Communications for developing the publication, to Rey Santos in AgriLife Information Technology for survey review and data analyses and to AgriLife Extension's Pam Hickman for data entry and manuscript preparation.

REFERENCES

- Higginbotham, Billy, and Andrea Feldpausch. 2005. Testing the TCE regional programming hypothesis: Wildlife management workshops for absentee landowners. Texas Cooperative Extension Final Report. 30 pages.
- Messmer, Terry A., Carol A. Lively, Duncan D. MacDonald, and Susan A. Schroeder. 1996. Motivating landowners to implement wildlife conservation practices using calendars. *Wildl. Soc. Bull.* 24(4):757-763.
- Reichheld, Fred. 1996. *The ultimate question*. Bain & Company. Harvard Business School Press. Boston, MA. 211 pages. ISBN 1-59139-783-9.

Appendices

Landowner Survey

Survey Respondent's Comments

Net Promoter Score

Calendar Advertisement Flyer

**Wildlife and Fish Management Calendar
For Texas and the Southeast: A Landowner's Guide
SURVEY**

1. Please indicate your primary occupation:
 a. farmer
 b. rancher
 c. business owner
 d. professional (biologist)
 e. educator
 f. other

2. Are you a: full-time resident on the property
 absentee landowner (live elsewhere)

3. Primary land use
 Personal/recreational
 Commercial use (i.e. livestock, fishing production, wildlife leasing)
 Both

4. How did you obtain your wildlife/fish calendar?
 a. Telephone call to the Extension Bookstore
 * b. Online at the AgriLife Extension Bookstore website
 c. Other (please list) _____

*** If you ordered your copy online**, rate the “user-friendliness” of the Extension Bookstore website/ordering process where 1 = not friendly, 2 = less than friendly, 3 = friendly, 4 = more than friendly and 5 = very friendly (circle one number).

1 2 3 4 5

5. How long have you had your calendar?
 Less than 4 months
 4 to 8 months
 more than 8 months

6. Please rate the following attributes of the calendar on a 1 to 5 scale with 1 = poor, 2 = less than fair, 3 = fair, 4 = good and 5 = excellent. Circle one number per attribute.

<u>Attribute</u>	1 Poor	2 < Fair	3 Fair	4 Good	5 Excellent
Timeliness of monthly information	1	2	3	4	5
Message usefulness	1	2	3	4	5
Appropriateness of information	1	2	3	4	5
Readability	1	2	3	4	5
Effectiveness	1	2	3	4	5
Calendar format	1	2	3	4	5

Appendices	1	2	3	4	5
Non-specific to a particular year (i.e. not tied to 2008 only)	1	2	3	4	5

7. _____ **Number of acres of property that will be impacted** through the wildlife and fisheries management techniques discussed in the calendar.
8. \$ _____ **Estimate dollars saved/earned** as a result of adopting practices discussed in the calendar.
9. _____ **Number of different people** using your calendar.
10. _____ **Number of different people** you estimate that will implement management practices 6 months after using/reading your calendar.
11. Please place a checkmark by each practice in 1 of the 3 categories listed: **New Idea To Me But Not Yet Implemented, Implemented Because of Calendar or Already Implemented Before Purchasing the Calendar.**

<u>FISH MANAGEMENT</u>			
	New Idea To Me But Not Yet Implemented	Implemented Because of Calendar	Already Implemented Before the Calendar
Build new pond(s)			
Pondwater testing			
Fish stocking			
Aquatic weed control			
Keep angler catch records			
Fertilize pond			
Supplement by feeding fish			
Practice predator/pest control			
<u>WILDLIFE MANAGEMENT</u>			
	New Idea To Me But Not Yet Implemented	Implemented Because of Calendar	Already Implemented Before the Calendar
Mechanically manipulate timber or brush			

Use prescribed fire			
Establish food plots			
Supplementally feed wildlife			
Keep wildlife harvest records			
Provide nest boxes			
Install water control structures for water fowl			
Build ponds for water source			
Conduct population census			
Restore wetlands			
Practice rotational grazing of livestock			
Convert from agriculture to wildlife tax valuation			
Develop a written management plan			

CONSERVATION EDUCATION AND INFORMATION

	New Idea To Me But Not Yet Implemented	Implemented Because of Calendar	Already Implemented Before the Calendar
Allowed public recreation access			
Attended wildlife/fish management program			
Reported illegal activity			
Reported wildlife/fish die-off			
Worked with youth conservation group			
Visited an agency about management			

12. Are you a member of any of the following organizations?

- | | |
|--|--|
| <input type="checkbox"/> Ducks Unlimited
<input type="checkbox"/> National Wild Turkey Federation
<input type="checkbox"/> Quality Deer Management Association
<input type="checkbox"/> National Rifle Association
<input type="checkbox"/> National Wildlife Federation | <input type="checkbox"/> Quail Unlimited
<input type="checkbox"/> Texas Wildlife Association
<input type="checkbox"/> Farm Bureau
<input type="checkbox"/> Audubon Society
<input type="checkbox"/> The Nature Conservancy |
|--|--|

_____ Texas and Southwestern Cattle Raisers _____ Other (Please List)
Association _____

13. Based on the information presented in your wildlife and fish management calendar, what is the likelihood you would recommend this publication and/or Texas AgriLife Extension Service (formerly Texas Cooperative Extension) to your family, friends and colleagues as a source of wildlife and fisheries management information. Circle one number below with 0 = not likely and 10 = likely.

0 1 2 3 4 5 6 7 8 9 10

Not likely

Likely

14. Any additional comments you would like to make about the calendar?

To receive a complimentary copy of the Wildlife and Fish Management Calendar, please complete the following. A copy will be mailed to whomever you designate when your completed survey is received! (Self-addressed stamped envelope provided for your convenience)

Name: _____

Mailing Address: _____

City/State/Zipcode: _____

Thank You!

Billy Higginbotham
Professor and Extension Wildlife & Fisheries Specialist
Texas AgriLife Extension Service
PO Box 38
Overton, TX 75684
v: 903-834-6191
fax: 903-834-6257
email: b-higginbotham@tamu.edu

14. Any additional comments you would like to make about the calendar?

Some activities are part of a 5 yr plan & are not performed each year; perhaps you could add an appendix where the person using the calendar could plan these activities and then mark what year each were accomplished. Also, you mostly ignored our target species-songbirds. Perhaps a separate calendar could be published for such bird "stewards" as us.

Good reminding reference

Very good source of information. I gave 2 calendars to associates of mine for use on their land.

More room needed for notes (recordkeeping). Don't really like filling in proper number for each day of the year.

Very informative - use often.

Material would be helpful in pamphlet form; or include dates on calendar.

Remove pictures entirely to make calendar larger to accommodate more notes, both in calendar date blocks and margin information. Nice images but this is too useful to waste space. Also, great as a "perpetual" calendar.

Very helpful.

Good info - I had to attend several classes to learn same info. Biggest help was to use cameras for census. I have since installed.

While I feel the calendar was very well done, it would have been good for us if there had been information included that pertained to wildlife not categorized as "game".

Keep up the good work!

Really enjoyed the calendar and will find it a useful reminder from year to year.

Adding the "timeless" calendar doesn't add much, but setting up a monthly calendar of reminders is great. I don't have to carry all that around in my head. Your survey categories - many were not applicable or were considered and rejected based upon our circumstances.

Have not used calendar - sorry!

The calendar is an extremely valuable resource for fish and wildlife management. I look forward to the new edition.

There is a lot of information available if you know where to look and seek it out. What I value about the calendar is it has much of what I need all in one place and organized in the calendar time line. A great tool!

I'm a professional wildlife biologist, so I was already familiar w/practices recommended. However, the calendar is an excellent tool to use for reminding you when they should be completed. I far prefer a year-specific calendar. Good Product!

We have built the wild hog traps as in calendar!

Excellent tool for being sure we are on track!

I'd rather it be a booklet cross referenced w/booklets from TAMU for more info.

14. Any additional comments you would like to make about the calendar?

Calendar is a great source of information. Unfortunately, I currently do not live on property in country and unable to put calendar source into use.

Good info for landowner.

Loved It! Good common sense approach!

Excellent! Thanks for all your hard work.

Makes a great gift for those applicable.

Good condensed version of a lot of material that is available through other sources. Good way to get the new landowner started thinking about all the issues. However, wildlife includes more than game. Could include some more info on native grass restoration and reducing improved grass pastures for numerous wildlife.

Very well done.

Have not used the calendar. Been involved in a major project. Will use it next year.

Very nice, useful, educational and a great tool!

Feel overwhelmed by amount of info I need to learn. Thank you for your course offerings. I am trying little-by-little to learn from each project.

I like the fact it is useful now and the same info will be useful later and even future generations!

Great idea! How about 1) when poisonous weeds come out, 2) best times to apply herbicides.

Expand with tips on feral hog control; add recommended seeds for game plots; phone numbers for contacting specific areas listed in calendar.

We find the monthly suggestions useful. It is impossible to remember everything. I also use the calendar to date arrival and departure of migrating birds, calving, garden seed planting, harvesting, unusual temperature variations and rainfall. It is a handy diary!

Increase info in appendix - expand and give website addresses (numerous)

Very useful information - I check it often.

Good resource and is something I will use for many years. Especially helpful as an absentee landowner to give the calendar to our help and follow-up with them on what needs to be done when.

Continue to improve it in the future. It's an absolute wealth of information!

New landowner as of early April 2008. Plan to live on land next couple of years - calendar is eye opener, educational and beautiful.

Very good - sent one to a friend, too.

Very high quality.

This is one of many resources I have used to manage fish, wildlife, hog control, etc. on my ET property. This is easily the most efficient, on target, well written information I have obtained. Very concise, extremely valuable information. Thank you.

14. Any additional comments you would like to make about the calendar?

Nice calendar. Interesting.

Very Handy

Excellent tool.

I am really excited to have the calendar. It will help me manage for wildlife. I have just had it for a couple of weeks and have learned a lot. This was a great idea - Thank you.

It was a very neat calendar. I grew up in the outdoors & already knew a lot of the info provided. It is more of a beginning calendar.

I think the calendar is an excellent reference tool and helps bring emphasis on activities and timing along with great tips.

Very useful.

I would like another one. I shared mine with a friend and he has not returned it.

Sorry I wasn't very informative. When I heard the Washington Co. Extension Agent mention the calendars, I thought they would make ideal Christmas gifts.

Good information and quite useful.

Very helpful to weekend rancher. Greatly improved bird and wildlife residency.

Excellent management tool

Like the monthly structure of calendar. Wish I had access to even more detailed suggestions and practices specific to North Central TX.

Excellent/simple guide.

Excellent publication.

I would like someone to visit me and comment on the success, failure of my attempts. I am trying to make my place wildlife friendly with hunting.

Despite being a biologist, I find the monthly information handy to review for personal land and work projects. I have one at work and one at the family farm!

I like it a great deal!

Excellent

We have 6 owners and use land for recreational use only. We manage for fishing and dove hunting. Advice on these subjects are appreciated. Farm is located just east of Kaufman, lake is 22 acres and 20 ft. deep @ dam.

This calendar will be helpful in developing a 3-5 year plan for a private club lake.

Personal circumstances have prevented me from being as active in management as desired this year. Hope to change soon.

I'd like to see more quail info.

Great tool, very informative. Perfect outline for a plan

14. Any additional comments you would like to make about the calendar?

Even though I was already using supplemental feed and food plots, this has helped using them both. The timing of various practices was particularly helpful as are the appendices.

Thing it's great! Information for commercialization of wildlife eq. lease info, animal viewing, hunting fees and maximize revenue of wildlife. Seems wildlife, not cattle, are the future in the Hill Country. Wildlife Coops & Assn's and registering hunting leases (we don't lease for hunting, but leases are key to many ranchers' survival).

Excellent Info.

I think the calendar is great. My problem is having sources to implement the procedures.

Innovative and informative rangeland and wildlife awareness tool. Excellently done - addresses contemporary issues with practical and useful solutions.

Wife thinks the calendar is nice

The calendar has been a great tool for us. Great work!

The calendar was most helpful in the preparation and development of game plots.

I belong to a fishing/hunting club which in the past dumped fish & fertilizer into the lake every year until we had a vegetation problem. A new group is in charge and we are developing a 3-5 year plan for lake management. Your calendar is perfect for our new team. Everyone who volunteers gets a calendar.

Excellent - The more information the better for week-enders!

Just starting - looking forward to working with the calendar.

An Excellent publication for information and guidance.

I hope to use the calendar more in the next 2 years as I spend more time managing our rural acreage.

I have reviewed & is very helpful. Thanks.

I'll refer to it more if it were tied to the year, but I know I probably wouldn't buy it every year.

Great - best I've seen in helping with planning.

Wish the calendar was year specific with each date on it for easier use as a calendar.

Good guideline for me so I can improve area for wildlife. Nothing mentioned about planting trees/vines for wildlife. I have had to stop food plots due to hogs for last 2-3 years, but have planted over 500 trees to supplement. Planted trees that produce food for wildlife. Could use help/info on trap door design for hogs. Pictures not detailed enough.

NET PROMOTER SCORE

The Net Promoter Score is used to index program effectiveness. It is based on a book entitled “The Ultimate Question” by Fred Reichheld. It is in wide use among Fortune 500 companies and asks one simple question: “How likely are you to recommend us to family, colleagues and friends “? The “us” in this case is the Texas AgriLife Extension Service as a source of information—and for our specific purposes here your use of the Wildlife and Fish Management Calendar. The calculation is simple—The clientele rate the likelihood of recommending you on a 0 to 10 Likert Scale with 0 being Not likely and 10 being Likely. You take the **percentage** of clientele attending the program that rated you a 9 or 10 (called promoters) and subtract the **percentage** of clientele that gave you a 6 or below (called detractors). You don’t use the 7s and 8s (called passives) except to determine percentages of the other two groups. The result of this subtraction is your Net Promoter Score. The most efficient companies (or program or product) usually rate 50% to 80%. A score of 5% to 10% means you are sputtering along and your promoters barely outnumber your detractors. A brief example—100 clientele utilize your services or product and responded with evaluation surveys. Let’s say that 25 rated the services or product at a 6 or below, 40 rated it a 7 or 8 and 35 rated it a 9 or 10. $35/100 = 35\% - 25/100$ or $25\% = 10\%$ NPS. A 10% NPS means it is time to take stock of your company or organization, or at least the services or product provided to this particular group of clientele! If you want a more detailed explanation, go to <http://www.bain.com/theultimatequestion> or <http://www.netpromoter.com>.



Want to know how to:

- improve the fishing in your bass and catfish ponds?
- encourage mourning doves with proper habitat management?
- understand the population dynamics of your deer herd?
- improve the antler quality of bucks?
- control feral hogs?
- use supplemental feed for wild turkeys?
- age deer in the field or from tooth wear?
- manage for ducks?
- select supplemental forages for wildlife?

Wildlife *and* Fish Management Calendar

for Texas and the Southeast

A Landowner's Guide

This beautiful, full-color calendar is the tool for you. You'll learn not only how to manage your property for wildlife and fish, but also when to perform critical management tasks.

Use the calendar to record your management activities, and you'll have invaluable data for measuring success, as well as documentation for tax purposes.

Whether you own a few acres or thousands, you'll find this management calendar indispensable.

Order your copy from:

Texas Cooperative Extension Bookstore
<http://tcebookstore.org>
888-900-2577 (toll-free)

\$7.95 + tax and shipping

\$3.50 each for orders of 50 or more