PRESENT METHODS OF BEEF PRODUCTION.

V.

By HERBERT W. MUMFORD, CHIEF IN ANIMAL HUSBANDRY, AND LOUIS D. HALL, FIRST ASSISTANT IN ANIMAL HUSBANDRY.

BREEDING BEEF CATTLE FOR MARKET.

The branch of beef production indicated by the above subject occupies at this time a minor position as a factor in Illinois cattle feeding operations. Of the cattlemen represented by this report, but twelve percent raise all the cattle they fatten and but thirty-five percent raise part and-buy part of their cattle. With reference to the cattle involved, only sixteen percent are marketed by men who raise all the cattle they sell and eighteen percent by those who raise part and buy part of their cattle. While the data on which these figures are based do not necessarily represent in all respects the entire beef producing industry of the state, they may be considered as bearing out in a general way the estimate quoted in Part I. of this series, that only about fifteen percent of the native beef steers marketed in Chicago are carried from birth to maturity without changing hands.

Bulls.

Pure bred sires are kept by 87 percent of the correspondents who raise their cattle. The remainder report the use of grades. The following percentages indicate the extent of each breed as to the bulls used: Short-Horn, 56 percent; Hereford, 19 percent; Aberdeen-Angus, 19 percent; Red Polled, 4 percent; Polled Durham, 1 percent; Galloway, 1 percent.

Note.—This is one of a series of papers based upon reports received from 509 cattle feeders in Illinois in reply to a list of 100 questions sent to each. The previous numbers, viz., Circulars Nos. 79, 88, 91 and 92 will be mailed upon application. For list of questions see Circular No. 65.
Cows.

Pure bred cows are kept by 19 percent of those who raise their feeding cattle. Grades are used by 35 percent of the number, and 46 percent do not state whether the cows are pure bred or grades.

Comparing the different breeds on the basis of the number of correspondents mentioning each in connection with the cows kept, we find the following percentage for each: Short-Horn, 68 percent; Aberdeen-Angus, 15 percent; Hereford, 11 percent; Red Poll, 3 percent; and Polled Durham, 1 percent; miscellaneous, 2 percent.

As to the age at which the cows are finally sold, the replies are divided thus: Eleven percent report "any time"; 22 percent sell them when they miss breeding or otherwise prove to be unprofitable as breeders; 67 percent name ages from 2 to 14 years at which they dispose of their cows. Of those who report definitely as to the age when sold, approximately one-third of the correspondents market the cows at eight years, one third before and one third after that age.

No season seems to be especially preferred for marketing cows, and the replies to the question upon this point are divided quite uniformly among the different seasons of the year. A large majority of the correspondents sell the cows fat. A few sell them in "breeding" or "medium" condition, and but two percent of all dispose of them when thin.

Heifers.

The age at which heifers are bred to produce market stock is shown by the following summary of the replies received: Nine percent of the correspondents breed them twelve months; 14 percent, at ages between 12 and 18 months; 17 percent, at 18 months; 14 percent, at ages between 18 and 24 months; 42 percent, at 24 months; and 4 percent, at ages above 24 months, the greatest age mentioned being 36 months. Heifers are kept until mature by about one-half the breeders who answer the question on this point. One-fourth explain that they keep the best ones; one-tenth reply "usually" or "generally"; and fifteen percent state definitely that they do not keep them until mature. The fact is evident in the replies as a whole that an effort is made in most instances to dispose of the females before they undergo marked depreciation in value, due to age. The extent to which this factor operates against the retention of the most valuable breeding cows is impossible to state.

Calves.

The spring season is chosen by four-fifths of the correspondents as a time for the dropping of the principal crop of calves. The remainder are divided in their preferences among the summer, winter and fall seasons and but two percent plan to have the calves dropped at two seasons, spring and fall.
One-fifth of those who reply castrate calves when less than one week old; one-half castrate before the calves are over one month old; four-fifths castrate when less than three months old. Only five percent of the correspondents delay the operation later than six months of age.

Of the feeders who raise all or a part of the cattle which they fatten for market, less than one half state that they intend their calves for baby beef. Further, the average age of the cattle marketed by those who report raising baby beef is 26 months and the average weight 1275 pounds; and one-third of them report ages between 30 and 40 months and weights between 1,400 and 1,600 pounds. The term "baby beef" as used at the leading cattle markets refers generally to steers which are "between one and two years of age and weigh from 800 to 1,000 pounds." *It is evident from the results of this investigation that the term is popularly applied to cattle of a wider range of age and weight than its common usage at the markets implies.

The length of suckling period recommended for calves intended for baby beef varies from one week to ten months. Three-fourths of all the replies, however, recommend periods from five to seven months in length. One-half of the whole number mention six months as the period preferred, and the average of all replies is 5 months and 24 days.

A summary of the replies concerning the length of suckling period for calves not intended for baby beef shows that approximately three fourths of all the replies name periods from five to seven months in length. Forty percent of the whole number mention six months as the period preferred. The average of all replies is five months and seven days, only seventeen days less than the average period computed from the replies concerning calves intended for baby beef. A question as to whether calves intended for baby beef receive grain while suckling their dams brought out the fact that three-fifths of the cattle feeders here involved feed grain at that time; one-third of the number state that they do not feed grain while the calves are suckling; and the remainder supplement the milk with grain only in winter or when pastures are inadequate in July or August. Considering the calves not intended for baby beef, the respondents are about equally divided as to the advisability of feeding grain while suckling.

The question, "How do you manage the calves intended for baby beef from weaning time until marketed," was answered in most cases merely by naming the feeds used for such cattle. Several kinds of feed were mentioned in most of the replies, and the results can be most readily studied by comparing the feeds with respect to the number of correspondents mentioning each. Of the concentrated feeds, corn constitutes nearly one half and oats one third, with bran, oil meal, corn and oat meal, *Illinois Experiment Station Bulletin 78, p. 387.
barley, cottonseed meal, gluten meal, wheat and rye ranking next in the
order named. One-third of the replies referring to corn specify the
shelled form, one-third use corn and cob meal, crushed corn, or corn meal,
and one-third do not indicate the form in which it is fed. Of the rough-
ages mentioned clover appears in two-fifths of the replies; "hay" consti-
tutes one-third, corn fodder, stover and silage one-fifth, the remainder
consisting of cowpeas, and corn-stalk fields. One-fourth of those who
mention pasture in this connection refer specifically to bluegrass; one-
fifth of those who mention hay, specify timothy.

The best method for wintering steer calves from weaning time to
grass in spring was indicated in the same way as above by those who
replied. Of those mentioning concentrates, two-fifths refer to corn, one-
third to oats, and the remainder to bran, oil meal, and a large number of
other grains and commercial feeds. Nearly one-half the correspondents
who mention corn in this connection use it in shelled form, over one-
fourth use crushed corn, corn and cob meal, or corn meal, one fourth do
not indicate the method of preparation preferred. Of the replies men-
tioning roughages, more than two-fifths refer to clover hay, one-fifth men-
tion simply "hay," nearly one-fifth specify corn fodder, corn stover or
silage, and the remainder are divided among various hays and straws.
One-third of the answers which mention pasture specify the use of blue-
grass.

In referring to the feeds best adapted to the wintering of yearlings
three-fifths of the replies mentioning concentrates refer to corn, one-fifth
to oats, and the remainder to bran, oil meal, cottonseed meal, and rye.
One-third of those who mention corn prefer crushed corn, cornmeal or cornmeal; one-eighth prefer shelled corn; and 56 percent do not
indicate the form in which it is fed. Of the roughages mentioned, corn
fodder constitutes one-fourth of the replies on this point, clover hay one-
fifth, corn-stalk fields nearly one-fifth, "hay" one-eighth, and straw one-
eighth. Of the replies mentioning grass, 60 percent specify bluegrass.

A comparison of the foregoing figures relating to calves and year-
lings indicates clearly that concentrated feeds are generally regarded as
most important in the feeding of calves, while for yearlings, roughages
seem to be considered of most consequence. In neither instance do pas-
ture crops receive much notice in the replies. It will be observed that
corn is more highly regarded for yearlings than for calves, while the
reverse is true of oats. The grinding of corn, however, appears to be
considered more necessary in the case of yearlings. Clover hay is ranked
much more highly for calves, while for yearlings, straw, varieties of hay
other than clover, and corn-stalk fields are mentioned more prominently.