Table 3. Forages and introduced pastures questions, all producers and by groups.

	All	Producer Group Larger[b] (Percent of total)	Smaller[c]
Typical hay feeding season 60 days or less [a]	10	17	7
Can set and monitor proper stocking rate [a]	39	61	35
Forage test raised forages (nearly always) [a]	13	19	10
Forage test purchased forages (nearly always) [a]	9	15	7
Have native grass land [a]	75	83	74
Stockpile forage grasses for fall and winter grazing (nearly always) [a]	34	44	34
Have introduced forages land [a]	78	88	77
Stockpile fescue or Bermudagrass for fall and winter grazing (nearly always) [a]	29	43	27
Soil test introduced pastures (annually or every other year)	22	23	21

[a] Statistically significant difference between larger and smaller groups
[b] 100 or more breeding females and 40% or more of household income from the beef enterprise
[c] Fewer than 100 breeding females and less than 40% of household income from the beef enterprise

monitor a proper stocking rate. A higher percentage of larger producers (61 percent) indicated they could set and monitor a proper stocking rate.

As noted above, feeding harvested forage is expensive, but necessary in most years for Oklahoma cow-calf producers. The only way to get the most benefit from harvested forage is to know the nutritional value of the feedstuff and one method of knowing the nutritional value is through forage tests. Thirteen percent of all respondents nearly always forage test raised hay and 9 percent always test purchased hay. At the other extreme, 43 percent and 58 percent, respectively, never forage test raised or purchased hay. Larger producers, perhaps because they are more dependent on cattle for their income, were more apt to forage test. Of this group, 19 percent nearly always forage test raised hay and 15 percent nearly always test purchased hay.

One means of reducing the amount of harvested hay fed is to stockpile forages. Stockpiling growing forages means allowing forages to grow and remain in pastures for later grazing in those periods when one would otherwise feed harvested hay. Stockpiling forages is typically less expensive than harvesting forage. About three-fourths of all producers have both native grass pastures and introduced forage pastures. Overall, 34 percent nearly always stockpile native grass forage and 29 percent nearly always stockpile fescue or bermudagrass for winter grazing. Larger producers stockpile more frequently. Of this group, 44 percent and 43 percent nearly always stockpile native grasses and introduced forages, respectively.

Of all producers, 22 percent soil test at least every other year. Regarding the frequency of soil testing, little difference was found between smaller and larger producers.

Summary and Conclusions

Oklahoma cow-calf producers who received a *Beef Cattle Manual* provided information on their current production practices. This Extension Fact Sheet summarized the demographic characteristics of those producers and their operations. It also summarized responses related to cow-calf practices in three areas; business planning and management, nutrition and management, and forages and introduced pastures.

In most cases, larger producers who rely on cattle for a greater percentage of their household income are more apt to adopt or use recommended management practices than are smaller producers who are less dependent on cattle for household income. The need for larger producers to generate profit may drive them to adopt "best management practices." Also, larger producers may have become larger by doing what was recommended and earning more profit, thereby enabling their operations to grow and expand. Thus, smaller producers who want to grow and expand must consider which management practices are most effective in controlling costs and generating income to increase cowherd profitability.

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OKLAHOMA COOPERATIVE EXTENSION SERVICE AGEC-245

Cow-Calf Production Practices in Oklahoma – Part 1

Mallory Vestal
Graduate Research Assistant

Clement Ward
Professor and Extension Economist

Damona Doye
Regents Professor and Extension Economist

David Lalman
Extension Beef Cattle Specialist

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http://osufacts.okstate.edu

Oklahoma's Master Cattleman program was launched in 2005. As of June 2007, Master Cattleman classes have been offered in 43 Oklahoma counties and 27 classes have either graduated or are meeting regularly. When the program began, 16 lead authors from 6 academic disciplines at Oklahoma State University (OSU) wrote an *Oklahoma Beef Cattle Manual* consisting of 40 chapters (Lalman and Doye, 2005). The manual was distributed through local Oklahoma Cooperative Extension offices, at producer meetings, and by e-mail request from an OSU Master Cattleman website (http://agecon.okstate.edu/cattleman/). Producers who received a copy of the manual were asked to complete a survey documenting their current beef production and management practices.

This is one of two Extension Fact Sheets which summarize cow-calf production practices for Oklahoma producers who completed the Master Cattleman survey. This fact sheet briefly summarizes demographics of people completing the survey as well as their responses regarding practices under three categories; business planning and management, nutrition and management, and forages and introduced pastures. The second fact sheet summarizes responses regarding quality assurance and animal health, marketing and risk management, and reproduction and genetics. Many tables and Microsoft PowerPoint slides resulted from this research (Vestal, 2007) and these can be accessed at the Master Cattleman website noted above.

Procedures

The survey instrument includes a variety of questions pertaining to a broad array of production and management practices that are relevant for a cowherd enterprise. These practices were categorized into seven areas. The survey also included information on the demographics of the respondents.

Survey information on commercial herd size and percentage dependence on the beef enterprise for household income was used to classify respondents into two groups. The first group (referred to as smaller producers) consisted of smaller cowherd operations (herd sizes of 1 to 99 breeding females) whose percentage of household income from the beef enterprise in 2003 was 40 percent or less. The second group (referred to as larger producers) consisted of larger cowherd operations (herd sizes of 100 or more breeding females) whose percentage of household income from the beef enterprise in 2003 was greater than 40 percent. Producers in these two groups totaled 414 and accounted for 56.8 percent of all producers used for this project. Smaller producers numbered 324 and larger producers numbered 90. Statistical tests were used to assess differences and similarities between the two groups. Additionally, for selected management practices where differences existed between the two groups, an effort was made to determine factors affecting adoption of specific practices.

This and the second fact sheet summarize all 729 survey respondents. Statistically significant differences are noted between the two groups described above when they were found.

Demographics of Cow-Calf Respondents

Survey respondents were asked a number of questions to establish a demographic profile. Highlights of the personal and operation characteristics for cow-calf producers completing the survey are mentioned here.

- Of all respondents, 89 percent were male, 91 percent were Caucasian, and 80 percent had at least some college courses. More than half (60 percent) were 50 years old or older.
- Nearly three-fourths (70 percent) were employed full time or part time off the farm or ranch. A slim majority (52 percent) of smaller producers had full-time off farm jobs, whereas most larger producers (72 percent) were full-time farmers and ranchers.
- Household income was split quite equally between those with less than $60,000 per year (51 percent) and those with more than $60,000 per year (49 percent).
- Overall, more than two-thirds of the respondents (68 percent) had commercial cowherds of less than 100 cows (Figure 1).
- Of all respondents, more than three-fourths (76 percent) depended on cattle for 40 percent or less of their total income (Figure 2). As expected, producers with fewer than 100 cows reported being less dependent on cattle for their household income than larger producers.

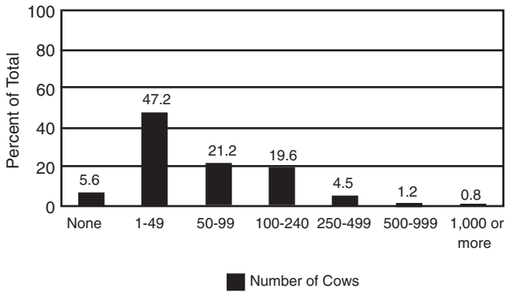

Figure 1. Distribution of respondents by number of commerncial cows in their operation.

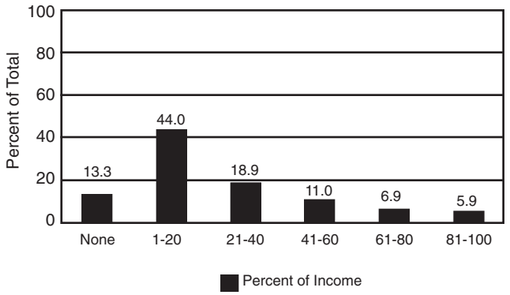

Figure 2. Distribution of respondents by percent of household net income from their beef cattle operation.

- For nearly half of all producers (45 percent), "generating enough farm income so off-farm income is not necessary" was very important. This objective was far more important to larger producers (76 percent of respondents in that group).
- Similarly, 58 percent of all respondents indicated "choosing practices that reduced labor" was very important.

Business Planning and Management

A series of questions were included regarding planning, recordkeeping, and general management (Table 1). Of all producers, 57 percent had a long-term business plan (five years or more); and of those, 73 percent indicated the plan was in writing. A higher proportion of larger producers had a long-term business plan (65 percent). Many fewer producers had a short-term (one to two year) operational plan.

Financial recordkeeping is an effective way to learn from the past to improve in the future. Producers had several levels of recordkeeping. Nearly the same percentage of respondents in total (35 percent) kept receipts and invoices in a box as used some type of computer system of recordkeeping (36 percent). However, nearly half of larger producers (45 percent) used a computerized system.

Determining the financial health of the ranch business is an important element of sound business management. Two-thirds of producers (65 percent) summarize their financial records annually for tax purposes. For many, this likely is the time they develop an income statement (53 percent) and balance sheet (42 percent). Fewer develop annual enterprise budgets (31 percent) or make cash flow projections (35 percent), both of which are useful in communicating clearly with lenders regarding the need for and ability to repay loans. Larger producers were more apt to use these financial management tools than smaller producers.

Production recordkeeping is important for good herd management as well. Producers indicated they nearly always keep certain types of records, such as sire and dam of calves (50 percent), calving dates (59 percent), calf weights (29 percent), vaccinations (51 percent), and medical treatments (45 percent).

Nutrition and Management

Nutrition and management questions covered a variety of practices (Table 2). More producers (69 percent) provide access to a commercial mineral for cattle grazing spring and summer pastures than provide salt (38 percent). About half of all producers provide both (47 percent) and only 4 percent provide neither.

Winter supplementation in Oklahoma is typically required for good nutrition of the cowherd and calves. Which supplement to use is important due to potentially large cost differences among alternative feedstuffs. How producers determine what supplement to feed or where they get their information varied. About half (48 percent) nearly always rely on past experience. Others consult a feed company representative (18 percent), extension educator (12 percent), or veterinarian (7 percent). Several use forage tests and estimated animal requirements to calculate supplementation needs (20 percent) and some use the tools available from OSU (7 percent) such as the OSU Cowculator (available at http://www.ansi.okstate.edu/exten/).

Castrating, implanting, and dehorning calves are well-recognized practices that add value to calves. However, some producers choose not to use these time-tested tools. Only a little more than half of all producers (56 percent) indicated they nearly always castrate bull calves not intended for breeding. Larger producers more dependent on cattle for household income castrated more frequently (73 percent).

Implants are somewhat controversial and are not appropriate if calves are being targeted for a natural beef retail market. Also, overuse of implants has been found to be associated with poorer grading and less tender beef. However, from a production standpoint, growth-promoting implants have been shown to increase growth rates 10 to 30 percent and improve feed efficiency 5 to 15 percent for a relatively small cost to cow-calf producers. Overall, 18 percent of all respondents nearly always implant steer calves and 13 percent nearly always implant heifer calves not intended for breeding. A higher percentage (37 percent) of larger producers nearly always implant steers and 25 percent nearly always implant heifers.

Horned cattle increase the incidence of injuries and bruising to other cattle and increase injuries for cattle handlers as well. Carcass bruising is a serious source of lost income for the beef industry. Feeder cattle buyers typically pay a premium price for polled or dehorned calves and there is evidence the

Table 1. Business planning and management questions, all producers and by groups.

	All	Producer Group Larger[b] (Percent of total)	Smaller[c]
Producers with a long term (5 years or more) business plan[a]	57	65	38
Some type of computer recordkeeping system[a]	36	45	32
Prepare an annual income statement[a]	53	58	53
Prepare an annual balance sheet[a]	42	47	40
Prepare an annual cash flow statement[a]	35	53	34
Prepare an annual enterprise budget[a]	31	34	31
Maintains records on sire and dam of offspring (nearly always)[a]	50	34	50
Maintains birthdates of offspring (nearly always)	59	48	59
Maintains weights of offspring (nearly always)	29	28	24
Maintains records on vaccinations (nearly always)	51	55	48
Maintains records on medical treatments (nearly always)	45	36	44

[a] Statistically significant difference between larger and smaller groups
[b] 100 or more breeding females and 40% or more of household income from the beef enterprise
[c] Fewer than 100 breeding females and less than 40% of household income from the beef enterprise

Table 2. Nutrition and management questions, all producers and by groups.

	All	Producer Group Larger[b] (Percent of total)	Smaller[c]
Provide commercial mineral (nearly always)[a]	69	81	64
Provide salt (nearly always)	38	36	39
Source of information on amount and type of supplement - experience (nearly always)	48	53	48
Source of information on amount and type of supplement - extension educator (nearly always)	12	6	12
Source of information on amount and type of supplement - veterinarian (nearly always)	7	5	6
Source of information on amount and type of supplement - feed company representative (nearly always)	18	11	18
Source of information on amount and type of supplement - forage tests and animal requirements (nearly always)[a]	20	27	17
Castrate bull calves not for breeding (nearly always)[a]	56	73	54
Implant steer calves (nearly always)[a]	18	37	12
Implant heifer calves not for breeding (nearly always)[a]	13	25	9
Dehorn calves with horns (nearly always)[a]	51	66	49

[a] Statistically significant difference between larger and smaller groups
[b] 100 or more breeding females and 40% or more of household income from the beef enterprise
[c] Fewer than 100 breeding females and less than 40% of household income from the beef enterprise

percentage of horned calves is declining. For all producers with horned calves, 51 percent nearly always dehorn, and 66 percent of larger producers nearly always dehorn.

Forages and Introduced Pastures

Several questions in the survey related to forage and pasture management (Table 3). Reduced feeding of harvested forages can lower production costs and improve profitability of the cow-calf operation. Reduced feeding of harvested forages reduces labor and equipment costs of harvesting, labor cost of feeding, and the cost of the forage itself. Harvested forage may account for nearly a quarter of total costs per weaned calf (Rasby, et al.).

Producers were asked to specify their typical length of the hay-feeding season. The most common response, by 45 percent of all respondents, was 91 to 120 days. That percentage varied little for smaller and larger producers. However, larger producers more frequently answered 60 days or less (17 percent) compared with smaller producers (7 percent).

Proper stocking rates are critical to effective, sustained pasture management. Stocking rates that are too high may cause overgrazing, damaged pastures, and reduced animal performance. Undergrazing results in lower gains per acre and lower gross returns. Therefore, stocking rates are considered critically important to a successful grazing system. Overall, 39 percent of all producers said they know how to set and