

AGRICULTURAL EXTENSION SERVICE

State of North Carolina

ANNUAL REPORT

1942

Period covered December 1, 1941 to December 1, 1942  
(Month) (Month)

Name of Project: ANIMAL HUSBANDRY - BEEF CATTLE, SHEEP AND WORK STOCK

Covering work done by L. I. Case

Sam L. Williams

D. C. Snodgrass

Percentage of time devoted to project: Full time - L. I. Case; 3 months - S.L.Williams;  
7 months - D.C.Snodgrass.

Date submitted: 2-24, 1943 Signed: L. I. Case  
Project Leader

Date approved: \_\_\_\_\_, 19\_\_\_\_. Signed: \_\_\_\_\_  
State Director of Extension Work

Date approved: \_\_\_\_\_, 19\_\_\_\_. Signed: \_\_\_\_\_  
Director of Extension Work U. S.  
Department of Agriculture

1942  
ANNUAL REPORT  
OF  
EXTENSION WORK IN ANIMAL HUSBANDRY  
IN  
NORTH CAROLINA

By: L. I. Case, In Charge  
Animal Husbandry Extension.

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## INTRODUCTION

Plans of Work For 1942 were revised to conform with war time needs. Long time demonstrations were eliminated or at least deemphasized and projects which directly had to do with the production of More Beef, More Lamb, More Mutton, More Wool and a Better Conditioned Work Stock were given the most attention. At the same time improvement in our livestock was sought by better sire replacements, better feeding and care.

Cattle numbers continued to increase and while we do not as yet have statistics to verify, it is believed that sheep numbers showed some increase last year. Work stock numbers continued to decrease which trend may be changed if new tractors and repair parts for old ones remain difficult to obtain.

### A-3 Beef Bull Placement. Adult

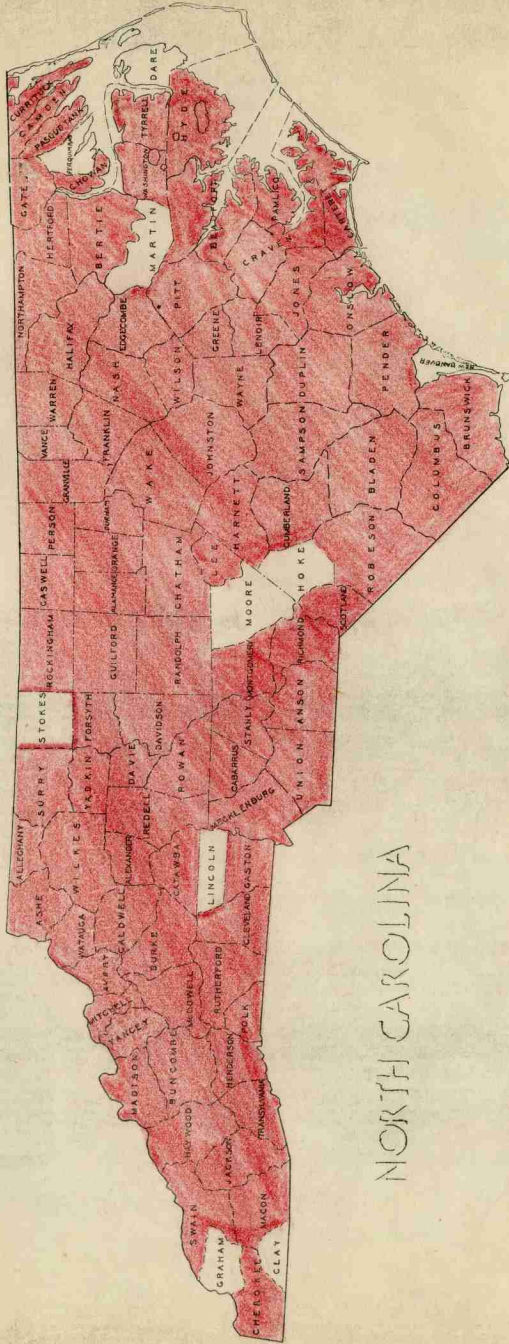
Annual reports from county agents show <sup>6</sup> 591 purebred bulls placed in <sup>90</sup> 89 counties. This is the largest number of replacements reported in recent years and probably for all time. Placement of purebred and high grade females is likewise the highest on record with <sup>7</sup> 86 counties reporting <sup>1550</sup> 1537 head.

### Summary of Bull and Female Placements

1936 - 1942

<u>Year</u>	<u>Bulls</u>	<u>Females</u>
1936	160	161
1937	178	211
1938	185	325
1939	351	936
1940	508	909
1941	444	1140
1942	591	1537-1550
1943	590	1740

Personal figures  
shown combined  
to Whites & Negroes  
need after  
Report typed



Counties in which agents assisted farmers  
in obtaining purebred Beef Type Bulls in 1942.

Prepared in:  
Office of Extension Studies  
N. C. Agr. Extension Service

Review of Purebred Sales 1942

<u>Breed</u>	<u>Date</u>	<u>Place</u>	<u>Bulls</u>	<u>Females</u>	<u>Total</u>	<u>Ave. Price</u>
Hereford	Apr.17	Wilson	11	24	35	\$320.85
Shorthorn	June 30	Asheville	11	29	40	233.37
Hereford	Oct. 1	Statesville	8	33	41	317.00
Shorthorn	Oct. 6	Asheville	11	36	47	230.00
Hereford	Nov.28	Clyde	24	57	81	323.00

In addition to these auction sales 8 car loads of registered Hereford cattle were shipped in from Kansas, Missouri, Nebraska, Texas and Canada. Many new herds of Aberdeen-Angus have been established, the foundation coming from Kansas, Virginia, Maryland. Furthermore, upwards of 50 head of herd bulls and outstanding females have been placed in North Carolina, having been purchased at private treaty from leading herds of Aberdeen-Angus, Polled and Horned Hereford and Shorthorn herds throughout the United States.

B. Fattening For Market. Adult

Although no definite figures are available it is believed more cattle were placed upon the slaughter cattle market than in 1941. A larger number of head were in the feed lots during the winter of 1941 - 42 and too more were shipped directly to market from grass, due to the favorable price. In the fall of 1942 more cattle were handled through the Governor's Revolving Fund than the previous year but a higher percentage of them were she stock. Price ceilings on beef and the threat of ceilings on live animals were determining factors when it came to buying feeders this past fall. Cattle men felt that heifers were a safer buy.

B-3 Fattening Project. 4-H Club.

Baby Beef Club Work made still further progress in 1942. Reports from counties show 538 boys and girls completing projects involving 648 head of animals. Our records of three fall and three spring sales, show that 4-H and F.F.A. boys and girls fed and placed on the market 188 fat steers weighing 159,500 pounds and selling for \$27,088.97. All but seven head (Guilford County) of these were graded and 101 were Choice, 58 Good and 22 Medium.

Report of Sales of 4-H Club Steers 1942

Rocky Mount - March 12 - 13:

The Grand Champion a 1055 pound Hereford-Shorthorn cross bred steer was shown by George Leonard, Franklin County. He sold for \$28.00 per cwt. to Z. B. Bullock, Rocky Mount. The Reserve Champion an 855 pound Hereford owned by Q. S. Leonard, Franklin County, a brother of George, sold to A. & P. Tea Company for \$22.25 per cwt.

Lumberton - April 21:

The Grand Champion steer was a Hereford weighing 852 pounds shown by Douglas Kinlaw, Robeson County. He was sold to Lumberton Trading Company, Lumberton, N. C. for \$35.00 per cwt. The Reserve Champion was an Angus-Shorthorn weighing 848 pounds shown by Gilbert Pate, Robeson County. He was sold to Pate Supply Company, Pembroke, N. C. for \$25.00 per cwt.

Kinston - April 23 - 24:

The Grand Champion, a Hereford, weighing 970 pounds was shown by J. C. Johnson, Johnston County, Four Oaks, Route 3. He was sold to Pender Stores for \$30.00 per cwt. Reserve Champion, a Hereford, weighing 890 pounds was shown by George Johnson, Johnston County, Four Oaks, Route 3. Sold to Kingan & Company for \$23.00 per cwt.

Asheville - October 7 -8:

The Grand Champion was a Hereford-Shorthorn cross bred weighing 860 pounds shown by Tom Vannoy, Watauga County, Boone, N. C. Sold to Dixie Home Stores for \$30.50 per cwt. The Reserve Champion, a Hereford, weighing 850 pounds was shown by Dorothy Dockery, Buncombe County, Weaverville, N. C. Sold to George Vanderbilt Hotel, Asheville, N. C. for \$26.00 per cwt.

Raleigh - October 13 - 14:

The Grand Champion, a Hereford, weighing 925 pounds shown by Nancy Elliott, Iredell County, Stony Point, N. C. Sold to Pender Stores for \$30.00 per cwt. The Reserve Champion, a Hereford, weighing 1040 pounds was shown by George and Briggs Price, Monroe, Route 2, Union County. Sold to Pender Stores for \$24.00 per cwt.



SUMMARY OF GRADES AND PRICES AT FAT CALF SHOWS - 1942

4-H and F.F.A. Steers (adult steers not included)

Spring Shows	No. Sold	No. Pounds	Amount	Wgtd. Ave. Incl. Champ.	Wgtd. Ave. Excl. Champ.	Choice			Good			Medium					
						No.	Pounds	Amount	Ave.	No.	Pounds	Amount	Ave.	No.	Pounds	Amount	Ave.
Rocky Mt.	39	32490	\$4207.11	Adult Steer	\$12.95	19	17125	\$2316.14	\$13.47	8	6615	\$851.20	\$12.87	12	8750	\$1039.67	\$11.88
Kinston	31	29035	3975.06		\$15.87	17	15355	2610.15	16.99	9	6385	905.41	14.18	5	3295	459.50	13.93
Lumberton	12	10485	2166.94		20.67	7	6480	1384.33	21.36	5	4095	782.61	19.54				
Totals	82	68010	10349.11			43	38960	6910.62		22	17005	2539.32		17	12045	1499.17	
Fall Shows																	
Asheville	60	51000	9139.60		\$17.87	34	30830	\$5621.60	\$18.23	22	17610	\$3098.15	\$17.59	4	2560	\$419.85	\$16.40
Raleigh	39	34315	6264.61		18.26	24	22485	4206.53	18.70	14	11085	1935.15	17.45	1	745	122.93	16.50
*Greensboro	7	6175	1335.65		21.63												
Totals	106	91690	16739.86			58	53315	9828.13		36	28695	5034.30		5	3305	542.78	
GRAND TOTAL	188	159500	27088.97			101	92275	16138.75		58	45700	7573.62		22	25350	2041.95	

\*were not graded

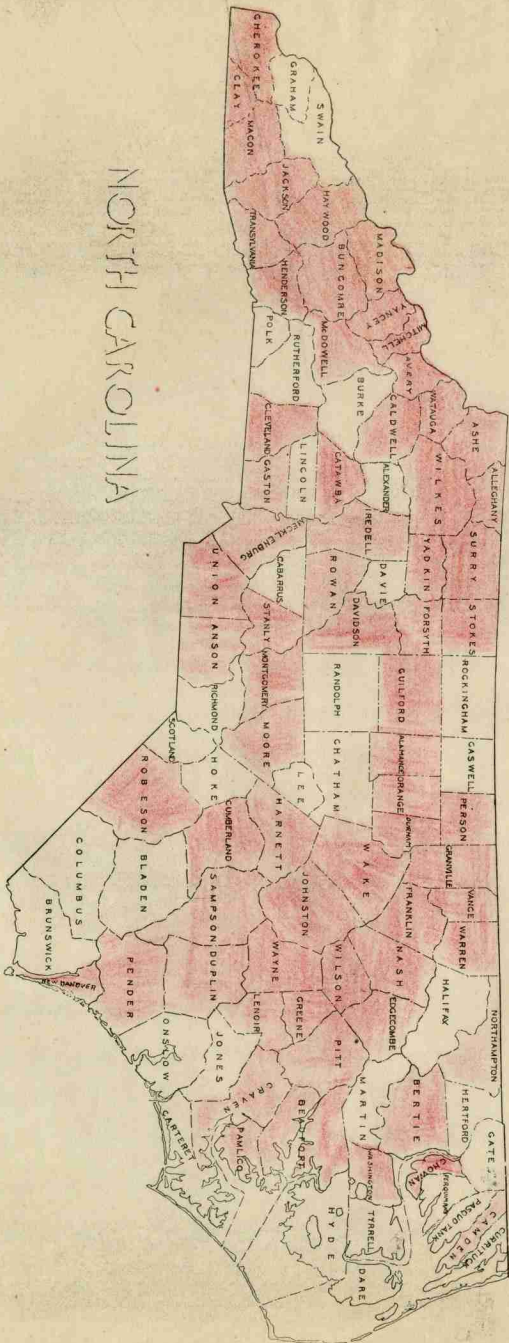
Financial Record of Baby Beef Club Records

Financial records on 144 head of 4-H Club steers show that 124 made a profit of \$5485.42 while 20 lost a total of \$187.57 when premiums are not included. This equals an average profit of \$36.79. When the prize money was included the total losses was cut down to \$84.77 on 10 head while the 134 made a total profit of \$6760.68. The average profit in this case was \$46.36 on the 144 head.

A study of the records of these beef calf projects brings out some very interesting facts, the most striking one being the close correlation between cost of gains and profits or losses. Costs per pound of gain varied from 4 to 25 cents, with an average of 12.2. In every case of loss (except loss by death) cost of gains ran over the average and with four exceptions this cost ran above 16 1/2 cents per pound. Twelve of 20 records which showed losses had feed costs running 18 cents or above. Two reports of losses where the feed cost was not extremely high, (14 cents) losses were due to very high initial cost (24 and 25 cents per pound).

Prepared in:  
Office of Extension Studies  
N. C. Agr. Extension Service

Counties Reporting 4-H Club Completions in  
Beef Cattle Projects in 1942.



SHEEP PROJECTS

C. Flock Management. Adult

Farm Flock Records were kept in 13 counties all but one of which sold lambs and wool cooperatively. The records were from 6 Eastern, 3 Piedmont, and 4 Western counties. The average gross income per ewe on 68 farms was \$14.44. Records for the past six years are as follows:

<u>Year</u>	<u>Gross Income Per Ewe</u>
1937. . . . .	\$ 9.36
1938. . . . .	7.18
1939. . . . .	9.27
1940. . . . .	9.56
1941. . . . .	11.18
1942. . . . .	14.40

Estimates of the cost of keeping a ewe one year varied from \$1.65 to \$7.50 with an average of \$4.10. Strange to say the highest as well as the lowest costs were in Eastern North Carolina, but on the average costs as well as incomes were higher in the mountains. These records bring out some interesting facts. As would be expected they show a close correlation between profits and percentage of lamb crops. They also show that the most successful sheep men use good rams, feed their flocks well, dock and castrate their lambs, treat regularly for internal parasites, control external parasites by dipping, and sell both their lambs and wool cooperatively by grade. The average size of the flocks on which records were kept was 19 ewes.

The two highest incomes on a per ewe basis were Martin Yates, Banner Elk, and W. Howard Gragg of Boone, both of Watauga County. Mr. Yates raised 19 lambs from 10 ewes and Mr. Gragg 20 lambs from 11 ewes.

P. A. Weeks, Whitakers, Route 1, Edgecombe County, had the best record in the East. His lamb crop was only 100 per cent but they graded high and sold at top prices as did his wool. His gross income was \$19.16 per ewe.

B. C. Pennington, Sturgills, Ashe County, raised 62 lambs from 42 ewes and reported an income of \$18.62 per ewe. This is the best record for flocks of over twenty five ewes.

R. C. Lowe, Banner Elk, Avery County, raised 41 lambs from 37 ewes with a gross income of \$16.21 per ewe.

COOPERATIVE EXTENSION WORK  
IN  
AGRICULTURE AND HOME ECONOMICS  
STATE OF NORTH CAROLINA

9

NORTH CAROLINA STATE COLLEGE OF  
AGRICULTURE AND ENGINEERING  
NORTH CAROLINA COUNTIES AND  
UNITED STATES DEPARTMENT OF  
AGRICULTURE COOPERATING

EXTENSION SERVICE

STATE COLLEGE STATION, RALEIGH, N. C.

FARM FLOCK RECORD (SHEEP)

(For Commercial Flocks Only)

On Farm of B. W. Farthing  
Post Office Valle Crucis, N. C.  
County Watauga  
County Agent H. M. Hamilton, Jr.  
Number ewes exposed to ram 12  
Were ewe lambs exposed? If so, state number 10 lambs not bred  
Number lambs raised to market weight 13  
Total value of lambs sold or kept \$ 153.86  
Number fleeces sold 23  
Number pounds of wool sold 132  
\*Total value of wool \$ 68.64  
Total Income \$ 222.52  
Gross Income per ewe \$ 16.00  
Estimated cost of keeping a ewe for one year \$ 6.00

\*To include market value of wool made into blankets, etc.

- 2 -

Was a purebred ram used? Extra good grade ram

If so, what breed? Hampshire

At what time did most lambs come? March

When were most of lambs sold? July and August

Were lambs creep fed? No

Were lambs docked? ewe lambs Castrated? Yes

How many times was flock treated for stomach worms? Four

What treatment was used? Cu Nic three times, Phenothiazine one time

Number of times flock dipped One

Was flushing practiced? Yes

Tell briefly how flock was wintered Ewes were fed no grain until one month before lambing time. Ewes were fed once a day a mixture of shelled corn and cottonseed meal, 3 parts corn and 1 part of meal. Also No. 3 potatoes were mixed with grain ration. After lambs were dropped ewes were fed same mixture twice daily.

How was wool sold? Wool pool

How were lambs sold? Pool

REMARKS: 1943 Season. I have 26 young ewes bred to a purebred Hampshire ram. Sheep have always shown a profit for me and will prove profitable to any farmer who will give them a chance.

C-2 Sheep Club (Market Lambs) 4-H Club

A summary of county agent's reports shows 77 boys and 13 girls completing Sheep Club Projects. This work involved 491 head of sheep in 32 counties, a decided increase over 1941.

What is known as a Sears Sheep Club Project was started in Wayne, Greene, Lenoir, Jones, Duplin, Craven and Carteret Counties. This involves 32 members with 162 native ewes and 32 ram lambs. The plan of this project is for each club member to return one good ewe lamb for each ewe given him within a four year period. These ewe lambs are to be used to start additional projects. Agreement forms follow.



Four-H Sheep Project  
Sponsored by  
Sears, Roebuck & Company  
In Cooperation with  
THE NORTH CAROLINA AGRICULTURAL EXTENSION SERVICE

AGREEMENT

It is understood by the undersigned that Sears, Roebuck & Company has offered to sponsor a 4-H Sheep Club Project in \_\_\_\_\_ County for the purpose of promoting the production of more and better sheep and they will furnish funds for the purchase of ewes and rams and some incidental expenses. In accordance with the rules as promulgated by the Committee appointed at Kinston, January 5, 1942, we, the undersigned, do hereby agree to the following:

County Agent

He agrees that he has approved the selection of \_\_\_\_\_ (Name)

\_\_\_\_\_, a 4-H Club member, to receive \_\_\_\_\_ (Address)

head of ewes for this project. The County Agent agrees to furnish the 4-H Club member oral and written instructions relative to sheep production and to assist him in every way possible to make a success of this project. He also agrees to receive the ewe lambs returned by this 4-H Club member and place them with other worthy 4-H Club members.

4-H Club Member

He agrees that he accepts these ewes with a definite understanding of his responsibilities as follows:

1. He is to apply himself diligently to this project and he will try to the best of his ability to follow the instructions and advice of his County Agent.
2. He will return to his County Agent one good ewe lamb from each of the first three lamb crops, in which ewe lambs are raised, and two good ewe lambs from the fourth crop, making a total of five. If he prefers he may return the five ewe lambs in less than the time herein specified.
3. When five good ewe lambs have been returned as specified it is understood that the original five ewes will become the property of the 4-H Club member.
4. If the 4-H Club member wilfully fails to carry out the instructions of his County Agent he agrees that the sheep may be transferred to another 4-H Club member and that he will permit the transfer upon the request of the County Agent. He also agrees that if he ceases to be a 4-H Club member before five good ewe lambs have been returned as provided herein that he will return the ewes to the County Agent for transfer to another 4-H Club member or pay

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

FOUR-H SHEEP PROJECT  
Sponsored by  
SEARS, ROEBUCK & COMPANY  
In Cooperation With  
THE NORTH CAROLINA AGRICULTURAL EXTENSION SERVICE

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Agreement No. 2

Four-H Club Member

I, the undersigned 4-H Club member have been selected and have received \_\_\_\_\_ ewes for this project, and together with my parent(s) or guardian, and my county agent have signed an agreement regarding the things necessary to be done in connection therewith. I have received a ram for my use and I hereby agree:

1. That this ram and any other ram which I may receive for my use in breeding my flock of sheep is and will remain the property of the project.
2. That I understand this provision is for the purpose of preventing inbreeding and to secure the greatest possible use of the rams assigned to me and other 4-H Club members who are cooperating in this sheep club project.
3. That I will care for this ram in accordance with the agreement signed by me on \_\_\_\_\_, 1942 with respect to the ewes.
4. That I will feed and house the ram assigned to me in return for the breeding service and it is my understanding that I am to shear the ram in the spring and receive the proceeds from the sale of all wool harvested from such ram.
5. That I will cooperate with my parents or guardian, my county agent and other members of the North Carolina Agricultural Extension Service, and will exchange the ram in my possession for any other ram they offer me whenever it has been decided to make such an exchange effective.

Parent(s) or Guardian

I, (we), the undersigned parent(s) or guardian, do hereby certify that I (we) understand the terms of the agreement No. 2 and approve it in full. I, (we) will cooperate fully with \_\_\_\_\_, a 4-H Club member, and the county agent and will try to the best of my (our) ability to assist in making this project successful.

County Agent

I hereby approve this agreement with respect to ownership and use of the rams assigned to this project and will assist \_\_\_\_\_, a 4-H Club member, in every way possible to make this project successful.

In witness whereof, we have hereunto set our hands and seals this \_\_\_\_\_ day of \_\_\_\_\_, 194\_\_.

(Date)

(Month)

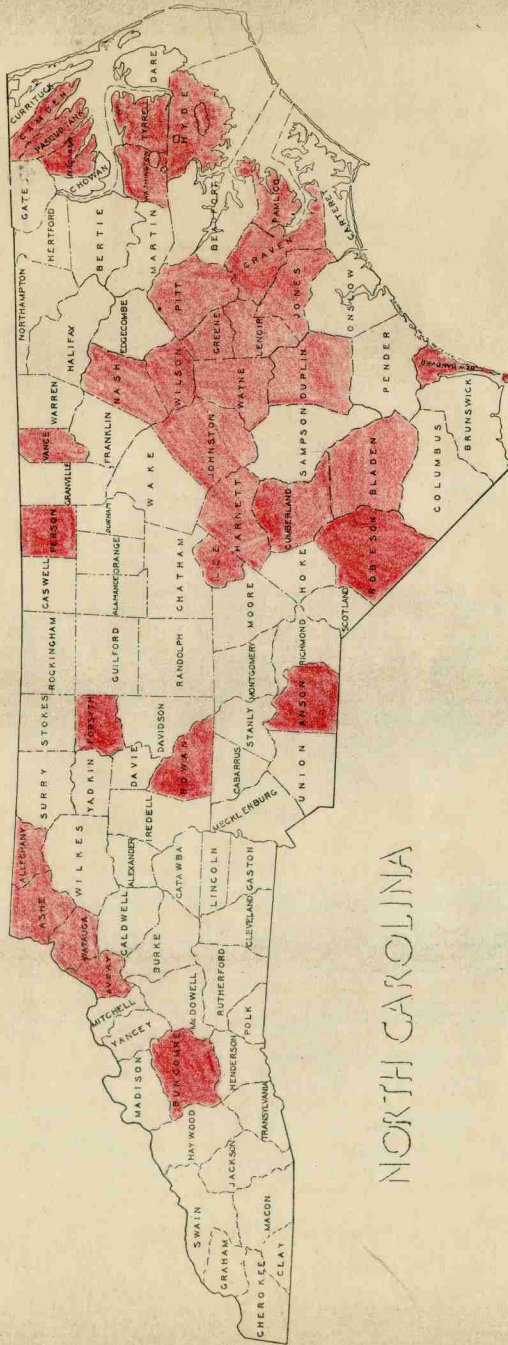
\_\_\_\_\_  
4-H Club Member

\_\_\_\_\_  
Parent or Guardian

\_\_\_\_\_  
Parent or Guardian

\_\_\_\_\_  
County Agent

July 1942



NORTH CAROLINA

**Counties reporting 4-H Club completions  
in Sheep Projects in 1942.**

**Prepared in:  
Office of Extension Studies  
N. C. Agr. Extension Service**

**C-3 Ram Placements**

More rams were placed in 1942 than during any previous year, agents reporting 232 placed in 53 counties.

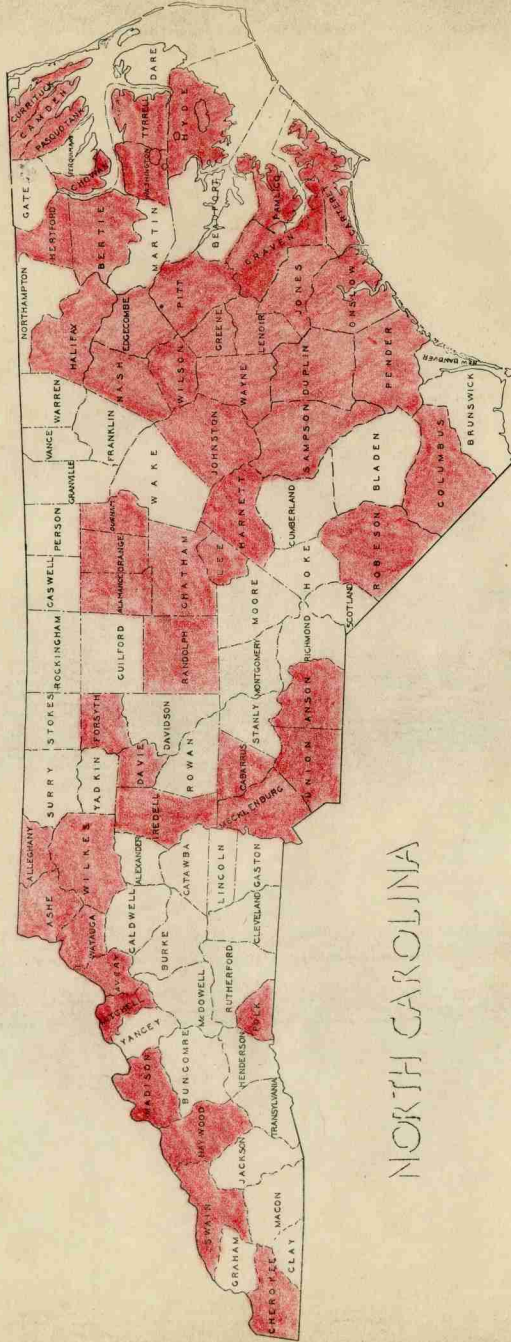
Three double deck cars of Montana ewes were placed.

**Summary of Ram and Ewe Placements**  
1936 - 1942

<u>Year</u>	<u>Rams</u>	<u>Ewes</u>
1936	71	29
1937	121	110
1938	87	174
1939	99	130
1940	113	137
1941	151	275
1942	232	526
1943	220	916

**E-3 Grading and Marketing Lambs. Adult**

More lambs were sold cooperatively by grade with a higher percentage of top lambs than for any previous year. This bears out the contention that this method of marketing teaches better production methods



# NORTH CAROLINA

Counties in which agents assisted farmers  
in obtaining purebred Rens in 1942.

Prepared in:  
Office of Extension Studies  
N. C. Agr. Extension Service

Summary of Cooperative Lamb Sales in 1942

County	Choice	Choice Bucks	Good	Good Bucks	Medium	Medium Bucks	4 s	44 s	Old Sheep	Total
Alleghany	305	11	593	91	113	56	37	2	7	1215
Ashe	143	11	320	83	98	75	24	9	2	766
Watauga	941	66	824	200	191	80	77	18	5	2402
* Tarboro	39		69		117	1	130	36	25	417
** Plymouth	34	1	122	21	191	8	108	7	31	523
*** Shawboro	3		61	6	113	32	78	10		303
oo Burlington	36		33		12	7	9		31	128
o Sanford	13		22		34	2	13	9		93
Total	1514	89	2044	401	869	261	476	91	102	5847
Per Cent of Total	25.89	1.52	34.95	6.85	14.86	4.46	8.14	1.55	1.74	

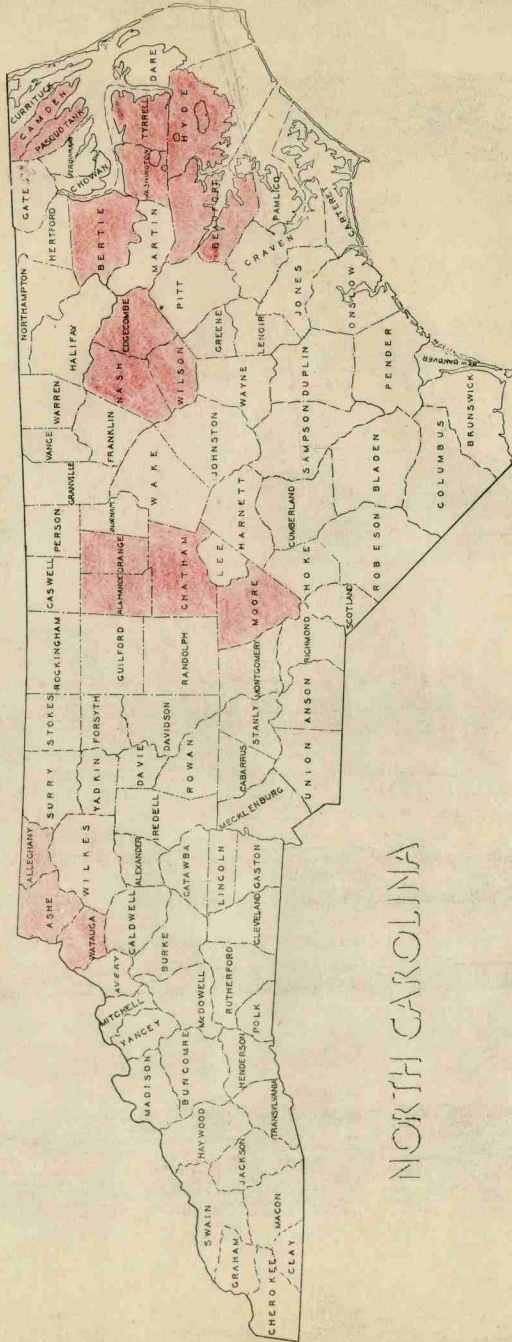
- \* Edgecombe, Nash, Wilson Counties  
 \*\* Washington, Hyde, Tyrrell, Beaufort, Bertie Counties.  
 \*\*\* Camden and Pasquotank Counties.  
 oo Alamance and Orange Counties.  
 o Moore and Chatham Counties.

Total Lambs Sold Cooperatively By Grade  
 1935 - 1942

<u>Year</u>	<u>No. Lambs</u>
1935	2324
1936	2506
1937	4303
1938	4464
1939	4373
1940	3753
1941	4710
1942	5847

1943

6035



COUNTIES MARKETING LANDS BY GRADE

Prepared in:  
 Office of Extension Studies  
 N. C. Agr. Extension Service

E-7 Wool Pool. AdultRecord of Wool Sold Cooperatively 1942

<u>County</u>	<u>No.Pounds</u>	<u>Price</u>	<u>No.Farmers Cooperating</u>	<u>Amount</u>
Watauga	35178	52 cents	400	\$18,165.91
Alleghany	15353	53 "	not reported	8,577.23
Ashe	9553	53 "	57	5,016.75
Avery	5718	52 "	50	3,010.19
Yancey	3092	51 "	40	1,480.37
* Elizabeth City	1651	53 "	10	574.31
** Tarboro	10289	53 "	77	4,763.37
oo Plymouth	4773	53 "	no record	2,166.83
Carteret	3053	38 "	5	1,160.14
<b>Total</b>	<b>88660</b>		<b>639</b>	<b>\$44,915.10</b>

\* Pasquotank and Camden Counties.

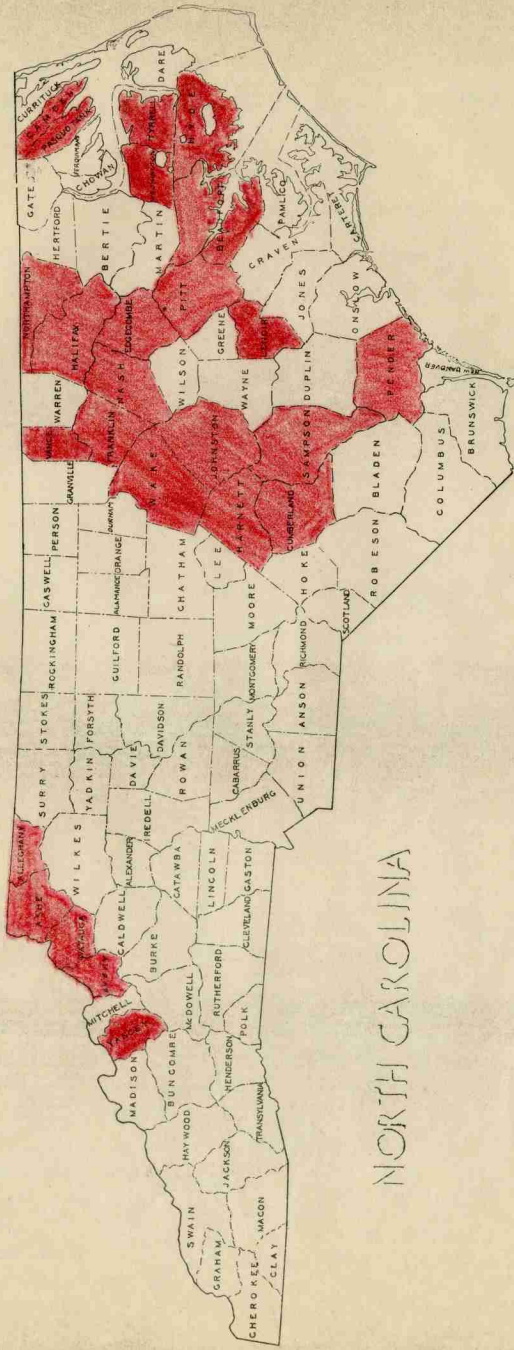
\*\* Edgecombe, Sampson, Johnston, Northampton, Pender, Nash, Halifax, Cumberland, Vance, Franklin, Lenoir, Wake, Pitt and Harnett Counties.

oo Washington, Hyde, Tyrrell and Beaufort Counties.

The above represents the bulk of the wool handled cooperatively.

There were several small pools not reported and moreover assistance was given many individual farmers in regard to selling. An arrangement with Chatham Manufacturing Company resulted in the cooperative handling of more wool than formerly and at better prices. It is believed that these wool sales netted the farmers enough money above the price they would have received through individual sales to more than pay the specialist's salary for the year.





# NORTH CAROLINA

Prepared in:  
 Office of Extension Studies  
 N. C. Agr. Extension Service

Counties marketing wool cooperatively in 1942.

Shearing Schools

Shearing schools were held in two Eastern counties, one Piedmont and one Western. A fourth school planned in a mountain county which had to be canceled because the sheep were left out in the rain. In these schools 12 county agents or assistants received sufficient instructions to carry on in their respective counties. Fifteen others including several 4-H Sheep Club boys also were given instructions.

## HORSE AND MULE CLINICS

The second series of Horse and Mule Clinics were conducted through December, January, February, March and April. The clinics were held by local veterinarians, county agents, and Sam I. Williams, who has since that time been called to the army. As before, the clinics were conducted on a community and county wide basis. Through the use of newspapers, posters and circular letters the county agents contacted the farmers and arranged for the meeting places in the counties. The local veterinarians administered all treatment on a graduated scale of charges, depending upon the number of horses and mules treated. The following services were offered at the clinics:

1. Free examination of all horses and mules brought to the clinic.
2. Internal parasite treatment.
3. Floating and pulling of teeth where needed.
4. Advice on other ailments and injuries.
5. Advice on feeding and management.

It was agreed that all local veterinarians and county agents would follow as closely as possible the following scale of charges for internal parasite treatment and floating teeth:

1 to 10 horses or mules . . . . .	\$1.00 each
11 to 20 horses or mules . . . . .	.75 "
Over 20 . . . . .	.60 "

Where additional dental work or other treatments were administered additional charges were made by the veterinarian which were agreeable to both the veterinarian and the farmer.

Forty-six counties held clinics this year in comparison to 24 counties last year and the number of farmers bringing workstock was more than doubled. One thousand three hundred and twenty-six farmers cooperated in these clinics by having 3004 horses and mules examined with 2298 being treated for internal parasites and 1040 receiving dental treatment. This includes duplications because in many cases both dental work and parasite treatment were administered to the same animal. From 60 to 90 days after treatment the following questionnaire was mailed to the farmers who had horses and mules treated. After each question, is shown the percentage of farmers returning the questionnaire who answered "yes" or "no" to each question.

1. Did the appetite improve after treatment? Number answered "yes" 77 percent. Number answered "no" 23 percent.
2. Is the animal in better health? Number answered "yes" 74 percent. Number answered "no" 26 percent.
3. Did you see any worms passed in the manure? Number answered "yes" 20 percent. Number answered "no" 80 percent.
4. Has general condition of animal improved? Number answered "yes" 79 percent. Number answered "no" 21 percent.
5. Are you interested in having animals treated next year? Number answered "yes" 87 percent. Number answered "no" 13 percent.

No check was made this year of the different kinds of medicines used, but in the past Phenothiazine seemed to get more favorable results and no deaths as a result of treatment have ever been reported where Phenothiazine was used.

The 1943 plans call for Horse and Mule Clinics to be conducted in 62 counties.

## MISCELLANEOUS

1. North Carolina Hereford Cattle Breeders Association:

This association held its annual meeting at the farm of G. M. Pate and Sons, Rowland, N. C. on September 9th. It was decided to increase the annual membership dues from \$2.50 to \$5.00 and to charge one per cent on cattle sold in the annual sale. It was also decided to hold the next sale at Wilson, N. C. on April 16th. The 1942 sale is mentioned elsewhere in this report. New officers and directors elected for the current year are as follows: President, George L. Pate, Rowland; Vice-President, J. H. Doughton, Laurel Springs; Secy.-Treas., J. M. Lynch, Asheville. The other directors are R. E. Barp, Selma; H. G. Shelton, Speed; John Long, Statesville and Claude T. Francis, Waynesville.

2. Out of State Trips:

December - (Case) Chicago, Ill., to attend International Stock Show.

(Williams) Kansas, to buy Herefords and Angus on order.

February - (Case) Virginia, to buy Aberdeen-Angus cattle

March - (Case) Virginia, to buy Aberdeen-Angus cattle.

April - (Case) Virginia, to buy rams for Hyde County

June - (Case) Virginia, to buy Hampshire sheep.

October - (Case) West Virginia, to attend Marlunda Hereford sale.

Cooperating Agencies

The Chamber of Commerce in Rocky Mount, Kinston and Lumberton in holding fat stock shows and sales.

The Chamber of Commerce in Wilson in holding Hereford Association Sale.

North Carolina State Banker's Association in furnishing premium money for Baby Beef Shows and Sales at Asheville and Raleigh. <sup>Elkin</sup>

State and local veterinarians in helping to organize and conduct Work Stock Clinics.

Chicago Flexible Shaft Company in conducting shearing schools.

Chatham Manufacturing Company in purchasing wool pools.

Southeastern Chain Store Council in the interesting of buyers among the Food Chains for 4-H Club Fat Steer Sales, etc.

Atlantic Coast Line Railroad Company, through their Livestock Development Agents in assisting with all lines of endeavor in the eastern part of the state.

Tennessee Coal, Iron and Railway Company, through their local representative in all lines of livestock work.

Farm Security Administration in the cooperative purchase of stallions, jacks, bulls, etc. <sup>skip in 1943</sup>

North Carolina Department of Agriculture in lamb grading work, etc.

Civic Clubs and Bankers in promoting better livestock through sponsoring 4-H Livestock Club Work, etc.

1942 STATISTICAL SUMMARY  
(From Specialists Reports)

	<u>L.I.Case</u>	<u>S.L.Williams</u>	<u>D.C.Snodgrass</u>	<u>Total</u>
Number days in the field . . .	162.5	47.5	109.0	319.0
Number days in the office . . .	143.5	28.0	63.0	234.5
Number days on annual leave . .	2	3	1	6
Number days on sick leave . . .	0	1.5	0	1.5
Number miles traveled by car and bus . . . . .	17,163	5,755	10,187	33,105
Number miles traveled by train.	2,160	160	0	2,320
Number visits to county agents .	219	53	168	440
Number visits to demonstrations	154	70	13	237
Number other visits . . . . .	124	9	287	420
Number meetings attended . . .	65	81	26	172
Total attendance at meetings .	5,040	981	2,151	8,172
Number office consultations . .	386	73	93	552
Number letters written . . . . .	2,297	224	219	2,740
Number different circular letters	14		4	18
Number articles prepared . . . .	8	1	3	12
Number radio talks prepared and given . . . . .	2	0	0	2

## OUTLOOK

The outlook is bright for results in Animal Husbandry Extension as far as the interest among farmers is concerned. Many handicaps present themselves, however. Farm labor shortages, limited supplies of gas and rubber, difficulty in obtaining new machinery and parts, fertilizers, protein meals, regulations, red tape, and other time consuming and nerve irritating things are all hampering accomplishments. Nevertheless, we will muddle through some way.

There is a need of twice our present force in Animal Husbandry Extension. This applies to both subject matter specialists and secretarial help.

Horse and Mule Clinics started in 1941 in 23 counties, were extended to 43 counties in 1942 and plans called for this work to be done in 63 counties in 1943. Not all of these will be carried out, however, due to shortage of veterinarians and an overload of work on county agents and specialists.

A higher percentage of time will be devoted this year to projects that have directly to do with the greater production of meat and wool.



# COOPERATIVE EXTENSION WORK

IN

AGRICULTURE AND HOME ECONOMICS

STATE OF NORTH CAROLINA

STATE COLLEGE STATION, RALEIGH, N. C.

NORTH CAROLINA STATE COLLEGE OF  
AGRICULTURE AND ENGINEERING  
NORTH CAROLINA COUNTIES AND  
UNITED STATES DEPARTMENT OF  
AGRICULTURE COOPERATING

EXTENSION SERVICE

September 28, 1942

## To County Agents Doing Baby Beef Club Work:

Some last minute suggestions regarding the handling of 4-H Club steers just prior to and at the show:

Give your boys final instructions in leading and showing. A good walk each day now and at the show will be good for the calves. If the heads and tails are not yet clipped have it done about one week before the show. Use a small amount of olive oil and alcohol, half and half on a woolen cloth or in a spray gun for softening coat of hair.

Low grade calves and wild unmanageable calves must be disposed of locally.

Avoid too much washing at show. Two or three good washings prior to shipping and one after arriving at show should be sufficient in most cases. Then keep stalls well bedded and clean.

The following will help to prevent calves scouring and going off feed:

1. Cut down amount of salt prior to and at show.
2. Gradually cut out succulent feeds and legume hays and substitute well cured grass hay instead.
3. Do not feed a full grain ration just prior to shipment or upon arrival at show. Otherwise feed regularly as to kind and amount of feed.
4. If calf is hot and very tired upon arrival at show, do not give him grain ration until he cools off and rests a while. Just give him some hay and a little water. If he gets all the water he wants while hot, scouring and going off feed will be the result.
5. Get calves used to eating and drinking out of same boxes or buckets that will be used at show.

Be sure to have necessary equipment for boys and cattle. This includes tubs or feed boxes, one for each animal, buckets for watering, good halters for tying and showing, forks for handling straw and litter, brushes, combs, etc. and bedding for the boys who will sleep at barn.

Sleeping accommodations at the State College Y.M.C.A. will be available for those who do not stay with the cattle. The charge is 50¢ per night, bed furnished. Mr. King, Secretary, of the "Y" says that all boys connected with the show may avail themselves of the showers, toilets, reading room, game room and other facilities of the "Y".

One county agent or a reliable man who will follow instructions must be with each county exhibit night and day.

Review rules of show and see that all are carefully observed.

Price ceiling regulations make it more important than usual that you exert every effort to interest local buyers for some of your steers.

In view of shortage of tires and gasoline it is suggested that counties double up on transportation of both animals and folks as much as possible.

It is not necessary that steers be tested for tuberculosis or Bangs disease.

While it is required that all calves be in place by 6:00 P.M. the day before the show, it is advisable that they be placed as much earlier as possible to give them more time for rest and to become accustomed to new surroundings.

Yours very truly,

L. I. Case, In Charge  
Animal Husbandry Extension.

D. C. Snodgrass,  
Animal Husbandry Extension Specialist.

COOPERATIVE EXTENSION WORK  
IN  
AGRICULTURE AND HOME ECONOMICS  
STATE OF NORTH CAROLINA

EXTENSION SERVICE

NORTH CAROLINA STATE COLLEGE OF  
AGRICULTURE AND ENGINEERING  
NORTH CAROLINA COUNTIES AND  
UNITED STATES DEPARTMENT OF  
AGRICULTURE COOPERATING

STATE COLLEGE STATION, RALEIGH, N. C.

April 27, 1942

WOOL BULLETIN

To All County Agents:

The wool market is the best in many years. The O.P.M. has placed a ceiling of 37.1 cents per pound grease basis which price is an average on all grades and classes of wool. This does not mean that our North Carolina wool cannot sell for more than that figure. On the contrary it means that our 1/4 and 3/8 blood wool should bring several cents more than last year and our best clear mountain wool sold in 1941 for 52 and some for 52 1/2 cents per pound. Our mountain wool sells higher than Eastern North Carolina wool because it is lighter shrinking. Boston Wool Market quotations as of April 17, 1942 are 7 to 8 cents higher than April 18, 1941 on 1/4 and 3/8 blood combing wool.

Military requirements for wool will be large in 1942 and will continue as long as the war lasts. The United States does not produce as much wool as we need in normal times and the future of our wool supply is quite dependent upon shipping facilities from Southern Hemisphere countries.

Wool Conservation Very Important

It is extremely important, therefore, from every point of view that North Carolina sheep farmers save every pound of wool possible. Here are some suggestions for the proper handling of wool.

1. Shear sheep only when fleeces are absolutely dry.
2. Shear on a smooth level, dry, clean, surface. A smooth board floor is best.
3. It is best to cut away the tags before shearing but in any case the dung tags should not be wrapped up with the clean wool. Also keep ~~black~~ leg and face wool in separate bag.
4. Remove fleece from animal in one piece as far as possible.
5. Roll each fleece with flesh side out. First spread the fleece with flesh side down, fold in from sides, then roll from the tail to neck. Do not roll too tightly.
6. Tie each fleece separately with paper twine. Only use twine once around each way. Never use binder twine, or loose-fibered twines of any kind. The reason for this is that the fibers get into the wool and will not take the dye, therefore, showing up as defects in manufactured goods.

7. Fleeces that are burry, cotted, or closely matted, and fleeces that are dead, black or gray should be kept separate from good clear wool.
8. Place the prepared fleeces in clean sacks, preferably in regulation wool sacks 7 1/2 feet high by 3 1/2 feet wide.
9. Store wool in a clean dry place. Never put ~~it~~ on the ground or in a damp place.

#### Selling the Wool

The unusual demand and high price of wool makes it of more than usual importance that our wool be sold for the best price possible this year. Alleghany, Avery, Ashe, Watauga, Yancey and possibly other counties have been selling their wool in county or larger pools to good advantage. In other sections wool has largely been sold in small lots, very often at prices considerably below the market.

Arrangements have been made with the officials of the Chatham Manufacturing Company, Elkin, North Carolina, to have a representative of that company to inspect and make offers on wool pools in Eastern, Piedmont, and where necessary, in Western North Carolina, where several of these pools can be visited on one trip and consume as little time and travel as possible. In most cases it will be advisable for several counties to go together and concentrate their grower's wool in one place. No definite minimum amounts of wool have been set but it is thought desirable that we should have at least 2000 pounds to the place.

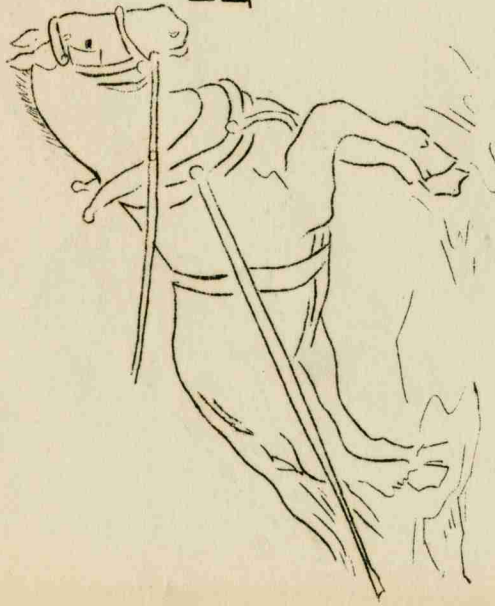
Each man's wool should be tagged with the name and address of the owner and the tags securely fastened to the bags.

At just what places we should attempt to concentrate wool will be left largely to you county agents to work out. I feel that we should be able to get fairly large pools together at Elizabeth City, Plymouth, Tarboro and Sanford. Further than this I have no very definite ideas but will be glad to get suggestions from you. If any of you think you can concentrate 2000 pounds of wool from your county and nearby counties, let me hear from you. Price offers will be made on an f.o.b. Elkin basis. Therefore, concentration points should best be on a railroad in case it proves best to ship by rail rather than truck. Please talk this matter over with your leading sheep men and your neighbor county agents and let me hear from you.

A premium will be paid on wool that is properly prepared and wrapped with paper twine. Such twine is available at the Producer's Cooperative Exchange, Richmond, Virginia, and the United Wool Grower's Association, Harrisonburg, Virginia, at 20 cents per pound.

Yours very truly,

L. I. Case,  
Extension Animal Husbandman



# PULLING FOR HORSE AND MULE CLINIC

1. Free Examination of All Animals Brought to Clinic.
2. Treatment For Roundworms And Bots When Needed.
3. Floating Teeth And Advice On Foot Trimming.
4. Advice On Feeding And Management.

PLACE \_\_\_\_\_

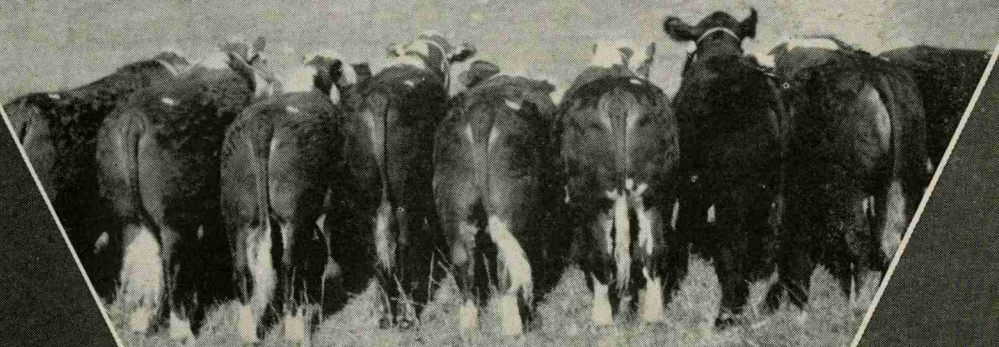
DATE \_\_\_\_\_

TIME \_\_\_\_\_

In Cooperation With -

County Agent \_\_\_\_\_

Veterinarian \_\_\_\_\_



**MORE MEAT *for***  
**VICTORY**

**ORTH CAROLINA**

Asheville, Oct. 7-8

**BABY BEEF SHOWS**

Raleigh, Oct. **13-14**

1 9 4 2

## ACKNOWLEDGMENT

The ever-increasing seriousness of a meat shortage, coupled with our surpluses of protein meals, wheat and other feeds, makes it imperative that our farmers exert every effort to feed more beef cattle for the market. Our boys and girls have played an important role in practically every phase of our war effort. They always do their part and more. We, therefore, congratulate them on the splendid work they are doing in connection with these baby beef shows and sales and ask that they continue this work and encourage greater participation in it in order that men in the armed forces of this country and our allies, as well as the civilian populations, be more adequately nourished.

The generous support and cooperation of the North Carolina Bankers' Association, makes it possible for the North Carolina Agricultural Extension Service to conduct this annual show and sale of baby beef animals. It has not only advanced the money for the premiums offered at the Asheville show and the Raleigh show, but through its members has cooperated to the fullest extent in bringing to the attention of the people in their respective communities the importance and significance of the livestock industry in a well-rounded farm program in North Carolina.

I. O. SCHAUB,  
*Dean of Agriculture and*  
*Director of Agricultural Extension.*

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NORTH CAROLINA STATE COLLEGE OF AGRICULTURE AND ENGINEERING  
OF THE  
UNIVERSITY OF NORTH CAROLINA  
AND  
U. S. DEPARTMENT OF AGRICULTURE, CO-OPERATING  
N. C. AGRICULTURAL EXTENSION SERVICE  
I. O. SCHAUB, DIRECTOR  
STATE COLLEGE STATION  
RALEIGH

## A BOY AND A CALF

Somewhere in the Southern Pacific War Area administering to the sick and the wounded is Hubert Clapp, Major in the Medical Corps of the United States Army. Twenty years ago, he was feeding the first 4-H baby beef animal, placed with a club boy in North Carolina. It's a long way from that 4-H baby beef project through high school, college, medical college, and to his present high position in the Armed Forces of the United States. Just what influence that 4-H calf project exerted on Hubert Clapp when he was a 4-H club member will never be known, but it is sufficient to say that he was an outstanding 4-H club member and made a real contribution to the 4-H program in his county, and needless to say he is making a greater contribution in service to his country today. In a similar way thousands of 4-H club members in North Carolina are rendering a patriotic service to the nation in helping to produce food and feed.

Great progress has been made since baby beef clubs started. In the first state show and sale only one steer graded choice, and a very small number graded good. In the 4-H shows and state sales last year, of the 250 animals shown, 129 graded choice and 88 graded good. Baby beef club work is definitely accomplishing the purpose for which it was intended. Farm boys throughout North Carolina are learning better breeding, feeding, and management methods, and adult farmers are in turn learning from the 4-H club members.

The 4-H sale is only a small part of the 4-H baby beef project. In fact it is only the method or means for disposing of the product produced. The project involves the selection of the animals, the teaching and demonstrating of the approved practices for feeding, fitting, and showing, and finally marketing. All of this is interwoven into the development and building of the character of the member involved. And it is in working with animals, and with living things that club members learn. The first lesson for a beginner is the selection of a good animal. From this point on the county agent gives instruction and assistance and the club member carries them out as best he can. Step by step he is taught how to feed and care for the animal.

Nothing could contribute more to teaching thrift and attention to details than the training a boy or girl receives in the feeding, fitting, and caring for growing animals. It is a constant reminder of the things to be done. A boy and a girl soon learn that the regularity and the constant attention to even small details are the factors that usually determine the difference between a successful project and one that is unsuccessful, and more than that, he learns from the animal that brain is ruler over brawn and that in working with the living growing animals he learns more about human nature. He learns that persuasion and kindness oftentimes accomplishes more than force and that strength without proper guidance is dangerous. And on the other hand, that strength when properly guided and directed is a real factor and a real power.

The 4-H member learns the value and importance of records. In the very beginning of the calf club project, he keeps accurate records as to cost of



feed, cost of equipment, and cost of animals. Throughout the project, a complete record is kept and when Mr. 4-H Club Member sells his calf and records the sale price, he can tell you whether or not he made a profit from the transaction, and if so, how much. More than that he can and will tell you that being a 4-H club member is a real worthwhile experience.

L. R. HARRILL,  
*State 4-H Club Leader.*

## NORTH CAROLINA FAT STOCK SHOW AND SALE

### GENERAL RULES AND REGULATIONS

1. In any case where questions arise that are not covered specifically by the following rules the decision of the management will be final.

2. Each exhibitor must have been the bona fide owner of, and in case of members of 4-H club or FFA, must have personally fed and cared for the stock entered the major part of the time, for at least five months prior to the date of the show.

3. All exhibits should be approved by the county agent of the county in which the exhibitor resides before the application for entry is made. All exhibits entered in the show must be approved by the management at the show barn at the time of delivery.

4. Each exhibitor or buyer must assume all liability in the case of death or injury to his stock.

5. All animals must be free from disease.

6. All steers entered in the Fat Classes must be without horns.

7. No animal calved prior to January 1, 1941, will be eligible to compete in the fat classes.

8. Not more than two entries allowed to the exhibitor in each class.

9. All champions must be entered in the sale. All animals entered in the sale will be sold.

10. Fat animals in order to be eligible for competition must be taken off milk when they reach 700 pounds in weight, or two months before the date of this show whichever occurs first.

11. Other rules and regulations agreed upon by county agents, in conference on November 3, 1941, will also apply to all exhibitors in this department. Copies of these rules are on file in all county agents' offices or may be secured from the Extension Animal Husbandry Office, North Carolina State College, Raleigh, N. C.

## WESTERN NORTH CAROLINA FAT STOCK SHOW AND SALE

City Water Department Garage, Valley Street  
Asheville, N. C., October 7-8, 1942

*Judge*—C. D. SWAFFER, Jacksonville, Florida

*Auctioneer*—OSCAR PITTS, Raleigh, N. C.

*Manager*—C. Y. TILSON, Asheville, N. C.

*Sales Manager*—H. W. TAYLOR, Raleigh, N. C.

### RULES AND REGULATIONS

Any producer or feeder in the mountain counties of North Carolina is eligible to exhibit.

Steers must be in place by 6:00 P.M., Tuesday, October 6th.

Judging will start at 1:00 P.M., Wednesday, October 7th.

Sale will be held at 1:00 P.M., Thursday, October 8th. All sale cattle will be taken off feed at 8:00 P.M., October 7th, and weighed empty at 6:00 A.M., October 8th.

### PREMIUM LIST

**Class I. Individual steers, Spayed or Martin Heifers.** (To be shown at halter.) Amount offered in this class—\$400.00.

Prizes will be awarded according to U. S. Standard Grades on a 6-3 basis. Exhibitors of animals grading Choice will receive identical premium money. Those whose animals grade Good will receive identical premium money which will be 50 per cent of the amount paid on Choice animals.

### CHAMPIONS

Animals in the Choice group will be placed individually by the judge and the first and second prize winners will automatically be the Grand Champion and Reserve Champion of the show. Both champions must be sold in regular sale held in connection with this show unless they are to be shown outside the state.

Grand Champion .....	Ribbon
Reserve Champion .....	Ribbon

**Class II. County Groups:**

Only one entry allowed from each country. This class will be made up of animals shown in the individual class. The county agent will decide which animals are to be used in making up this class.

**Five Fat Steers, Spayed or Martin Heifers (To be shown at halter)**

1st	2nd	3rd	4th	5th
\$30.00	\$25.00	\$20.00	\$15.00	\$10.00

**Class III. County Groups of Home Raised Animals:**

Sire and dam of these animals owned in county from which shown. Only one entry allowed from each county. The county agent will decide which animals are to be used in making up this class.

Premiums won in classes II and III may be used to help defray expenses of all animals exhibited from the particular county represented.

**Three Fat Steers, Spayed, or Martin Heifers (To be shown at halter)**

1st	2nd	3rd
\$15.00	\$10.00	\$5.00

## EASTERN NORTH CAROLINA FAT AND FEEDER CALF SHOW AND SALE

Campus, N. C. State College, Raleigh, N. C., October 13-14, 1942.

*Judge*—J. E. FOSTER, Raleigh, N. C.

*Auctioneer*—OSCAR PITTS, Raleigh, N. C.

*Manager*—L. I. CASE, Raleigh, N. C.

*Sales Manager*—H. W. TAYLOR, Raleigh, N. C.

### RULES AND REGULATIONS

Any producer or feeder East of and including Surry, Yadkin, Iredell, Alexander, Catawba, Lincoln, and Cleveland Counties, North Carolina, is eligible to exhibit. Exception: All counties eligible in class V.

Steers must be in place by 6:00 P.M., Monday, October 12th.

Judging will start at 1:00 P.M., Tuesday, October 13th.

Sale will be held at 1:00 P.M., Wednesday, October 14th. All sale cattle will be taken off feed and water at 8:00 P.M., October 13th and weighed empty at 6:00 A.M., October 14th.

Steers will be released immediately after sale.

### PREMIUM LIST

**Class I.** Individual steers, Spayed or Martin Heifers. (To be shown at halter.) Amount offered in this class—\$300.00.

Prizes will be awarded according to U. S. Standard Grades on a 6-3 basis. Exhibitors of animals grading Choice will receive identical premium money. Those whose animals grade Good will receive identical premium money which will be 50 per cent of the amount paid on Choice animals.

### CHAMPIONS

Animals in the Choice group will be placed individually by the judge and the first and second prize winners will automatically be the Grand Champion and Reserve Champion of the show. Both Champions must be sold in regular sale held in connection with this show unless they are to be shown outside the state.

Grand Champion	Ribbon
Reserve Champion	Ribbon

**Class II.** County Groups:

Only one entry allowed from each county. This class will be made up of animals shown in the individual class. The county agent will decide which animals are to be used in making up this class.

**Three Fat Steers, Spayed or Martin Heifers.** (To be shown at halter.)

1st	2nd	3rd	4th	5th
\$25.00	\$20.00	\$15.00	\$10.00	\$5.00

**Class III.** County Groups of Home Raised Animals:

Sire and dam of these animals owned in county from which shown. Only one entry allowed from each county. The county agent will decide which animals are to be used in making up this class.

Premiums won in classes II and III may be used to help defray expenses of all animals exhibited from the particular county represented.

**Three Fat Steers, Spayed or Martin Heifers. (To be shown at halter.)**

1st	2nd	3rd
\$15.00	\$10.00	\$5.00

**Class V. Feeder Calves. (To be shown at halter.)**

This class shall consist of steer calves, calved between January 1, 1942, and May 31, 1942. They must be sired by purebred Hereford, Aberdeen-Angus or Shorthorn bulls; and be out of good grade or purebred beef type cows.

It is required that calves in this class be put on a grain ration at least one month before the show and that they be weaned at least ten days before the date of the show.

Amount offered in this class—\$75.00.

Prizes will be awarded according to U. S. Standard Grades on a 5-3 basis, but in no case will Choice Feeders be awarded more than Fat Steers of the same grade. Each good grade feeder will receive 60 per cent of the award paid Choice Calves.

**SPECIAL AWARDS****SPECIAL BABY BEEF PREMIUMS**

In addition to the premiums offered by the show management the national beef cattle registry associations make the following offers:

The American Hereford Association, Kansas City, Mo., will add 25 per cent to whatever premiums are won by Hereford steers owned and exhibited by 4-H Club members and FFA students in individual classes where the premium amounts to \$4.00 or more.

The American Shorthorn Breeders Association, Chicago, Ill., will add 25 per cent to whatever money prizes which may be won by Shorthorn steers owned and exhibited by 4-H Club members, and FFA students.

The American Aberdeen-Angus Breeders Association, Chicago, Ill., will add 25 per cent to whatever premiums are won by Aberdeen-Angus steers owned and exhibited by 4-H Club members and FFA students in the individual classes.

**Class IV. Fitting and Showmanship.**

First Prize—Leather halter, scotch comb, and brush.

Second Prize—Leather halter.

Third Prize—Scotch comb, and brush.

First prize winners in this class will not be allowed to compete a second time at the same show.

**THE THOMAS E. WILSON AWARD**

All 4-H Club members working under the supervision of the Extension Service during the current year in any meat animal project are eligible to compete.

For the best record submitted:

A gold medal to the winner in each county.

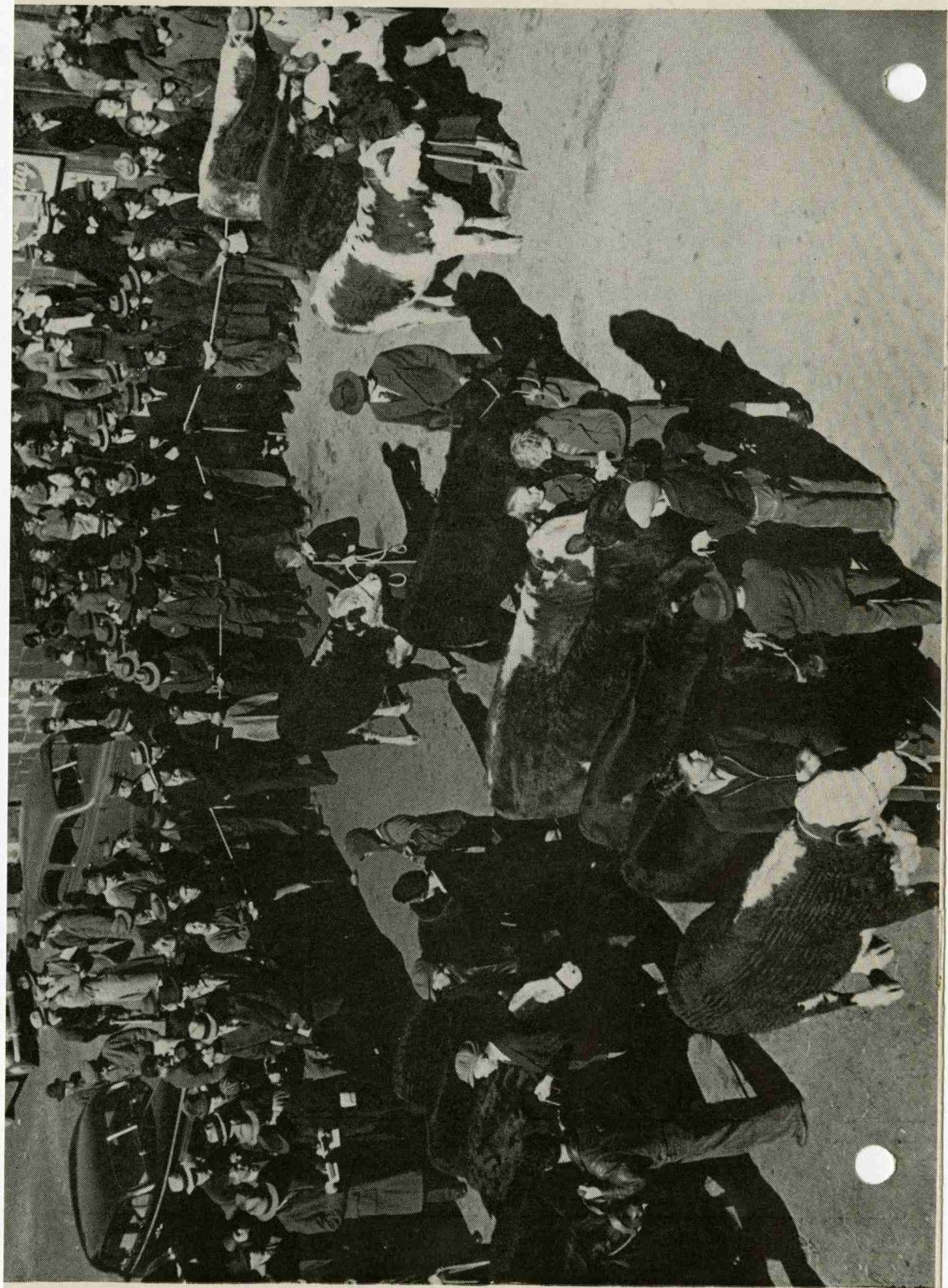
A standard American make 17 jewel gold watch to state winner.

\$200.00 scholarship to the national winner, and a free trip to the National Club Congress in Chicago.

**Requirements**

- Standard Report Form and club member's project record books.
- Report giving total number of different members enrolled in Meat Animal projects in the county.
- Report giving total number of participants in this contest.

**NOTE TO COUNTY AGENT:** Be sure that your 4-H members bring their Baby Beef or Meat Animal project records. Standard Report Forms may be secured from the State Club office.

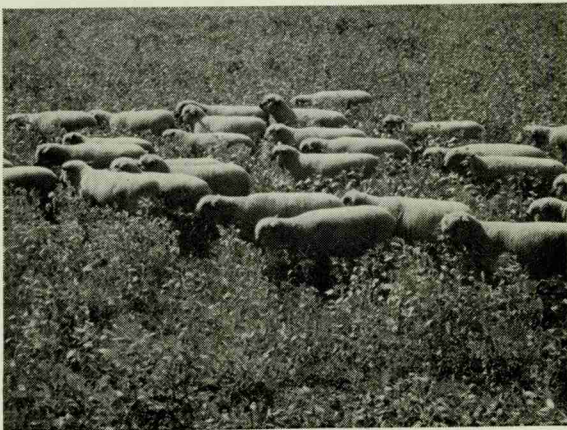


JUNE, 1942

WAR SERIES  
EXTENSION  
BULLETIN



## The Control Of Internal Parasites In Sheep



HEALTHY FLOCK ON ANNUAL GRAZING CROP

NORTH CAROLINA STATE COLLEGE OF  
AGRICULTURE AND ENGINEERING  
OF THE  
UNIVERSITY OF NORTH CAROLINA  
AND  
U. S. DEPARTMENT OF AGRICULTURE,  
COOPERATING

## Control of Internal Parasites In Sheep

By

L. I. CASE, *Extension Animal Husbandman*

And

JOHN E. FOSTER, *Professor of Animal Husbandry*

Stomach and intestinal worms are serious handicaps to the sheep business unless definite measures are used to control them. Fortunately, damage from internal parasites can be held to a minimum by the use of annual crops, rotation of pastures and by treatment.

*Symptoms* of internal parasites are loss of flesh and diarrhea. As the condition becomes more serious the skin becomes pale, and in extreme cases the skin under the jaw becomes baggy from the accumulation of fluid there.

*Prevention* of parasitic infestation may be accomplished by use of annual grazing crops such as soybeans, lespedeza, the small grains and winter legumes. When permanent pastures are used, the flock should be moved from one area to another as often as it is practical.

*Lambs* are more easily infected by worms than older sheep; therefore, more than the usual precautionary measures should be taken with them. When they are kept on limited areas of permanent pasture, it is sometimes necessary to administer treatment every two weeks from June to November.

*Treatment.* There are many different drugs that are used in the control of one or more different kinds of sheep parasites. No one treatment has been found, however, that is effective for all. There is considerable evidence that alternating treatments of two drugs are more effective than the same, given time after time.

The following schedule of treatments is recommended for the control of all internal parasites that affect sheep in this section, provided other control measures such as rotation of permanent pastures and the grazing of annual crops are used.

It is not necessary to keep sheep off feed before or after treating.

Time to Treat*	What to Treat	Material to Use
Shearing time or about May 1	All except lambs	Phenothiazine
June 1	Lambs over 30 pounds	Cu-Nic**
July 1	Entire flock	Phenothiazine
August 1	Entire flock	Cu-Nic
September 1	Lambs	Cu-Nic
October 1	Lambs	Cu-Nic
December 1	Entire flock	Phenothiazine

\* Where lambs are kept on limited areas of permanent pasture, they should be dosed every two weeks from June 1 to November 1.

\*\* Cu-Nic refers to a Copper-Sulphate and Nicotine Sulphate mixture.

*Phenothiazine* may be given in gelatin capsules, compressed pellets, or in the form of a drench. The drench method seems to be generally favored for field treatments. When the drench is used it may be obtained already mixed with a liquid which holds the powder in suspension or it may be purchased in dry form mixed with other ingredients to which water is added before it is administered.

The dose recommended is 25 grams or approximately 1 ounce (one ounce avoirdupois is equal to 28.35 grams) of pure phenothiazine for a well grown yearling or adult sheep, slightly over half this amount for lambs over 60 pounds and proportionately less for smaller ones. Directions of the manufacturer should be followed but it is well to see that the dosage of pure phenothiazine corresponds closely with the above recommendations.

Sheep growers should consult their county farm agents for sources of this material.

*Caution.* There is some slight evidence that harmful results are obtained when phenothiazine is administered to ewes within a month of breeding time or during the latter stage of pregnancy. Therefore, if the schedule of treatments given in this circular conflicts with either the breeding or lambing season it had best be varied to be on the safe side.

### MIXING CU-NIC

Dissolve one ounce of copper sulphate (blue stone) in three quarts of water. Then add  $\frac{3}{4}$  of an ounce of a 40 per cent solution of nicotine sulphate (Black Leaf 40) to the solution. This will make enough to dose 25 mature sheep. In as much as copper sulphate will corrode most metals, the solution should be mixed in a glass, porcelain or earthenware receptacle.

### TABLE OF DOSAGE

Yearlings and mature sheep	3 to 4 ounces
Lambs 85-lbs. up	3 "
Lambs 65-85 lbs.	2½ "
Lambs 45-65 lbs.	2 "
Lambs 30-45 lbs.	1 to 1½ "

Dose weak animals somewhat lighter than the above.

*Treating Pregnant Ewes.* The above treatment is not injurious to pregnant ewes, but if they are close up to lambing there is some danger due to careless or rough handling.

### GENERAL DIRECTIONS

The treatment may be administered by means of a drenching tube, a metal dose syringe or bottle. The drenching tube consists of a rubber tube about 3½ feet long and  $\frac{3}{8}$  inch in diameter, a funnel preferably of enamel ware and a brass or copper tube about 6 inches long and 5/16 of an inch in diameter, all fitted together. The metal tube is placed through the side of the animal's mouth, over its tongue and between the back teeth.



PROPER METHOD OF HOLDING SHEEP FOR DRENCHING

*Precautions.* Stir the solution frequently while using. When dosing keep the sheep standing on all four feet, not tipped back on its rump. *Don't* raise the head too high. (The nostrils should be above level with the eyes.) *Don't* try to drench too fast. *Don't* put the instrument back too far in the mouth, as it makes it difficult for the animal to swallow.

Breeding ewes early makes it possible to get lambs on the market before warm weather and resulting trouble.

UNITED STATES DEPARTMENT OF AGRICULTURE  
EXTENSION SERVICE  
WASHINGTON, D. C.

OFFICIAL BUSINESS

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WAR SERIES  
EXTENSION  
BULLETIN



NO.

12

## THE FEEDING AND MANAGEMENT OF HORSES AND MULES



NORTH CAROLINA STATE COLLEGE OF AGRICULTURE AND ENGINEERING  
OF THE  
UNIVERSITY OF NORTH CAROLINA

AND  
U. S. DEPARTMENT OF AGRICULTURE, CO-OPERATING  
N. C. AGRICULTURAL EXTENSION SERVICE

I. O. SCHAUB, DIRECTOR  
STATE COLLEGE STATION  
RALEIGH

DISTRIBUTED IN FURTHERANCE OF THE ACTS OF CONGRESS OF MAY 8 AND JUNE 30, 1914

# The Feeding and Management of Horses and Mules

By

SAM L. WILLIAMS\*

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Horses and mules in North Carolina are the largest and one of the most important classes of livestock. Their value is two times as great as that of all cattle and calves, and five times as great as the value of all hogs and sheep. They furnish a large percentage of the basic power essential in the production of all agricultural commodities and are, therefore, indirectly related to other industries of the state.

Raising horses and mules is a profitable business when used as a source of farm power and as a means of increasing the farm income from the sale of our surplus animals produced. Four good animals can plow four, disc 15 or harrow 30 acres a day in the spring season, do all other kinds of farm work at a proportionate rate and raise enough colts to furnish replacements, if wisely managed. In this way, the work animals reaching an age of 6 to 7 years can be sold each year and younger animals used to replace them. A good team of well broken horses or mules will demand a much higher price than matched pairs of yearling or two-year-olds.

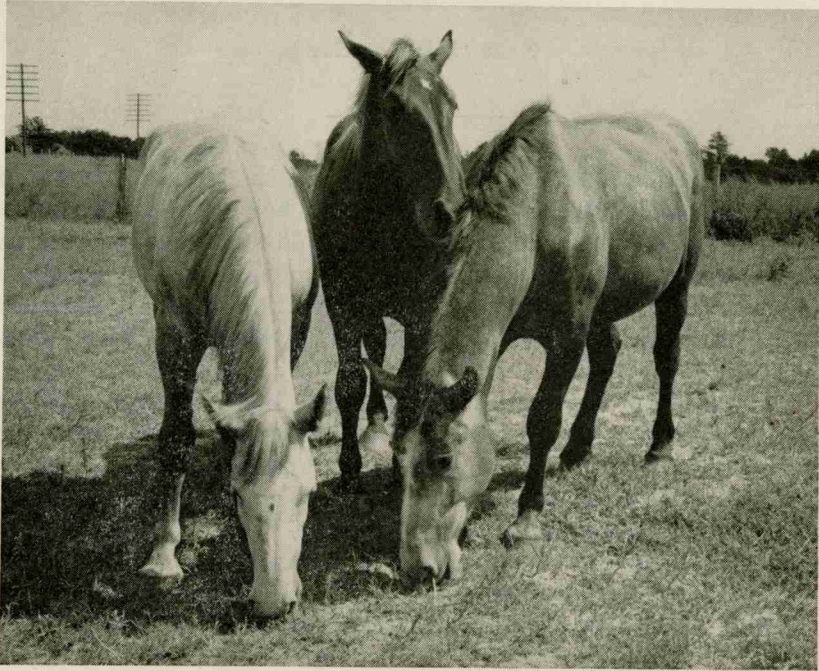
## Feeding Horses and Mules

*Good Pasture* should be the first consideration in properly handling horses and mules. Work animals should be out on pastures at night and day when not at work and should be turned out at night even when working. Work animals allowed pasture at night keep cooler, rest better, have more satisfactory elimination through the kidneys, bowels and skin and are not as likely to become over heated in hot weather.

The use of good permanent pasture supplemented with temporary pastures is very essential in reducing the cost of keeping work stock, and when properly rotated will go a long way toward controlling internal parasites. Rye, wheat and barley all furnish good temporary winter and late spring pasture, if sown early in

\* Animal Husbandry Extension Specialist until called into service with armed forces.

the fall and pastured only when ground is reasonably dry. Sudan grass sown as early as possible in spring, comes on rapidly and has tremendous carrying capacity per acre in July and August.



GOOD PASTURES CUT DOWN FEED COST OF WORKSTOCK

### Pasture Management Essential To Parasite Control

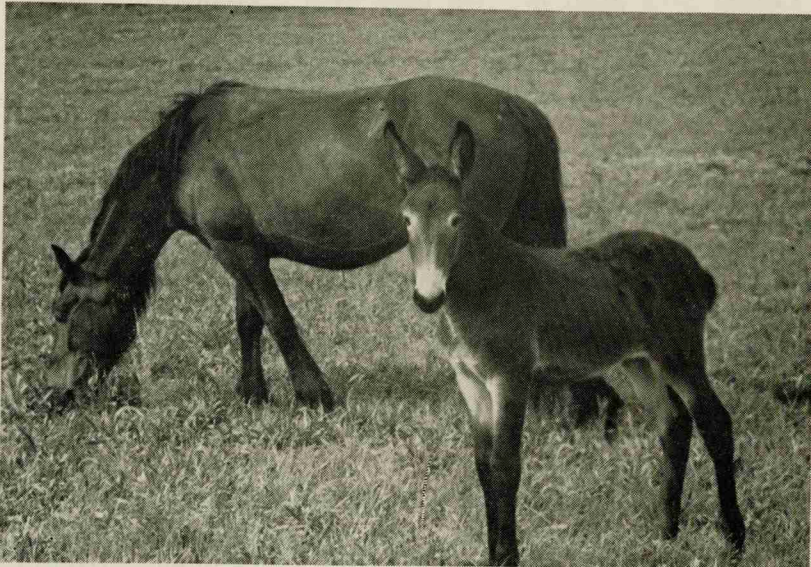
As internal parasites enter the animals mainly from pasture, it is necessary to understand control measures which should be applied to pastures. Internal worm parasites of horses and mules lay eggs which are voided in the manure. The young parasites when hatched pass directly or indirectly back into the animals grazing on pastures. The large intestinal round worms and pinworms enter the horses and mules as eggs. Bots enter as tiny maggots which hatch from eggs deposited or glued to the hair. *To reduce infestation of pastures, horses and mules should be treated by graduate veterinarians from 30 to 90 days after the first heavy frost or freeze; or during the months of December, January, and February.* One treatment at this time each year will go a long way toward controlling internal parasites, but other control measures are necessary. *Dead bots and worms are*

passed from 24 hours to 15 days after treatment, and animals should not be turned out on any permanent pasture for at least three weeks following treatment. Stalk fields that are to be plowed in the spring should be used instead and all horse manure from barns or lots should be spread on land where it will be plowed under next spring, preferably where row crops are to be cultivated throughout the following season.

To clean up permanent pastures, already heavily infested with eggs and larvae of internal parasites of horses and mules, it is a good practice to pasture heavily in late May or June with cattle and sheep so that grasses are eaten clean and close to the ground. Repeat this practice in August and rotate work stock frequently from permanent to temporary pastures from late May until November. This will reduce the chance of reinfestation with parasites hatched out of their own droppings.

Such procedure, followed for several years, will go far toward cleaning up permanent pastures, even those that have been heavily infested. But chemical treatment must be administered year after year, as flies and other insects may carry larvae from farm to farm.

*Forage and Hay* for work animals should be produced on the farm and cured properly before being used. *Dusty feed is injurious to all animals, and especially horses and mules, and*



INCREASING FARM POWER AND FARM INCOME

*moldy feed of any kind is poison, and cause a high death loss each year.* Any kind of nutritious hay is all right if sweet and free from dust and mold. Legume hays, such as clover, lespedeza, alfalfa, soybean and cow-pea are all good for feeding horses and mules. Timothy hay and other grass hay are equally as good as legumes when the grain portion of the ration is high in protein and minerals.

### **Oats and Corn Standard Grains for Horses and Mules**

Oats contain more protein, ash and fiber than corn but are much lower in energy value. Oats are a somewhat safer feed than corn to feed as the sole grain ration with a nonleguminous hay as they are less concentrated. Corn has the highest energy value of any commonly available feed, but when fed to horses and mules with a nonleguminous roughage it is a ration lacking in both protein and mineral. Legume hay fed with corn greatly improves the protein, mineral and vitamin content of the ration. Protein concentrates are also satisfactory for balancing the corn ration, but they are more expensive than home-grown legumes.

*Barley, Wheat and Rye* are also occasionally fed to horses. These feeds require crushing and grinding. Wheat and rye should be fed in limited amounts and mixed with other feeds in order to prevent digestive disturbances following their use.

*Cotton Seed Meal* is often used as a protein supplement in rations for horses and mules. A safe rule is to not feed over one pound per 1,000 pounds of live weight. Using cotton seed meal in larger amounts may cause digestive disturbances.

### **Amounts of Feed and Frequency of Feeding**

The weight of the individual horse or mule and the presence or lack of thrift are the best indications of an adequate ration. No definite set of rules can be laid down as to the amounts that should be fed. The following suggestions are offered as guides in arriving at the amount needed to maintain the animal and furnish energy to do work.

1. Horses at hard work should have one pound of good quality hay per hundred weight daily and  $1\frac{1}{4}$  pounds of grain per hundred weight daily.

2. For horses and mules at light work the grain should be reduced and the hay increased proportionately.

3. When idle or doing very light work feed still bulkier rations.

Grain feeds are usually divided into three equal feedings a day. The hay ration is best fed one-half at night and the other half divided equally between the morning and noon feedings.

### *Suggested Grain Mixtures*

<b>No. 1</b>		<b>No. 2</b>	
Shelled Oats .....	50%	Shelled Oats .....	50%
Corn .....	35%	Corn .....	50%
Bran .....	15%		
<b>No. 3</b>		<b>No. 4</b>	
Corn and Cob Meal ..	50%	Corn .....	50%
Shelled Oats .....	30%	Barley (crushed) ...	50%
Cotton Seed Meal ...	20%		
<b>No. 5</b>			
		Wheat (crushed) ...	30%
		Barley (crushed) ...	50%
		Cotton Seed Meal ...	20%

NOTE: Mixtures 2 and 4 should be fed with legume hay. Non-legume hay may be used with Mixtures 1, 3 and 5.

### **Salt and Water**

Attention to the supply of salt and water is of utmost importance in horse and mule feeding. Salt requirements must be met either by bulk salt fed with the grain or by block or bulk salt fed free choice.

Water, grain, and hay should be the order of feeding at all times. With frequent watering, there is little danger that too much will be taken at one time.

The horse and mule situation in North Carolina offers a real challenge to all those whose use horse and mule power. Why not make a survey of your own situation and give serious thought to the things which you can do to improve your work stock as well as doing your part toward supplying the demand in this state?

# Fat Stock Show And Sale Will Be Held Here Oct. 7-8

## 10 Counties To Be Represented At Great Event

Representing an agricultural industry that sends millions of dollars annually into the pockets of mountain farmers and is of vital importance in war food production, 69 baby beef calves will be brought to Asheville for the Fat Stock Show and Sale Oct. 7-8, from the following ten counties: Buncombe, Cherokee, Haywood, Macon, Madison, Wayne, Ashe, Henderson and Watauga.

The show and sale will be held at the city water department garage on Valley street. Animals will be in place by 10 o'clock on Oct. 6. The judging will begin at 1 p. m. on Oct. 7 and the sale will start at 1 o'clock on the afternoon of the following day.

C. Y. Tilson, Buncombe county farm agent, is manager of the event.

Although the show is open to others, it is restricted to the steers of members of the North Carolina 4-H club. A few of the animals will be exhibited by Future Farmers of America. A number of classifications have been arranged.

Sponsoring the show is the North Carolina State Bankers association. The Extension Service, N. C. State College, is cooperating.

A sale of the show will be held at Raleigh Oct. 13-14. The two events were arranged to take the place to an extent of the beef cattle exhibits staged in the past at N. C. State fair at Raleigh and the Western North Carolina Agricultural and Industrial fair at Hendersonville.



**GOING TO SHOW**—Here are two of the fine Western North Carolina baby beef calves that will be at the show and sale in Asheville Oct. 7-8. Owner of the Hereford is Arnold Buckner of Baltimore. Roger Cordell of Baltimore owns the Aberdeen-Angus. The boys, both 4-H club members, are shown beside their calves. The Hereford is 11 months old, the Angus 13 months.

## FARMERS OF N. C. SELL 5,000 LAMBS

### Watauga County Sells 2,000 On Cooperative Basis

COLLEGE STATION, Raleigh, March 8.—Nearly 5,000 lambs were sold cooperatively by farmers last year, L. I. Case, Extension animal husbandman of Stat College, announced today. He said that farmers who marketed their sheep in this way realized greater profits.

"Watauga county alone graded and sold nearly 2,000 head of lambs on a cooperative basis," Case stated. "The farmers received top prices for their animals because they were sold by grade, cooperatively."

Other counties which sold lambs on a graded basis, according to the Extension specialist, were: Alleghany, Ashe, Edgecomb, Nash, Wilson, Pender, Washington, Tyrrell, Hyde, Beaufort, Onslow, Alamance, Moore, Chatham, Union, and Anson. Case said that the last-named five counties concentrated their sheep and shipped them from Sanford, for the first cooperative lamb marketing from that group of counties.

## Sheep Shearing Show Presented

### 20 Sheep Lend Wool For Every Uniform

"Every sheep owner should consider the proper shearing and handling of his wool as a patriotic duty, as it takes the wool from twenty sheep to outfit a soldier." L. I. Case, Extension animal husbandman, of North Carolina State College, told a group of farmers attending a sheep shearing demonstration on the farm of F. W. Boswell in Wilson county yesterday.

Farmers and extension representatives from Nash, Edgecombe, Wilson, Wayne and Johnston counties were shown the most efficient method of

shearing sheep by E S Bartlett of the Chicago Flexible Shaft Company. Those present were given actual practice in the shearing of sheep and the correct methods of handling the fleece and the drenching of the sheep.

Bartlett prophesied a prosperous future for the sheep industry in the south. Because of the open winters he said that we could feed our sheep very economically by pasturing them on winter cover crops and that any expansion of sheep raising must come in the south for the western ranges had been expanded to their full capacity. He also stated that we usually import about two hundred and fifty million pounds of wool that on account of the shortage of ships had been practically cut off.

Case urged every farmer to be sure and save every ounce of wool that he could as it is badly needed in the manufacture of equipment for the army. The group was told that all shearers should be especially careful to see that they did not have to make second cuts so that the fleece could be sheared, as a whole as this made the wool bring a better price by making it easier to grade at the mill. If the sheep are sheared when they are absolutely dry the chances of the wool getting dirty or becoming musty is materially lessened. Also all "tags" should be removed from the wool. Care should be used in tying the fleece which should be rolled with the flesh side out and tied with a paper string about six feet long. The wool should then be stored in burlap bags where it is certain to be dry.

A shipment of lambs is to be made from Tarboro and Plymouth on May 18 it was announced and anyone interested in shipping lambs should get in touch with their county agent.

Among those present were Wilson County Agent J. O. Anthony and J. A. Marsh, assistant county agent, with Wayne represented by Assistant Agent D. J. Murray and C. C. Clark and M. E. Aycock, assistant county agents from Johnston.



### Wool And Lamb For Uncle Sam

Among the scores of North Carolina farmers who are producing sheep to help supply war needs of the United Nations is T. Holt Haywood, owner of the Arden Farm near Winston-Salem. Pictured above are a flock of yearling Hampshire ewes, which are part of the foundation breeding flock being developed on Mr. Haywood's farm. L. I. Case, extension animal husbandman of N. C. State College, says these sheep are exceptionally good and that they will be a supply source for other Piedmont farmers who are interested in establishing farm flocks with registered Hampshire sheep.



# Most of Horses and Mules In State Have Parasites

By L. I. CASE  
Extension Animal Husbandman  
N. C. State College

It is estimated that 95 per cent of the 71,000 horses and 305,000 mules on North Carolina farms are infested with internal parasites of various kinds. The large and small round worms are doing the most harm to the workstock in all sections, eastern, piedmont and the mountains. Bots are also extracting heavy toll in the piedmont and mountain areas. Bots, however, do little or no damage in eastern North Carolina, except in western animals shipped into this area. Such pestilence prevails only one year in most instances.

Worm infestation is indicated by: Loss of body weight and general unthriftiness, loss of appetite, digestive troubles especially colic and weakness and lack of ability to withstand hard work. Although death does not often occur, the damage of the lack of ability to withstand work properly is extreme.

In order to counteract some of the great loss due to worm infestation, horse and mule clinics were established in several counties two years ago. The North Carolina extension service specialists and county agents, state and local veterinarians, vocational teachers, the North Carolina department of agriculture and farmers cooperated in this move. More than 2,000 horses and mules have been treated since December, 1940.

Not only are the animals treated for worms, but dental work such as floating teeth, pulling bad teeth, and cutting extremely long teeth is done. Management of the horses and mules in effecting control measures is also brought out at the clinics.

For treatment of the internal parasites, both phenothiazine and carbon tetrachloride are used successfully, carbon bisulfide is used some, also, particularly in treatment for bots. Phenothiazine, because of its less toxic effect upon the animals, is rapidly gaining favor among the veterinarians.

Some of the recommended measures for breaking the worm cycle are:

- (1) The feeding of grain and hay in boxes and mangers well up from the ground so the animals can consume their feed without coming in contact with the larvae.
- (2) Rotation of pastures, avoiding wet, low grass land; this permits the animals to graze without picking up the larvae. Especially is this true of low pastures which provide more ideal surroundings for the development of the parasitic worms.
- (3) Sanitation in stables, regular cleaning of the stables will reduce, greatly, the development of the larvae under almost perfect conditions.
- (4) Furnishing a wholesome food supply and clean surroundings are safeguards against parasite infestation in horses and mules.

## Horses And Mules Claim More Attention On Farm

Much has been said and written about "Old Dobbin" resuming his place in the "agricultural sun"—about a return to the horse and buggy days, now that war-time shortages of tires and metals threaten to restrict the use of modern labor-saving tractors and machines.

Sam L. Williams, assistant Extension animal husbandman of N. C. State College, says the horses and mules have never lost their importance on the farm. "The value of workstock on North Carolina farms is twice as great as that of all cattle and calves, and five times as great as the value of all hogs and sheep," he declared.

"Horses and mules furnish a large percentage of the basic power essential in the production of all agricultural commodities," he continued. "This has always been true, despite the increase in tractors and other machinery in use on the farm.

"Raising horses and mules is a profitable business when they are used as a source of farm power, and as a means of supplementing the farm income through the sale of surplus animals produced. Four good animals can plow four, disc 15 or harrow 30 acres a day in the spring season; do other kinds of farm work at a proportionate rate; and raise enough colts to furnish replacements, if wisely managed.

"In this way, the work animals reaching an age of 6 or 7 years can be sold each year and younger animals bred to replace them. A good team of well-broken horses or mules will demand a much higher price than matched pairs of yearlings or two-year-olds."

Williams says that pasture is the first consideration in properly feeding workstock. He also called attention to the need for controlling parasites and diseases of work animals.