

## FEEDING PIGS FOR RESULTS ON THE FARM

"Hogging-Down" Corn Proves Itself a Profitable Way of Feeding the Shoats--Results of Experiments.



A lively bunch of shoats it pays to "hog down" corn. That is no longer a matter of guesswork. It has been thoroughly demonstrated by the feeding experiments recently conducted at the Iowa Agricultural Experiment Station under the direction of John M. Evvard, experimentalist in animal husbandry. Shoats turned into a field of ripe standing corn, especially if there be with it a supplemental crop like cow peas, soy beans, rape or pumpkins, will take on weight faster than those in the feed lot, and they harvest the corn and feed it with less labor and larger profit for the farmer. They do their own husking, they distribute their own manure, they eliminate hauling and storage of corn, they save the time and labor of feeding, and they become good rustlers and through exercise become strong and vigorous. Moreover, the experiments show that when hogs are brought from the field to be fed out, they may be finished off at one-fourth less cost than the hogs taken from the dry feed lot.

The complete results of the Iowa station experiments are not yet ready for publication. They will be given out later in a bulletin under preparation by Professor Evvard. But all these facts taken from the records of some hundred young hogs make clear the value of "hogging down."

In 1909 four lots of shoats were turned into four different fields, one of corn alone, another of corn and cow peas, a third of corn and soy beans, and a fourth of sweet corn and soy beans. The pigs were carefully weighed and the value of the corn in the field was carefully estimated on the basis of the cost of labor, rent of land, etc. At the end of the test the following results were shown:

Lot	Cost for each 100 lbs. gain	Total gain per acre
Lot 1, corn alone	\$3.74	
Lot 2, corn and cow peas	2.50	503
Lot 3, corn and soy beans	2.38	619
Lot 4, sweet corn and soy beans	3.53	353

The test demonstrated another thing—that corn without a supplemental feed is not as good for growing swine nor as economical as a combination feed. They must be fed something with corn that will give them needed nitrates. The cow peas and soy beans do that. If the supplemental crops were not sown, then hogs turned into the corn field should be fed meat meal, tankage, or linseed oil meal. That is important, insists Prof. Evvard.

In 1910 another four lots of shoats were turned into the fields to forage for themselves, with the following results:

Lot	Cost for each 100 lbs. gain	Total gain per acre
Lot 1, corn and Canadian field peas	\$3.75	329
Lot 2, corn and soy beans	3.06	457
Corn, rape and pumpkins	3.00	abt. same
Corn and vetch	6.00	283

In this test, the pigs in the field of corn and soy beans took on weight at the rate of .9 lb. per day, in the corn, rape and pumpkin field 1 lb. per day, and in the corn and vetch field .4 lbs. per day. The vetch proved itself an unsatisfactory supplemental feed. The rape and pumpkins were very satisfactory, even though the rape and pumpkins were only a fair stand.

In this 1910 test the cost per 100 lbs. of gain was estimated differently than in 1909. In 1910 the corn yield was charged to the hogs at 7 cents per bushel less than market value, that being the cost of husking and hauling to market.

Professor Evvard demonstrated this other important fact in his 1910 experiments: The shoats from the corn field may be fed out at less cost than those that are taken from the dry feed lot. The shoats from the corn and soy bean field gained 2.1 lbs. per day in the finishing lot at a cost of only \$2.53 per 100 pounds of gain. The shoats from the corn and Canadian peas gained at the rate of 1.47 lbs. per day. Those from the

dry lot gained at the rate of 1.6 lbs. per day and at a cost of \$3.43 per 100 pounds gained. The pigs from the field were more vigorous and better rustlers than the feed lot pigs.

If the corn in the corn and peas field had been husked and sold, it would have brought approximately \$10.00 per acre; hogged down, it produced pork worth \$19.74, a 100 per cent increase.

If the corn and soy beans field had been husked and marketed it would have brought \$11.62 per acre; as it was fed, it produced pork worth \$27.41, an increase of 140 per cent.

If the corn in the corn, rape and pumpkin field had been marketed, it would have brought \$19.34 per acre. It produced pork worth \$38.04. The corn and vetch field yielded corn worth \$15.91 and it produced pork worth only \$17.01, indicating that the combination is ineffectual.

Even where no soy beans or cow peas were sown, corn may be satisfactorily hogged down if meat meal or its equivalent be fed with the corn. A pound of meat meal per hog per day will give the desired results and increase the feeding value of the corn. The farmer need not hesitate to buy meat meal, though it may cost him from \$45 to \$50 per ton. A pound of meat meal will put on as much pork as fifteen pounds of corn, and its cost is only 2½ cents as against 12 cents for the corn. A pound will answer for each pig per day. When more is fed it loses some of its efficiency as feed. Just enough to balance the ration is necessary.

The cost of fencing off the feeding lot is urged as an objection to hogging down corn. This may be met by fastening woven wire fencing to the corn stalks with binder twine. If well done, that sort of fencing will answer the purpose.

Professor Evvard's experiments show very conclusively the value of hogging down corn. He advises it because it pays, in money and in labor saved.

## Eleventh Year

Successful Practice in Denison, Iowa.

WILL BE IN MY OFFICE IN

**Hotel Denison,**  
**Monday, Sept. 25th**

10:00 A. M. UNTIL 6:00 P. M.



Dr. B. A. STOCKDALE.

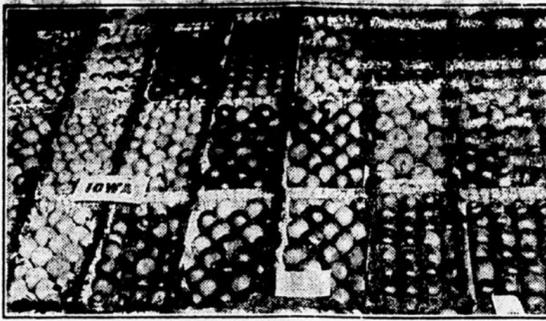
I want every person who suffers from a chronic disease—it makes no difference how bad the case, or how long they have suffered—to call and consult me. I will make a thorough examination, tell exactly what can be done, whether they are curable or not, how long it will require and all about it. I have devoted twenty years of my life to the study and treatment of diseases of the Stomach, Liver, Bowels and Kidneys; Indigestion, Dyspepsia, Constipation and Diabetes; Heart and Nerve Troubles; Rheumatism, Chronic Catarrh in all its forms—in fact, all Chronic Diseases.

I have a special treatment for nervous and physical weakness of men which I would like to explain in person. Call and get my opinion and advice free of charge.

If for any reason you cannot visit me write for an examination blank.  
**DR. B. A. STOCKDALE,**  
Utica Building, Des Moines, Iowa

## GRADING AND PACKING APPLES FOR MARKET

By LAURENZ GREENE, Experimentalist in Horticulture, Iowa Station, Ames College.



An Iowa Exhibit that Illustrates the Different Styles of Apple Packing.

Iowa orchards will not be sources of satisfactory profit to their owners until orchardists learn how to sell the fruit they grow. It is important to produce choice apples in abundance but it is just as important to market them right. There is no money in unsold apples, nor apples sold for a half or a third or even less part of what they are worth.

Iowa apple growers are waking up to the importance of grading and packing fruit for the market because of the competition which has arisen from the shipments of far western fruit into the east, and the invasion of Canadian apples also. Poorly graded and packed fruit from Iowa and elsewhere has had to take the poorer prices when offered for sale alongside the better packed product of other districts.

The question is often asked if the fruit growers of the central west could compete with those of the west if their apple products were packed in boxes. The answer is that the same grade of apples put up in the same manner would easily find a market in competition with the western grown fruit. Our main difficulty in Iowa is that we do not grade our apples. Some people have the idea that the box is what sells the fruit and have attempted to place their products on the market in a shiftless sort of pack. This has without exception proved a failure. Far more important than the package is the grading and method of packing.

At the present time, even in the more advanced fruit growing sections, grading is done almost alone as regards size and color. But little attention is given to flavor and size demands more attention than color; all these things should be taken into consideration and on very nearly an equal footing. The quality should have, and is demanding, more attention. If the growers of the middle west will carefully grade and pack, taking quality into consideration, the Ben Davis and other apples of poor quality grown in the far west, where they take on high color, will not enter into competition with their fruit. Some of our better growers in this section try to put up a pack fairly free from worm injuries, but most do not grade closely enough along this line. Canada and the western states do not allow a wormy apple to go into a fancy grade and prohibit their being exposed for sale.

An apple to be of No. 1 grade, called fancy in some sections, should contain no coddling moth or other worm injuries, should be absolutely free from scab and then should be placed with apples of very nearly equal size and color.

Second grade apples should not be those that are wormy or scabby, but should be equal to those of No. 1 grade in every way except size.

Both grades should be of even size and color.

Use only the better grade of boxes for packing in boxes. White are much to be preferred to darker wood boxes because they have a neater appearance and sell better. A cheap box is likely to split and never look well on the market.

There are two general sizes of boxes in use in the northwest which seem to accommodate the different sizes of apples nicely. The standard box is 10½x11½x18 inches; the special, 10x11x20 inches. The ends should be not less than ¾ inch, the sides ¾ inch and the top and bottom ¾ inch. This gives a box that will stand shipment, and which will have enough spring to take up slack, when properly bulged in packing.

Linings of paper should be used in the boxes, as this keeps the fruit clean and prevents considerable bruising. The better grades may well be wrapped. Some packers use paste-board between the layers, but that is not gaining favor, as it seems a needless expense. They may impress the purchaser, however, that unusual care has been taken in packing.

There are three general styles of packs—the straight, the diagonal and the offset. The diagonal is the most popular. The offset is especially losing its favor because it leaves such a large number of blank spaces at the side of the box. In the straight pack the apples rest one upon another, so that the bottom apple in a tier receives the weight of all those above it and usually there are four bruised spots on each apple where it meets its neighbor. In the offset and diagonal packs each apple rests on four others, so that the bruising is decreased. These packs are usually designated 3, 3½, 4, 4½ or 5 tier

packs, according to the number of rows across the box from side to side. The number of apples from top to bottom is spoken of as so many layers. Packs are coming to be known more and more by the number of apples in the box. This is the better method, as the buyer does not care so much about the style of the pack as he does the condition of the apples and the number he gets in a box.

The five tier pack is used for the 200 apple pack and this is the usual number found in a five tier box.

The four tier pack is used for the 96, 112 and 128.

With the diagonal packs we find greater variety of packs and numbers. In the three and one-half tier pack we have in the standard box 64, 72, 80, 88 and 112; in the special, 96, 104 and 120.

In the 4½ tier we have 155, 165 and 175.

## HOW THE COW TESTING ASSOCIATION HELPS.

In a single year's time, W. H. Maust, president of the Pioneer Cow Testing association, near Waterloo, increased the average butter fat production of his dairy herd from 231 pounds per cow per year to more than 300 pounds.

In 1910 the cows on his place returned him nearly \$20 more apiece than they did in 1909, with exactly the same barn room, the same pasturage, the same labor, and practically the same feeding. When he counted up his profits in 1910, he found himself better off some \$250 on his thirteen cows than in 1909, and yet he had worked no harder, nor had he put in any longer hours.

How did he do it? He put his dairy herd on a business basis. He cut out the guess work in the management of his cows.

The agricultural department of the Iowa State College at Ames showed him how to find out exactly what every cow was producing. It helped him to locate the good-for-nothing animals that were eating their heads off. When he located them, he got rid of them and put money makers in their stalls. The result was that in a year's application of common sense business methods to milk production he increased the yield of his cows from 231 pounds of butterfat to more than 300 pounds a year. That isn't the end of it. Mr. Maust has started on a road of better dairying that will lead him finally where his cows will yield 400 pounds of butter fat, probably, instead of 300, and add still another \$25 to \$30 a year per cow to his income.

These facts are brought out by figures of the 1910 tests of the Pioneer Cow Testing association, which are now being compiled at the state college. The records of the other associations like it in Iowa indicate that Mr. Maust's experience is not the only one of that kind. It may be said safely that good gains in butter fat production will be shown in every herd of the forty-six comprising the two associations that began testing in 1909. Every herd record examined by the state college statisticians justifies the testing association and gives evidence that if every dairy herd in the state were included in a testing association, many millions of dollars would be added annually to the wealth produced in Iowa.

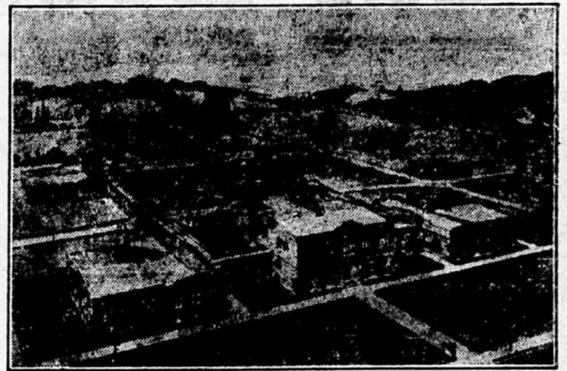
The testing associations are purely local associations, co-operative in character. They comprise from twenty to twenty-six herds of animals and when organized the state college furnishes a man to test the cows who makes his home in the community and visits every herd once a month through the year. The cost to the farmer is a dollar per year per cow, no more, and for that dollar he is given a test of feeds, milk production and other things that will point the way to increase his milk output many dollars per year.

Iowa now has five of these testing associations, all of them located in eastern Iowa and including some thing like 1,200 to 1,400 cows. If there were 5,000 such associations including Iowa's half million cows they would point the way to adding at least \$15,000,000 to the annual net income from them.

This is the time of the year to remember that it adds to the life of farming machinery to put it under shelter promptly after the harvest season. Lumber is cheaper than self-binders, even though it is dear.

## IOWA'S VETERINARY SCHOOL AND HOSPITAL

A \$150,000 Building at Ames Now Nearing Completion--An Important New Addition to the College.



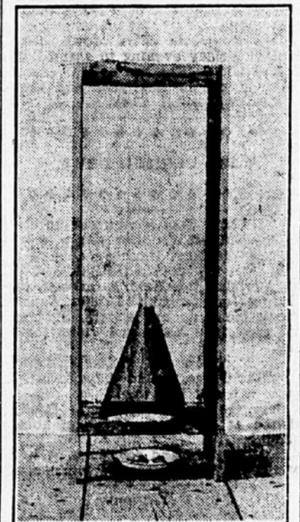
Iowa's New Veterinary School.

## A GOOD HOME-MADE FLY TRAP

By A. A. Burger, Iowa State College Extension Department.

The common house fly, innocent and harmless as he may look, is not only a troublesome pest, but one of the dirtiest, filthiest and most common carriers of disease germs which we have. "Swat the fly" is the watchword these days and knowing his soulless habits we cannot be too persistent in the "swatting." The common breeding grounds of the fly are piles of rubbish and barnyard manure. We could effectively prevent his invasions if we would clean up the yard of all rubbish and haul out the manure daily. This may be kept away from the house by keeping slop buckets, garbage cans, etc., at some distance from the house and by screening the porches. A very effective device is the home made fly trap.

It is easily made and costs but a few cents. Take a piece of one-inch board twelve inches wide and saw off two pieces twelve inches square for the top and bottom of the trap. (Any size board will do.) Tack the two boards together temporarily and with a keyhole saw rip out a piece from the center of the boards about nine inches in diameter. Save one of these pieces for a top through which the flies may be removed. A small strip nailed to the top will hold it in place and serve as a handle. A piece of three-foot screen is now tacked around the two square blocks and four-inch strips (lath doubled will answer the strips) nailed to the edges. The strips should project two inches at the bottom, thus allowing room for a dish of bait such as sweetened water, or anything which will draw flies. Before the bottom board is nailed into the trap the wire cone should be securely nailed. This is



A Fly Trap that May be Quickly and Cheaply Built.

made about fifteen inches high with a one and one-half inch opening at the top. The accompanying illustration shows a trap twelve inches square by three feet high, a very convenient and easy form to make.

The flies light on the bait, eat their fill, rise to the cone and finally pass through the opening into the trap. Once inside they are safe. Empty the trap every two or three days, either burning or burying the flies. If the trap is properly made and baited with proper material it will do the business. Where flies are very plentiful it will not be uncommon to find the trap half full of flies in three or four days.

It is estimated that not less than 3,000 new silos were built in Iowa this season, and perhaps nearer 4,000. Professor J. E. Davidson, head of the agricultural engineering department of Iowa State College, believes that the average will run close to forty per county. A large majority of these thousands of new silos are stave silos but the number of tile and cement block silos will reach about 500. The demand for silos will probably continue as large next year, this year's experience with that of other years proving the silo a necessary equipment for every modern farm where live stock is grown.

The finest veterinary hospital and college buildings in the United States are now nearing completion at the Iowa State College at Ames. With their inner and outer courts they will cover a block of ground about 400 feet square. They will cost when completed \$150,000, and \$27,000 more will be spent in equipping them. They will contain every facility for the study of disease in every kind of live stock and their laboratories will give opportunity for investigations that have never before been possible in Iowa or any other midwestern state.

There will be only two other veterinary schools and hospitals to compare with this new structure. At the state agricultural college of Ohio a fine \$90,000 building has recently been completed and at the University of Pennsylvania a new building is in use, but neither one is as large as Iowa's.

These new buildings and their equipment, which are to be ready for use late in December, will give Iowa the very best modern facilities for promoting the growing of sound, healthy live stock and fighting the tuberculosis plague. They will furnish veterinary students every possible means for the study of live stock diseases and live stock surgery. They will provide unequalled facilities for hospital and clinical work. They will furnish the best of facilities and material for experimental work. Especially will Iowa secure in the new buildings modern facilities for the study, investigation and control of dairy cattle diseases, something in which Iowa has been delinquent in the past. The structures were planned with a view to give splendid service to Iowa's live stock industry, and that is to be the purpose of their maintenance.

The buildings are arranged in two parallel lines, about 100 feet apart. There will be three separate structures in the front line, the administration building in the center and a smaller building at each side of it, connected with it by a covered passageway. The administration building will be two stories high; all the other structures are only one story above the basement, save the hospital building, which is two short stories high. In the main building will be the general offices, an assembly room, museum, library, faculty room and private laboratory. The building at one side will contain physiology and pharmacy laboratories and class rooms; at the other, pathological and bacteriological laboratories and class rooms.

In the hospital across the court from the administration building will be stalls for forty-five large animals and some twenty-eight smaller animals, like dogs. There will be a large operating amphitheater, clinic rooms for the free treatment of animals of all kinds, a smaller operating room and a room for operations on dogs. To the north of the hospital building will be a smaller structure for anatomy work, including dissection and post mortem work, and a lecture room, fitted with a modern animal ambulance, a surgeon's office, dispensary, and other offices.

The operating room equipment will be of the best and good enough to rival similar equipment for human beings. The room will be so finished that it may be thoroughly cleaned, and every operating room will be equipped with the best sterilizing apparatus and operating tables worked by electricity.

"These new buildings and their equipment will give Iowa farmers the very best facilities for fighting disease in their herds and droves," said Dean C. H. Stange, head of the veterinary department. "With our new laboratories, we will be able to do original work in the investigation of disease that has never before been possible in the west. We will be able to render quicker and prompter service to live stock growers and protect them more thoroughly. Furthermore, we will be able to turn out veterinarians who are splendidly equipped for their work. Our school ought to take rank with the best German schools."

"Iowa has long been the greatest of live stock states, with only very meager equipment for the protection of live stock from disease. Hereafter Iowa will have veterinary facilities that fit the greatness of its live stock interests."