

1931

ANNUAL REPORT

of

L. I. CASE,

AGENT IN ANIMAL HUSBANDRY,

RALEIGH, N.C.

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Covering Work with Beef Cattle and Related  
Livestock Production, Marketing and Meat  
Utilization Projects in Areas Released from  
Quarantine.

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in Areas Released from Quarantine.

I. INTRODUCTION.

During the year of 1931 most of my time and efforts have been expended in the coastal plains section of the State for here very little livestock work had been done, due largely to the fact that it has been released from quarantine only within recent years. Here, except in isolated instances, little interest has been shown in livestock. The average farm worker is not livestock minded. On the other hand, large land holders and time merchants are beginning to show an interest in a change of some kind, that will help them out of their financial difficulties. Some of these who are not too seriously handicapped by lack of finances are turning to livestock as an adjunct to their present farming systems, while some few have released their tenants altogether and are going into livestock farming exclusively. It is with these classes of farmers that I have been working for the most part.

## II. PLAN OF WORK FOLLOWED.

Pastures. Working on the assumption that pastures of a more or less permanent nature are the foundation of the beef cattle industry, projects were planned to determine:

- (a). The most practical means of establishing permanent pastures.
- (b). The best pasture mixtures on various soil types.
- (c). The carrying capacity of improved pastures of various kinds.
- (d). The effect of various fertilizers and lime on pastures already established.

### Crop Gleanings.

In certain sections of eastern North Carolina large areas of corn and soy beans have been grown for grain exclusively, the stalks and leaves being left in the field. Thinking that such byproducts would furnish considerable amounts of cattle feed for the winter months, a project was outlined for determining the value of these feeds where they were gleaned by cattle.

### New Herds.

There are large areas of land in the territory under consideration that are not producing sufficient income to pay taxes. In addition there are many farms that have considerable areas of native pastures and some have been producing quite large amounts of feeds of various kinds with no livestock to consume it. Where conditions have warranted, it was planned to

aid farmers in establishing herds for the purpose of consuming native grasses and surplus feeds of other kinds.

#### Herd Improvement.

Many of the herds and flocks are of low grade due to poor breeding. In order to bring about improvement it was planned to import purebred bulls and rams and distribute them thru sales or other means.

#### Improved Wintering.

*copy to here for 1932 report*

There are quite a large number of herds of cattle being carried in the tide water section of the state on ranges of native grasses in the summer and the marshes and "Banks" in the winter. Under these methods the cattle lose considerable weight during the winter months. With the hope of furnishing more adequate winter feed the Bureau of Plant Industry was asked for advice and assistance in testing a number of different varieties of plants for introduction to an area representative of the section.

### III. ACCOMPLISHMENTS.

#### Pastures.

##### (a). Methods of Pasture Establishment.

On a farm in Bertie County two acres of land were seeded to a mixture of Carpet grass, Lespedeza and Dallis grass in the spring of 1931.

The preparation and cost of same is shown in the following:

"A" - 1 acre.

Disking one hour one man and tractor	\$ 1.25
Breaking five hours one man and two horses	2.25
Disking one hour and twenty-five minutes, one man and tractor	<u>1.04</u>
Total cost	\$ 4.54

"B" - 1 acre.

Disking one hour one man and tractor	\$ 1.25
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Both acres were harrowed before and after seeding.

Results.

Both acres produced a very good stand of grasses and lespedeza.

"B" contains a higher percentage of native grasses and both are being mowed occasionally and grazed with cattle and sheep. Further results will be watched.

(b). Best Pasture Mixtures on Various Soil Types.

On a farm in Currituck County six acres of land were well prepared and seeded in early October to the following mixture per acre: Italian Rye grass 8 pounds, Red Top 8 pounds, Kentucky blue grass 5 pounds, White Clover 5 pounds, Alsike Clover 3 pounds. The area was divided into four parts equal in size and in February 1931 Plat I was seeded to 6 pounds of Dallis grass and 15 pounds of Lespedeza seed; Plat II, 6 pounds Dallis grass, 15 pounds of Lespedeza and 3 pounds of Red Mammoth clover; Pl at III, 8 pounds of Carpet grass, 4 pounds of Dallis



grass and 12 pounds of Lespedeza; Plat IV, 10 pounds of Carpet grass and 15 pounds of Lespedeza.

The season of 1931 produced an excellent stand of Lespedeza, Rye grass and Red Top which was cut for hay. At the present time there is a fair stand of everything except the clovers. The area will be watched for further evidences of plant adaptability.

Other tests are under way in other sections on varying soil types. At the present time on the lighter soils of the fine sandy loam types, Carpet grass, Dallis grass and Lespedeza seem to be doing the best under conditions of rather close grazing. While on the black soils, Blue grass, Red top and Lespedeza seem best adapted.

There is some evidence that the Clovers are able to get established better if a moderate application (300 pounds per acre) of superphosphate is applied to the soil at time of seeding.

(c). The Carrying Capacity of Pastures of Various Kinds.

An indication of the carrying capacity of Carpet grass and Lespedeza pasture was secured on the farm of E. E. Bell, Jones County during the summer of 1931. Twenty-six head of plain steers weighing from 320 to 705 pounds each made 2960 pounds gain from June 8th to September 8th on a pasture measuring 14.2 acres. In other words, three months grazing produced 208.45 pounds gain per acre. This pasture is six

years old, has been grazed closely since it was established and had received little or no fertilizer.

On W. W. Jarvis' farm in Currituck County weights were recorded as follows:

No Head	Dates on Pasture	Total Days	Pasture Days	Gain	Description of Pasture
36	5/1 - 10/28	180	6480	8062	16 A Lespedeza
3	5/1 'til sold,	dates unrecorded		473	
10	8/3 - 10/28	86	860	1427	9.25 Carpet & Lespedeza
12	10/6 - 10/28	22	264	215	5. Poor Carpet grass in orchard
6	9/16- 10/28	42	252	510	6. Native pasture
					36.25 acres
Total Gain		10,687 pounds			
Per Acre Gain		X 294.81 pounds			

X Tame vs. Native Pasture.

A comparison of improved pasture and native pasture was made on this farm also. The record follows:

6 cows on Native pasture 127 days - 550 lbs. gain  
same 6 cows on Improved pasture 42 days - 510 lbs. gain.

On a cow day basis these gains show:

.72 lbs. per day on Native pasture.

2.02 lbs. per day on Improved pasture.

This, however, does not tell the whole story as the cows were on the Native pasture from May 13th to September 16th the best part of the grazing season and on Tame pasture

September 16th to October 28th when it had deteriorated from grazing by other cattle and advancement of the season.

Value of Reeds (*Arundinaria tecta*) for Summer Pasture.

Reeds are depended upon to furnish grazing for the herd of native cows and their offspring from May until December each year at the Blackland Station, Wenona, North Carolina. During the past year 14 cows with ten grade calves and fifteen cows with six native calves were maintained on reed pasture for 223 days (May 9th to December 18th). The results were as follows:

	<u>14 cows</u>	<u>10 calves</u>	<u>15 cows</u>	<u>6 calves</u>
Average initial weight	583	143	629	128
Average final weight	669	323	702	354
Average gain	86	180	73	226
Average daily gain	.39	.81	.33	1.01

The lack of adequate fencing made it necessary during the breeding season, to keep 13 yearling heifers on a tame pasture while 15 yearling steers were allowed to run with the breeding herd on reed pasture. Their gains during a 153 day period (May 9th to October 9th) were:

	<u>Steers</u>		<u>Heifers</u>	
	<u>8 native - 7 grade</u>		<u>5 native - 8 grade</u>	
Average initial weight	413	432	362	313
Average final weight	559	572	444	416
Average gain	146	140	82	103
Average daily gain	.95	.92	.54	.67

A chemical analysis of the blades and upper part of the



stems of the reed plant showed 10% water, 7% ash, 14.8% crude protein, 29.9% fiber, 34% N. F. Extract, and 4.3% fat.

(d). Pasture Fertilization.

On several farms in the territory one to two and one-half acre tracts of established pasture were fertilized in the spring of 1931 as follows:

500 lbs. 4-8-4 per A.	Check	111 lbs. Nitrate of Soda per A.	250 lbs. of 16% Superphosphate per A.
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This in general was the simple test run, although several variations were made such as the inclusion of another plat on which potash, a combination of potash and phosphate, or manure was used. In some cases 600 pounds of 4-8-4 were used instead of 500 pounds. The plan is to repeat the same fertilizer applications each year for three years, keeping a check on results. No more lime will be added during the three year period.

Observations the first year have shown an increased growth and spread of lespedeza on the complete fertilizer and phosphate plats. The reverse seems to be true on the nitrate plats although this appearance may be due to stimulation of the growth of the grasses and consequent competition.

#### Hottentot Moss.

One permanent pasture of carpet grass and lespedeza of several years standing was found to be infested seriously with Hottentot moss. It was killing the carpet grass in many places. This condition was thought to indicate soil impoverishment, therefore, the fertilizer and lime test mentioned in the preceding paragraph was run. It is too soon to expect definite results but present indications are that the complete fertilizer is favoring the growth of grass and discouraging the moss. It is planned to repeat the same fertilizer applications this spring.

#### Value of Crop Gleanings.

In order to learn the carrying capacity of corn and soy bean stalks for wintering cattle, records were kept during the winter of 1930-1931 on a cooperating farm in Currituck County. These records show that on a total of 89 acres of corn stalks, from which over 40 bushels of corn per acre were harvested, 65 acres of soy bean stalks that had yielded 15 bushels of beans per acre, and 16 acres of rye, 43 head of cattle, all ages, made a total gain of 2355 pounds from November 19th to March 10th. The cattle had the run of the fields with no shelter. The nearer mature an animal was the better it wintered under these conditions. Spring calves weighing 310 to 385 pounds made gains averaging 44 pounds while calves and yearlings weighing 500 to 600 pounds made gains of 78 pounds per head. One two year old

steer gained 120 pounds during the 110 day period. Dry cows of not excessive ages made very good gains while cows nursing calves lost weight.

Summary of second years work on the same farm.

Fifty-six head of cattle of various ages and weights were carried during the winter of 1931-1932 as follows:

October 28th to November 14th - 1931

16 acres of Lespedeza that had been grazed during summer.

20 acres of silage corn stubble.

4 acres of soy beans + sown broadcast.

November 15th to February 22nd - 1932

65 acres corn stalks - yield of corn 45 - 50 bushels.

60 acres soy bean stalks - yield of beans 15 - 20 bushels.

Total Cattle days - 4959

Total gain 1711 pounds

Average daily gain .345

Gains were not as good as during the previous winter. This can be accounted for in two ways. (1). Cattle were in better condition when they were turned on the fields and (2) they no doubt lost weight between the time they were taken off pasture and the time they were put on the stalk fields. It was not possible to make weighings for this period.

New Herds Established.

From the fall of 1930 thru 1931 about 2000 head of breeding cattle were shipped into eastern North Carolina for the

purpose of establishing herds. These cattle came mainly from the western part of the state and from southwestern Virginia. They were placed on farms in numbers varying from a few head up to two car loads. In most cases purebred bulls were imported at the same time for use in these newly established herds. Considerable time has been spent in visiting these herds and advising the owners in regard to feeding and management problems.

Herd Improvement.

Forty-eight purebred bulls of the beef breeds and twenty-two purebred females have been brought into the coastal plains section of the state.

Fattening for Market.

Thirty-seven car loads of cattle were fattened for market in the eastern part of the state during the fall and winter of 1931. Advice was given as to the feeding of the majority of this number and on several farms rather close supervision was given.



Variety Test for Furnishing Winter Feed in Tidewater Section.

In an attempt to furnish better grazing for cattle wintered on beaches a variety test was started in Onslow County. The seed was furnished by the Bureau of Plant Industry and advice as to varieties, time and methods of seeding was given by H. N. Vinall of that Bureau.

Fall 1931 seeding:

Smooth Vetch	-	soil Inoculation
Hairy Vetch	-	soil Inoculation
Hop Clover	-	soil Inoculation
Black Medic		
Rye Grass		
Bitter Tannic (Panicum Amarulum)		
Abruzzi Rye		

The following varieties are to be seeded in March 1932:

Coronilla Varia  
Lespedeza Sericea  
Sea-side Bent  
Canadian Blue grass  
Vasey Grass  
Osterdamia Japonica  
Agropyron Intermedia  
Quack Grass  
Bermuda Grass

Internal Parasites.

Fecal samples were collected on several farms where evidence of internal parasites exist. In most every case an

infestation of stomach worm, *Haemonchus contortus*, was found. Attempts to control this trouble are being made by means of rotational grazing, temporary pastures, and drenching.

#### Sheep Improvement.

The sheep population of eastern North Carolina is quite small and in most cases the quality is low due to poor breeding and lack of proper feeds. In an attempt to remedy the situation arrangements were made with a state Hampshire breeder and a small sale of rams was held in June.

Eleven head of yearling rams were sold at an average of \$23.50 per head. It is hoped to extend this method of distributing rams next year.

#### Publicity.

A considerable amount of publicity concerning cattle and sheep farming has been secured thru the cooperation of state papers. Articles prepared by the author of this report have been turned over to the college editor who has used the same for distribution via associated press and other channels. A few clippings of articles are shown on the following pages.

#### Statistical Report.

Number of days in Field	162	1932 148
Number of days in Office	122	163
Number of days on Leave	29	? 000
Number of auto miles Traveled	20,309	16054
Number of rail miles Traveled	2,482	2741
"    "    "    "    "		422

# MYERS & HOUSEMAN

## LIVE STOCK COMMISSION MERCHANTS

UNION STOCK YARDS  
Baltimore, Md.

### REFERENCES

Drawers and Mechanics National Bank, Baltimore, Md.  
First National Bank, Jersey City, N. J.

JERSEY CITY STOCK YARDS  
Jersey City, N. J.

Members  
Baltimore Jersey City  
Live Stock Exchanges

## JERSEY CITY MARKET

**Cattle**—Nine loads of steers met a fair trade at a shade better prices than last Friday, although indifference was shown except at low prevailing figures.

**Cows**—10 loads offered, market steady.

**Bulls**—2 loads offered, market steady.

**Sheep and Lambs**—22 loads on sale; 4 loads of W. Va. lambs sold 6½ to 6¾c sorted. Balance of receipts New York and Penna. lambs best of which sold at 6¾c sorted. A few loads sold 6 to 6½ sorted. Trade was active with prices fully steady with last week's close.

**Calves**—1200 at both New York markets. Good to choice nearby calves 7½c; bulk of receipts mediums which sold 5½ to 6½c. A few small lots of light weights sold 2½ to 4c according to weight. Only one deck medium Southern veals offered which sold at 5.65. Trade was active with prices fully 50c higher on all grades on account of light receipts.

**Hogs**—Light receipts, top 4½c.

Monday, November 28, 1932

**CHOICE DRY FEDS** ..... 6.75 to 7.00

(VIRGINIA QUOTATIONS)

**CHOICE STEERS AND YEARLINGS**..... 6.00 to 6.25

Good..... 5.50 to 5.75

Medium..... 4.50 to 5.25

Common..... 4.00 to 4.25

**CHOICE FAT BULLS**..... 4.00

Good..... 3.00 to 3.25

Good Western Bolognas..... 3.75

Medium..... 3.25 to 3.50

Common..... 2.75 to 3.00

**CHOICE COWS**..... 2.25 to 3.75

Good..... 3.25 to 3.75

Medium..... 3.00 to 3.25

Cutters..... 2.50 to 3.00

Bolognas..... 2.00 to 2.50

**CHOICE HEIFERS**..... 1.00 to 1.50

Good..... 5.00 to 5.25

Medium..... 4.50 to 5.00

Common..... 4.00 to 4.50

**GOOD TO CHOICE NEARBY VEALS**..... 7.50

Medium..... 5.50 to 6.50

Common..... 3.50 to 4.50

Small Calves..... 2.50 to 4.00

**CHOICE SOUTHERN VEALS**..... 6.50

Good..... 5.00 to 6.00

Common..... 3.00 to 4.00

**HEAVY SOUTHERNS**.....

Good..... 3.00 to 4.00

Medium..... 2.50 to 3.00

Common..... 2.00 to 2.25

**GOOD TO CHOICE TRIMMED LAMBS**..... 6.50 to 6.75

Medium to Good..... 6.00 to 6.50

Common to Medium..... 4.00 to 5.00

Choice Ewes..... 3.00

Common Ewes..... 1.00 to 1.50

**GOOD TO CHOICE N. Y. & PENNA.**..... 6.00 to 6.50

**CHOICE STEERS**..... 5.75 to 6.00

Good..... 5.50 to 5.75

Fair..... 5.00 to 5.50

Medium..... 4.25 to 4.75

Common..... 3.50 to 4.00

**CHOICE HEIFERS**..... 4.50 to 5.00

Good..... 4.00 to 4.50

Medium..... 3.00 to 3.50

Common..... 3.00 to 3.25

**CHOICE COWS**..... 2.75 to 3.00

Good..... 2.25 to 2.50

Medium..... 2.00 to 2.25

Cutters..... 1.50 to 2.00

**CHOICE BUTCHER BULLS**..... 3.00 to 3.50

Good Butcher..... 2.75 to 3.00

Good Bolognas..... 2.75 to 3.00

Medium..... 2.25 to 2.50

Common..... 2.00 to 2.50

**FEEDING STEERS**.....

Good to Choice..... 4.50 to 5.00

Fair to Good..... 4.00 to 4.50

Medium to Fair..... 3.50 to 4.00

Common to Medium..... 3.00 to 3.50

**GOOD TO CHOICE LAMBS**..... 6.25 to 6.60

Medium..... 4.00 to 5.00

Common..... 3.00 to 3.50

**GOOD TO CHOICE CALVES**..... 5.50 to 6.00

Medium..... 4.00 to 4.50

Common and Heavy..... 3.00 to 3.50

**HEAVY HOGS**..... 3.75 to 4.10

Medium..... 4.00 to 4.30

Lights..... 4.10 to 4.35

Roughs..... 2.75 to 3.35

Pigs..... 4.10 to 4.35

(These quotations for Ohio hogs)

## BALTIMORE MARKET

**Cattle**—Receipts of cattle last Friday 50 loads; trade was active and steady on anything good regardless of weight, although very few of this class were offered. There were fair receipts of medium weight cattle on the plainish order; this class was hard to move at steady prices and closed very dull.

Today (Monday) 15 loads offered; due to the light supply of steers the market held at steady prices with Friday.

**Cows**—Fair supply, market steady.

**Bulls**—Fair supply, market steady.

**Heifers**—Fair supply, market steady.

**Sheep and Lambs**—Receipts 3000; market higher than last Monday and steady today with the close of last week.

**Calves**—Receipts 300; trade today was steady with the close of last week and 50c lower than last Monday.

**Hogs**—Receipts 2500; market lower today.

Statistical report, 1933

Number of Beef Bulls Glaced

~~121~~ 121

Number of Incubated & High Grade Females found -- 158

Number of Buried Rams placed 108

Number of Purebred or High Grade ~~Bulls~~ placed 38

Number of children completing 4 H. Club Project

with Beef Cattle. 28

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Number Method Demonstrations	2	9
Attendance	12	94
Number of Meeting Addressed	12	40
Attendance	1747	4407
Number of Farms Visited	217	236
Number of Office Consultations	34	51
Number of Letters Written	702	196
Number of Circular Letters Prep'd	9	14
Number of Circular Letters Sent	1000	1390
Number of Bulletins Sent Out	92	124
Number of Articles Prepared	9	20

Respectfully submitted,

L. I. Case,  
Agent in Animal Husbandry,  
State College Station,  
Raleigh, North Carolina.