

AGRICULTURAL EXTENSION SERVICE

NORTH CAROLINA STATE UNIVERSITY AT RALEIGH

SCHOOL OF AGRICULTURE AND LIFE SCIENCES

EXTENSION ANIMAL HUSBANDRY
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October 2, 1978

MEMORANDUM

TO: J. D. Dodson and D. G. Harwood, Jr.

FROM: James W. Patterson, Specialist In Charge, Extension Animal Husbandry

James W. Patterson

Enclosed is a copy of the Annual Report for fiscal year 1977-78.

Copy to: Dr. T. C. Blalock
Dr. C. A. Lassiter



COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS, NORTH CAROLINA STATE UNIVERSITY AT RALEIGH, 100 COUNTIES AND U. S. DEPARTMENT OF AGRICULTURE COOPERATING

Extension Animal Husbandry
Annual Report for 1977-78

Beef Cattle

During the past year, we spent our time working with livestock agents and beef cattle producers in striving to improve the quality, nutrition, management and marketing of beef cattle and sheep and the development of our 4-H members with beef, swine and horse projects. Specialists spent extra time working with agents and producers on keeping the herds together under drought conditions. Because of the shortage of stored feed, fewer light calves were held over for stockers. Everyone recognized the opportunity, but short feed supply reduced participation in the stocker program.

Educational programs were directed toward practices designed to improve the efficiency of production of quality feeder cattle. In the fall of 1977, we were stressing the substitution of grain for roughages because of both quality and shortage of roughages. This fall we are looking at the largest stored hay crop in recent years.

During the past year, the section conducted more than 30 on-the-farm demonstrations to encourage the use of recommended management practices. These included demonstrations on growth stimulants versus controls, combinations of two growth stimulants that have a different mode of action, worming, grub control, fly control and feeding poultry waste. As a result of these, many producers are now using growth stimulants to increase their profits by approximately \$20 per head.

One grub control demonstration was conducted on a group of steers being wintered with the treated steers gaining 17.3 pounds more than the controls at a cost of 22 cents per treated animal. When these steers were sold, they brought 53 cents per pound resulting in a \$9.15 return on a 22 cents investment. These results have caused both agents and producers to take a second look at the importance of proper grub control.

Numerous beef cattle producers in poultry producing areas have an interest in feeding poultry waste to beef cattle. Most efforts have centered around devising workable feeding programs utilizing poultry waste. The main goal of using poultry waste in feeding programs is to reduce the cost of feeding resulting in increased profitability. Several on-farm demonstrations and performance trials have been conducted to measure performance of cattle on poultry waste based rations.

The western area specialist has been the project leader this past year for a beef cattle demonstration at the Mountain Research Station in Waynesville. This year comparisons were made between wintering 350 pound steers and 450 pound steers. The 350 pound steers were found to have a \$38 higher net return, they gained .1 pound per day more and were fed eight cents per pound of gain cheaper.

Hay and corn silage were compared as a feed source for these cattle. The corn silage fed cattle had a .48 pound higher average daily gain, were fed 18 cents per pound of gain cheaper and had a \$20 per animal higher net return.

Two grades of cattle, NC 2's and NC 3's, were compared with the result being that there was very little difference in their ability to gain and make money for the producer in this type of system.

A comparison was made to determine the profitability of feeding one percent of their body weight in grain while on fall pasture. Those getting grain received a protein source in this feed the second month. The result was that those getting the grain plus grass gained twice what the ones getting grass alone gained, 1.52 pounds per day versus .75 pound per day. If the cattle had been sold at the end of the two months, those receiving grain would have had a \$6.12 per head higher net return than those receiving grass alone. The two groups were treated alike during the winter. In the spring those that had received the grain were 50 pounds per animal heavier than those that received

grass alone during October and November. Also, in the spring the net return on those receiving grain was \$4.48 per head higher. If producers in the area will adopt these practices demonstrated to be the most profitable, it will increase their incomes by the same amount.

These cattle have been retained, and the differences will be further evaluated when they are sold this fall.

Also being evaluated this summer was the profitability of a grain-on-grass program to overcome the depressed gains in July and August when fescue goes dormant. Part of the cattle are being sprayed for flies to determine the difference in weight gains due to good fly control versus no control. The results of these two things will not be known until October.

Nutrition Programs. Two major management practices that would improve nutrient utilization by beef cattle are proper supplementation of basal rations and freedom from internal parasites. The absence of these two practices, either alone or in combination, will often result in very little gain in stocker cattle or feeder calves on a feeding program that would otherwise support adequate rates of gain.

The major thrust in the past year has been aimed at holding educational meetings and conferences that involve discussions on the two items above. Both the performance aspects as well as economic aspects of proper supplementation and parasite control are discussed. In addition time is spent with individual farmers explaining the importance of the above practices. A major positive step in these cases has been farmer acceptance of a "balanced ration" concept. Adoption of such practices should serve to improve gains for feeder calf and stocker producers as well as improve profit potential.

A major effort has been expanded during the past year to publish a bulletin on wintering programs for stocker cattle. Outlined are accepted production practices, types of cattle, suggested feeding programs and economic analyses. The

cooperation of Thomas Reynolds, Extension Economist, was solicited in this effort. This publication should provide sufficient information so that a farmer could start up a wintering operation on a sound basis, both nutritionally and economically.

An effort has also been put forth to stress the use of growth stimulants in beef cattle. Demonstrations with RALGRO have been conducted in Chatham County. In addition, the use of stimulants has been demonstrated to individual farmers who needed to learn the implanting technique.

Performance Testing. The preference for heavy, high quality calves caused continued interest in performance testing and the use of tested bulls with above average performance. The North Carolina Beef Cattle Improvement Program ran 13,322 cow records and 11,372 calf records during this period. The top three counties on the program were Halifax County with 1,527 cows, Hyde County with 919 cows and Union County with 852 cows. Sixty-seven bulls were tested at the Rocky Mount Bull Test Station with 39 selling for an average of \$767.82. Seventy-eight bulls were tested at the Salisbury Bull Test Station with 51 selling for an average of \$751.08.

We have 70 bulls on test at Rocky Mount and 60 at Salisbury this fall. This represents a decrease probably due to low prices received for bulls in the spring and general herd reduction. The quality and 205-day records on the bulls now on test are the best ever.

Silage was available for the first time this fall to start the bulls at Rocky Mount. This silage was stored in the fall of 1977 to be available this fall to feed until this fall's silage was ready. This practice reduced the digestive problems and reduced the time and trouble of getting the bulls on feed.

Marketing. Feeder cattle production is the main beef enterprise in North Carolina. During this period the herd reduction and high cow slaughter nationally continued

to bring supply and demand of feeder cattle in balance. The number of calves sold through the organized sales indicates the reduction of cow numbers in North Carolina is not as great as those reported nationally. Extreme drought conditions in the summer and fall of 1977 reduced the number of light calves carried over as stockers. However, a continued increase in the fed cattle market and a predicted large grain crop has stimulated optimism in the feeder cattle market.

There were 53 demonstrational feeder and stocker sales, two on-the-farm and one tele-auction feeder sale in the fall of 1977 and spring of 1978. This represents an increase of one demonstrational feeder sale. In the 56 sales, 61,471 head of feeders were marketed for \$13,420,933.17. This represents a decrease of 5,663 head and only a \$302,191.00 decrease in total income. The average feeder sold for \$218 per head during this period which represents an increase of \$14 per head over the 1976-77 period. Feeder calves showed a price increase of \$5.29; yearling steers, \$4.40; and stockers in the spring of 1978, \$15.31 per hundredweight. Again prices in the special sales averaged from four to six cents per pound above all alternative markets. With a conservative estimate of an average of four cents per pound, this would reflect a \$1,625,481 increase in profits for North Carolina beef producers marketing through the special sales.

The numbers of feeders being consigned to the fall sales indicate that the brood cow numbers are down in North Carolina, However, it is encouraging to see the numbers are not down as much as the national estimates would indicate. North Carolina producers that are on a controlled breeding program with a sound management, breeding and feeding program producing feeders and marketing through the special sales are staying with their brood cows.

Horses

Many young foals are developing bone problems which are related to mineral deficiencies and/or trace mineral interferences. Breeders are becoming aware of the need to analyze their feed and supplement their feed according to nutrients needed as a result of these problems and the inherent expenses. The area horse management schools have had a direct impact on making horsemen aware of these problems and have aided them in finding means to correct the problems.

Herd health and parasite control programs have improved. Horsemen are now generally worming their horses four times per year and their weanling horses six times per year which is a tremendous improvement over the previous practice of worming two times per year. The change is a result of two separate factors: 1) better education from seminars and horse management classes and 2) development, availability and sale of better worming products from the local feed and tack stores. Effective new products are being marketed which are pastes and avoid the palatability problem of previous drugs.

4-H Horse Program. The 4-H program has continued to be a dynamic program maintaining a high level of interest and participation on the state level. Problems are developing in the program which may result in a future decline. Methods need to be developed to recruit new members into the program. A large problem is the loss of county programs and leaders due to agents resigning and/or relocating. Efforts must be made to quickly involve new agents into the horse program which may help maintain existing county horse clubs. State programs will decline if a high level of county and district interest is not maintained. The judging contest had more participants in 1978 but with fewer counties involved. The State Show was the largest to date with over 275 participants and 1150 entries. As the State Show grew, some districts had smaller shows with less county participation. These problems will receive top priority during 1978-79 in an

attempt to increase support to county staffs which should increase county participation.

A pilot program for helping the handicapped through riding was initiated in Wake County. The program offers many possibilities since a new clientele and civic involvement is established which can benefit the entire 4-H program.

Sheep

There seems to be a renewed interest in sheep. More requests were received from the counties this year than in the past several years. Lamb prices remained strong. A lamb pool was held in Graham, and the western lambs were marketed in cooperation with Virginia resulting in the best prices that sheep producers have ever received. State area wool pools were held in Washington, Durham, Salisbury and Asheville; and county pools were held in Newland, Boone and Jefferson.

4-H Livestock Projects

Participation in 4-H livestock activity has increased significantly for the third consecutive year in the 13 major projects and demonstrations offered. These figures are based on a statistical summary by the 4-H office. Steer performance index, sheep shearing and beef breeding had the largest gains in the 1977-78 period.

Livestock shows were added in Martin and Alamance Counties plus a district beef heifer show at the Dixie Classic Fair. A new show was set up for 1978 in Johnston County. A market hog show and judging contest were added to the Northwestern North Carolina District Show at Winston-Salem. We had a total of 34 county, district and state level shows in 1978, the largest number in recent years. Production records requiring minimum ownership and individual animal

Identification plus eliminating adult divisions at most shows is adding to their educational value. This is also increasing interest and participation by sponsors.

Livestock judging continues to grow as an important tool in the total development of our youth. More team participation in district contests was noted this year. Thanks to the generosity of our sponsors, our first place state team from Lenoir County entered regional contests in Richmond, Virginia; Timonium, Maryland; Harrisburg, Pennsylvania; and the national contest at Louisville, Kentucky. Our runner up from Surry County participated in the Richmond Contest and was our first entry in the Junior Stockman Contest at the Eastern National Livestock Exposition. This is a very practical contest that includes a meats division, and we plan to continue participating.

Agents, leaders and club members in 46 counties were given special assistance. Materials for use in projects and demonstrations were distributed to 100 counties, and folders with available project manuals, guides, etc. were distributed to counties.

Video tapes, slide sets, manuals and mimeograph materials have been updated, revised and reprinted to keep them current.

We have sponsors to adequately fund all activities where needed through 1978 and 1979.

4-H Animal Science Activity* Summary

	<u>1977</u>	<u>1976</u>	<u>1975</u>	<u>1974</u>
Animal Science				
Livestock Judging	448	498	352	258
Livestock Shows & Sales ¹	793	705	623	667
Production Demonstration	49	75	46	25
Other Activities ²	499	483	541	850
Total	<u>1789</u>	<u>1761</u>	<u>1562</u>	<u>1800</u>
Beef				
Breeding Project	210	189	---	---
Market Steer	467	376	657 ³	---
Grazing Project	159	161	94	---
Performance Index	250	162	147	---
Char-Grill Demonstration	77	89	81	72
Total	<u>1163</u>	<u>977</u>	<u>979</u>	<u>864*</u>
Sheep				
Market Lambs	48	56	36	---
Breeding Ewes	9	1	19	29
Sheep Shearing	74	11	---	---
Total	<u>131</u>	<u>68</u>	<u>55</u>	<u>29</u>
Swine				
Market Pig	398	410	---	---
Brood Sow	48	81	524 ⁴	---
Pork Production Contest	159	179	---	---
Pork Cookery Demonstration	70	76	63	79
Total	<u>675</u>	<u>746</u>	<u>587</u>	<u>635*</u>
Meat Animal Totals	3758	3552	3183	3328
Horses				
Horse Project	2689	2761	2931	3563
Horse Bowl	267	227	112	N/A
Horsemanship Camp	185	168	198	175
Horse Demonstration	102	112	222	186
Horse Judging	243	229	320	290
Horse Public Speaking	117	66	54	38
Horse Shows	1941	1779	2046	1652
Trail Rides	<u>807</u>	<u>717</u>	<u>N/A</u>	<u>N/A</u>
Horse Totals	6351	6059	5883	5904
Grand Totals	10109	9611	9066	9232

* Totals are correct, individual break downs not available some years.

¹ Beef, sheep, swine.

² Some activities formerly included are listed in other categories.

³ The number 657 refers to Breeding Project and Market Steer.

⁴ The number 524 refers to Market Pig and Brood Sow.