

Farm and Garden

JAPANESE INTENSIVE FARMING

The Way the Little Brown Folks Till Their Small Estates.

With very few exceptions the whole of the land under grain of any kind is absolutely flat. If it is not so by nature the Japanese farmer levels and banks it up till it is horizontal. In the narrow valleys there are elaborate series of terraces running up the slope of the hills till the fields become so small as to accommodate but a double row of plants. The more typical grain



A MOSAIC IN GOLD AND GREEN.

country, however, lies in broader valleys or along the coast, where there are many wide plains which were once beneath the water. If one looks down on these from a slight elevation they appear like some elaborately designed mathematical figure or as though a cloth had been spread over the earth with mosaic patterns in gold and green. Each little field is as nearly rectangular as circumstances will allow. Many of them, therefore, are perfect rectangles, for where the plain is broad it is easy to fit into it small fields of twenty or thirty feet in length. Some of the plots are even less than this. Many barley fields are only six feet by a dozen or so.

The pattern of this mosaic is vividly marked out by the coloring of the various crops. Today the barley is ripe and stands golden in the sunshine. The ricefields, however, are but bare expanses of mud or water, for the rice is not yet planted out, but is growing in small, oblong fields by itself, which show a vivid emerald green growth of little plants only three or four inches high. At the end of May some of the farmers are beginning to reap their ripe barley and wheat, and when this is finished they will be free to plant out what is to them the much more important crop, the rice. Reaping and planting of grain together one may see in the same acre.

There is no broadcast sowing of grain here. Each seed grain has an individuality and is separately tended. The barley is planted in rows, perhaps three feet or six feet long, and each row is a foot or eighteen inches from the next, so that a worker can pass between the rows to tend and weed and finally to reap each individual plant. In many cases each row grows on a little semicircular ridge four or five feet horizontally and about a foot high, so that the barley is well drained, though the next little field may lie under several inches of water. In the whole district of Okuna there was only one of the ripe fields "laid" by the wind, and that was one of the larger—nearly thirty feet across. It is not to be inferred from this that the Japanese farmers do not have to contend with heavy winds and pitiless, beating rains. Japan is a particularly windy country, and this year has been a very bad season, for even in April there was heavy snow—snow so thick that it entirely obscured the telegraphic and railway communication for a few days. The wheat and barley are all sown in the autumn, so that they get the benefit of the winter sunshine, which is clear and brilliant and very hot. This, of course, is the chief cause



JAPANESE CUTTING THE GRAIN.

of the early ripening of the grain, for from the time it is sown till the time it is reaped it never has a spell of dull weather that lasts more than a few days.

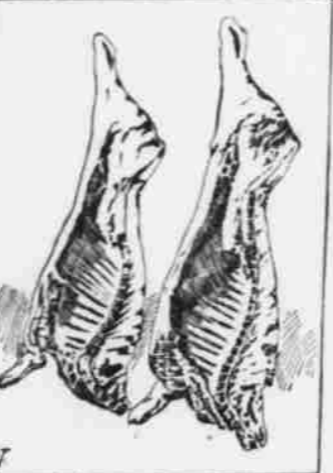
Japanese men and women cut their rows of grain by holding each plant's stalks together in one hand and cutting them off with a sharp, bent knife at the end of a straight handle a foot or more in length. The handle is laid tidily on the ridge where it has grown, and its neighbor is placed beside it. It till the small field is covered by the straw. To thrash, the heads are cut off the stalks and then pounded with a heavy wooden mallet.

SILAGE FOR BEEF CATTLE.

The somewhat prevalent idea among farmers that beef cattle fed on silage do not go to the block in as good condition as those fed dry rations of roughage has been disproved by a series of important investigations and feeding tests of the department of agriculture. The great value of silage as a meat producer as well as for dairy purposes is conclusively shown. In

the tests reported by Professor Soule to the bureau of animal industry as conducted at the Tennessee government experiment station with nine groups of feeders, covering periods of 120 days' feeding for market, cattle fed on stover as the rough portion of the ration made a good gain of 1.27 pounds per day, but those receiving a succulent ration did much better, making an average gain of 1.75 pounds per day. The farmer who feeds for the market cannot afford, it is stated, to be without a silo. Silage makes a most excellent feed for beef production and one that in the long run will make an exceedingly cheap pound of gain by reason of the small amount of concentrated feed stuffs, grain, cottonseed meal, etc., required to be fed with it.

The prejudice against silage for beef cattle has undoubtedly come largely from the demands of the butchers, who have maintained that beef cattle so fed were inferior meat producers. The important result, therefore, of the slaughter test of these cattle is found in the fact that the silage fed cattle showed the highest per cent of good meat, thus overthrowing the impression that such cattle will not "kill well." The slaughter test of fifteen dry fed cattle showed a total of 8,106 pounds of good meat, while that of fifteen succulent fed cattle was 8,281 pounds, a gain in favor of the silage fed cattle of 577 pounds of salable meat. When the cattle in one of the experiments were offered for



SIDES OF BEEF.

[Showing influence of dry and succulent rations on the character of carcass.]

sale the butcher proposed to discriminate against those fed silage, maintaining that they would not dress as well as the others. He was assured that if the silage fed cattle did not dress out as well as the others he would not be expected to pay as high a price for them. "The slaughter tests spoke for themselves," said Professor Soule, "and sounded the deathknell of a prejudiced and absurd belief."

Nor does the item of feeding cost show up to the disadvantage of silage, but the contrary. A pound of grain in the stover fed ration cost an average of 5.8 cents, while in silage fed cattle a pound of gain under the same conditions cost an average of 5.00, or a difference of \$1.70 per hundredweight.

Silage, it may be generally remarked, writes G. E. Mitchell in American Cultivator, has a very wholesome effect on the handling qualities of cattle, making the hide soft, elastic and flexible and the hair glossy and oily to the touch as compared with a coat that is inclined to be rough, dry and shaggy with the stover fed cattle.

Insist on Stable Cleanliness.
In the production of commercial milk the dairyman must not only keep himself and his cows clean, but he must not draw the milk from the cow in a stable filled with dust. He never should feed hay before milking. He should not feed grain nor disturb the bedding before milking.

I may get into an argument in regard to this statement, for there are those who claim that the stable should be cleaned before the milking is done. I maintain not, for you know the more you disturb some thing the worse it smells. The dairyman must not feed silage before he milks, for contamination of the air of the stable occurs with the acid odor of silage the milk will certainly be tainted. It may not be detected at once, but the city neighbor who attempts to use this milk when forty-eight hours old will certainly detect an unpleasant flavor.—John D. Nichols.

Paralysis in Pigs.
Partial paralysis in pigs may be treated successfully in some cases by dosing with epsom salts, allowing one ounce to each animal, following with a dessertspoonful of cod liver oil, ten grains of phosphorus of lime and two drops of nux vomica as a physic, given twice a day for several weeks.

Sheep Dainty Feeders.
Sheep are dainty feeders. They will not eat hay that has been mused over by other animals. Refuse from the sheep racks may be thrown to the cat, but it will not work the other way. Sheep do not like grain from a rusty crib. They are dainty, and it is best to humor them.

BOX MANGERS.
They Cannot Be Properly Cleaned and Should Be Abolished.

That box mangers are an abomination is being appreciated by the recent barn builders. Since it is realized that they are not a necessity, but a danger, the best dairy farms are abolishing all racks and raised boxes used as mangers. The objections to having a small feeding compartment boxed closely around the cow's head are three—the box manger cannot be kept clean, and hence is a disease disseminator; it hinders ventilation, and it prevents the cow from feeding in a natural position.

With small corners and tall sides the box cannot be satisfactorily swept nor cleaned of the odd scraps of feed which collect. This accumulating dirt and dust becomes moldy and rotten and attracts flies and rats. It is further harmful in that it becomes gradually eaten by the cow and is harmful to her. The box manger affords a roosting place for chickens, whose droppings become mixed with the cow's feed, with injurious effects. Sweeping or shoveling the waste material from the manger does not thoroughly clean the box, but removes only the very largest pieces of dirt, the small particles and dust remaining being able to do as much harm as the larger ones.

A cow's neck is so formed that eating takes place with the greatest ease when the mouth is lowered to the level of the ground. If a cow eats without straining during swallowing she will eat and digest better, and her health and milk supply will profit accordingly. Therefore the feed for a cow should be placed at her feet and not a yard or two in the air. The hay racks placed above the cow's shoulders are entirely wrong.

A cow to be healthy requires all the fresh air it is possible to supply. Box mangers, partitions or other boarded barriers act as obstructions to the easy flow of air within the barn, and hence seriously check ventilation.

The farmer should not neglect to adopt the proper feeding trough by waiting until he builds a new barn. The old partitions and boxes should be removed and new feed troughs and stanchions constructed. The feed trough should be immediately in front of the stanchion and upon a level with the floor. If built of boards, it should be 12 inches high.

A trough built of cement is the ideal. When such material is used, the trough should be concave, without corners. A square trough of boards or cement should not be built. The corners collect dirt and into them the cow accidentally pushes her food, being unable to lick it from the angles.

The best trough should be built with a slope that water may flow its whole length. It should have no partitions or divisions. Such a trough can be used for watering the cows, the water from a hose being allowed to enter at the upper end, flowing down past each cow, which drinks at will.—Dr. H. B. Wood in Jersey Bulletin.

The Work Horse.
Work horses should be groomed twice a day.
The harness should be removed as soon as the work is done.
Never give food immediately after hard work. The stomach at that time is in no condition to receive food.
The work horse should have a variety of food.
Upon the clean condition of the skin the health of the horse largely depends.

Horses are frequently troubled with brittle hoof, due to a deficiency of water in the bone, the result of fever.
Keep a lump of salt in the manger.
Never put a horse down with a variety of food.
Never put a dirty, rough bit in a horse's mouth.
Don't leave a shoe on a horse more than four weeks.
Do not allow the stable to be too light during the summer time.
Balking is caused by overloading, tight harness or abuse.
Keep the manures sweet and clean.

The best time to clean the mud of the horse's legs is before it gets dry.
The farm horse should be a walker.
For a horse to manure four pounds of hay will require over an hour, half an hour for four pounds of whole oats and fifteen minutes for four pounds of ground feed.
The following is recommended as an invaluable hoof remedy: Linseed oil, half pint; turpentine, four ounces; oil of tar, six ounces; organum, three ounces. Shake well.

Castrating Pigs.
The work should always be done in the morning, as they will move about during the day and thus escape much of the soreness that would follow evening work. When done in the evening and they go at once to their beds and remain till morning, they come out very stiff. Pigs that are castrated should be castrated as soon as they are large enough; the older they get the greater the risk of total loss. The work should be done, if possible, before the onset of the season or day becomes excessive. When very warm it is easy to overheat a pig in high flesh and kill him. When it is warm a cool pen about the building should be selected, and it will be an aid to dampen the floor well. The work is always more pleasant as regards cleanliness if the floor of the pen is well covered with clean straw.

Test the Wool.
In keeping ewe lambs for breeders it is a good plan to test the strength of their wool. Take samples of all the ewe lambs and see which threads are the strongest. Tough fiber may be transmitted from one generation to the next as well as other good characteristics.

SUCCESS IN SWINE BREEDING.

J. E. Keller, in an article that won a prize in the swine contest conducted by the American Agriculturist, says of hog breeding and management:
As to breeds I may say all have their strong and weak points, and our thirty years' experience in handling 100 to 200 hogs annually convinces me that a better feeding animal is more frequently secured by crossbreeding. This is understood to mean the progeny of pure bred parent stock. The character of the progeny of pure bred parents can be foretold with a marked degree of certainty, but of crossed parents usually give the highest grade meats with the least offal, but many of them have been bred for heavy points and consequently have lost fecundity. I find relief in this line by using Chester Whites, Duro-Jersey or large Yorkshire sows, which I find prolific breeders and excellent mothers. These are bred to a thoroughbred Poland-China boar. A Poland-China boar and Berkshire sow brings a very superior feeder. In crossbreeding it is usually advisable that the sow should be of the larger breed, as this gives freedom of parturition and great suckling ability. The dam should have good length, wide between upper and lower body line, fair width, strong bone, set with straight joints and not less than twelve well developed teats.

A sow to be profitable should be able to produce two good litters annually and bring to weaning in good condition an average of eight pigs to the litter. Where a small herd is kept and warm quarters provided I find the early March litters the most profitable, as they are large enough to get more out of the summer clover pasture,

which is the best and cheapest pig feed. The sows may be bred to fall farrow in August or September and the litter get a good start before winter sets in. To carry very small pigs over winter is seldom profitable. Where several hundred pigs are to be handled the latter part of April or first of May unless the most perfect housing and artificial warmth are provided. Even then, on account of lack of exercise for the little pigs, the fatality is considerable. I breed at one time as near as I can and even up the small litters with the surplus of the large ones.

The parent stock should be in fair flesh and good health at time of mating to insure strong, healthy litters. The dam should have exercise during the period of gestation—this is very important—and she should be in good flesh at farrowing, as she will endure the drain on her system better during the suckling period and carry the litter to weaning in better shape. Her winter feed had best be of a tissue forming, laxative nature. Mill feeds, roots, field peas, soy beans, clover leaves, with an occasional dash of corn, are excellent. Bear in mind that the sow must be well fed during the period of gestation to secure best results.

The sow should be placed in her farrowing quarters a few days previous to this event, so she will become acquainted with her surroundings. She should be fed sparingly on scalded bran slops at this time to cool out and regulate the system and after farrowing should be given only tepid water or a very thin gruel for the first twenty-four hours, after which she may be put on her regular ration. If farrowed in a lean period it is fatal to the litter by seriously deranging the system of the



A BERSHIRE CHAMPION.

[Champion Poland-China boar.]

sow. Add to the feed gradually till on full feed in ten or twelve days. If the sow is very restless at time of farrowing, remove the pigs carefully as they appear and return as soon as farrowing ceases. In most cases it is better to leave the sow entirely alone, and in case of extreme cold weather provide sufficient bedding so she may burrow in it and her bodily heat prevent chilling of the litter.

The pigs will show a disposition to eat at three weeks old and should be encouraged to do so by providing a creep where shelled corn and sweet milk are to be had. By the time they are eight weeks old they should be on full feed and weaning take place without check to thrift or growth. Never give the dam during the suckling period sour or stale feed. This will derange the systems of the litter, causing dysentery and stunted growth.

Facts About Goats.
Goats do not eat grass as long as there are weeds and brush.
An Angora is a prolific breeder and a productive shearer until twelve or thirteen years old.
An ordinary fence is generally effective to confine goats. Their tendency, as a rule, is rather to go through a fence than to jump over.

Make the Cow Comfortable.
Whatever adds to the comfort of the cow increases the milk yield. Discomfort decreases the yield. Strive to make the cow comfortable. Give her shade during the hottest days and the best protection you can from flies.

POINTS ON THE PIG.
Some Notes For Breeders That Are Worth Remembering.
Pigs that mature early are the ones for profit when well cared for.
Wood charcoal, wood ashes and salt should be accessible at all times.
The greatest profit of the dairy consists in converting the byproducts into pork.
Don't let the hogs have access to dirty or filthy water holes.
Give them salt often, also plenty of fresh water daily.
Never use a scrub male and then expect a fine litter from a good sow.
Oats fed to sows during pregnancy, by slowing them broadcast on the ground, increase the size of the unborn pig also helping to keep the sow and litter in good condition.

A mixture of wheat and barley is more valuable food for growing pigs than corn alone.
Ground wheat and corn give better feeding results than ground wheat and rye.
The profit in feeding young pigs lies with those that are not stunted in their food.
More pigs are underfed than are overfed.
Soaking meal does not produce as great a gain in feeding value as soaking whole grain.
Economical feeding is not how much they eat, but what they assimilate.
Keep the herd free from lice by frequent applications of kerosene emulsion, or Minor's fluid mixed with water and sprayed on them, or by dipping if you have a tank. For small pigs use a half barrel to dip them in.

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