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PRESENT METHODS OF BEEF PRODUCTION.

III.

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

HOGS FOLLOWING CATTLE IN THE FEED LOT.

Of all who replied to the questions submitted in this investigation 458, or 90 percent, keep hogs with cattle when on feed. As to the breed of hogs preferred for the feed lot, a summary of the replies of 396 correspondents shows that 70.7 percent favor Poland-Chinas; 9 percent, Berkshires; 4.5 percent, Duroc-Jerseys; 3 percent, Chester Whites; and 12.8 percent, "any breed." One correspondent mentions Tamworths. This summary is not to be looked upon as a criterion of the relative merits of the breeds mentioned for feed lot purposes, because the wide distribution of the Poland-China, for example, makes it most familiar to and best understood by the average feeder, and thus most in favor with him. It is another question to what extent the comparative distribution of the breeds is the result of their respective merits.

The best age at which to put hogs in the feed lot varies with their

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. Part I, Circular No. 79, "Stockers and Feeders," and Part II, Circular No. 88, "Fattening Cattle," will be mailed upon application. For 1st of questions see Circular No. 65.

condition and previous method of feeding. A summary of the experience of a large number of feeders, however, will be of interest. 357 feeders report as follows: 15 percent prefer pigs 4 months old or less; 13 percent prefer pigs $4\frac{1}{2}$ or 5 months old; 38 percent prefer them $5\frac{1}{2}$ or 6 months old (mainly the latter); 9 percent prefer them $6\frac{1}{2}$ or 7 months old; 9.5 percent, $7\frac{1}{2}$ months old; 4.5 percent $8\frac{1}{2}$ or 9 months old; 7.5 percent, 10 to 12 months old; and 3.5 percent reply, "any age." Thus it is seen that 6 months old pigs are most generally preferred, and the number of replies reporting above and below that age respectively are not materially different.

The weight of hogs desired for following cattle varies from 40 to 225 pounds, according to 400 correspondents reporting on this point. 6 percent prefer pigs weighing 75 pounds or less; 7 percent prefer weights above 75 and below 100 pounds; 23.5 percent prefer 100-pound shoats; 28.5 percent answer more than 100 pounds up to and including 125 pounds; 23 percent choose weights from 130 up to and including 150 pounds; 10 percent, from 160 to 225 pounds; and 2 percent reply, "any weight." In other words, three-fourths of those reporting, favor pigs from 100 to 150 pounds weight, and the average of all is practically 125 pounds. Considering this result in connection with the average age recommended above, namely, six months, we find that, in general, pigs desired for feed lot purposes are light, young hogs, and necessarily thin in condition at the weight given for the age of six months.

83 percent of those who report keeping hogs with cattle give them feed in addition to that secured from the droppings of the steers. The remainder aim to keep just enough pigs following the steers to consume the droppings. The former plan is followed mainly because most feeders prefer to keep all their hogs of suitable age in the cattle yard for convenience in handling, and to regulate their feed by means of additional corn rather than by adapting the number of pigs to the amount of feed available in the manure.

402 correspondents reply to the question as to how many 150-pound shoats will thrive well on what they can secure from the droppings of each steer without additional corn being fed. Of these, 10 percent report less than one shoat per steer; 43 percent report one shoat; 21 percent, from one to one and one-half shoats; 20 percent, two shoats; 6 percent, more than two shoats, the highest number of hogs per steer mentioned being three. In view of the fact that 83 percent of the feeders here included give additional corn to the pigs, the reports on the matter under consideration must be taken as estimates, rather than

as the results of experience. It is believed by the writers of this circular that most of the estimates given are too high, since it is probable that many of the correspondents have overlooked that part of the question referring to the addition of corn to the feed secured from droppings. This is indicated by the fact that of the feeders who keep only enough hogs with the cattle to consume the droppings, 11 percent keep less than one hog per steer; 56 percent keep one hog per steer; 16 percent, one and one-half hogs per steer; 12 percent, 2 hogs; and 5 percent, more than two hogs per steer; thus showing that this system of handling hogs with cattle reduces the number of hogs to a greater extent than is appreciated by cattle feeders who feed additional corn, and have merely estimated the number of hogs required to consume the droppings alone. For experimental data on this subject the reader is referred to Bulletins Nos. 73, 83 and 90 of the Illinois Experiment Station.

The average daily gains secured upon pigs where additional corn is not fed are reported thus by 259 correspondents: 9 percent secure less than one pound per head; 42.5 percent, one pound; 8.5 percent, between one pound and one and one-half pounds; 18.5 percent, one and one-half pounds; 16.5 percent, from one and one-half to two pounds; and 5.5 percent, more than two pounds. Here again it should be noted that undoubtedly many correspondents have failed to consider the last clause of the question, referring to the feeding of additional corn, so that their replies are made to some extent upon the assumption of extra corn being fed to the hogs.

The question is often asked as to what proportion of the corn fed to cattle is used by and should be charged to the hogs following. Estimates on this point have been secured from 256 cattle feeders in this investigation. 11 percent of these state that one-tenth or less of the corn fed should be charged to the hogs; 8 percent name proportions above one-tenth and below one-fifth; 21.5 percent name one-fifth as the correct proportion; 23 percent name one-fourth; 31 percent, one-third; and 5.5 percent, one-half. Thus it is seen that three-fourths of all the correspondents charge from one-fifth to one-third of the corn to the hogs. Of course, the replies vary largely with the method of preparing the corn. That is, those who grind the corn almost invariably charge relatively small proportions of it to the hog, while those who feed shock, ear, or shelled corn count on the hogs using a much larger percent.

Oil meal fed to steers is often said to have a beneficial effect upon the pigs following. Of 120 correspondents who replied to a question upon this point, 37 percent state that such feed has been a decided ad-

vantage to the pigs. The remainder, 63 percent, reply that they have not found it to be of marked advantage in that respect.

Unlike oil meal, cotton-seed meal fed to cattle is believed by many feeders to exert an injurious effect upon the pigs. 40 correspondents have answered the question upon this point. Of these, 40 percent report that it is undesirable to turn hogs after cattle receiving cotton-seed meal, while 60 percent have observed no injurious effects. *hester*

33 correspondents mention other supplementary feeds which have been equally as good as oil meal in their effect upon the pigs. Of these, 66 percent mention various condimental stock foods.[?] The remainder mention salt, ashes, cotton-seed meal, cow peas, wheat, and clover hay. One of the most successful feeders states in his report that he has used successfully a self-feeding box in supplying mineral substances to the hogs. Wood ashes are mixed by the wagon-load with salt, copperas and sulphur and placed in a small self-feeder similar in construction to those used for cattle.

Summarizing the answers of 400 feeders regarding the form of shelter provided for pigs when following cattle, we find that 79 percent use sheds (doubtless most, if not practically all, refer here merely to the cattle shed, rather than to a separate hog shed); 8 percent use barns; 8 percent, hog houses; 2.5 percent provide no shelter; 1.5 percent depend upon racks, cribs and feed boxes; 1.5 percent upon woods, and 1.5 percent upon straw stacks. In other words, only 8 percent furnish permanently constructed houses for the hogs, while practically all of the remainder allow only such shelter as they can secure within or without the sheds or barns provided for the cattle.