



ROOFING A BARNYARD.

ard Around This Cattle Barn Is Covered and Comfortable. It is to be a common sight to see...



ROOFED BARNYARD.

try, and this is in the use of completely covered barnyards, over which the accumulating manure from the cow and horse stalls, the calf and sheep pens, is evenly spread, and coarse litter thrown on top, the whole being kept...

Such a barnyard also provides splendid protection to animals when housed at night during the summer, this roof protecting them from heavy showers in the night and affording an excellent opportunity for exercise in the winter, as all the sides, except that toward the south, can be protected against cold winds by being temporarily boarded up.

The plan of a covered barnyard shown in the illustration provides not only the required protection of both animals and manure, but affords also an excellent grain chamber, where grain can be stored convenient for use. Under the side roofs is also afforded a chance for the storing of small tools and a great variety of articles that are occasionally in the way when stored about the farm buildings.

With all due regard to this and other matters for saving manure, however, it should be thoroughly understood that manure is never worth any more than at the moment it is voided by our farm animals.

It then contains as much nitrogen, potash, phosphoric acid, lime, etc., as it ever will contain. The sooner it is put upon the land the less waste there will be of those elements of plant food unless the land is so exposed that the manure will wash off or is so sandy that the plant food will leach away and be lost. Because excrement does not improve by keeping it is applied at once.

Hog Trough. Here is a trough which hogs would find difficulty either in rooting to pieces or upsetting. The supports explain themselves. They are placed under the trough at a distance of three feet apart. Each support is 2 1/2 feet long, 1 foot high and 2 inches thick.



THOUGH THAT WILL WEAR.

In the illustration, the trough is set into the triangular places made for it and nailed fast. Nail the trough fast to the supports upon its inside. Take two of the triangular pieces and nail them together to form the trough for its end pieces. One of the three cornered pieces is placed on one of the supports into the trough, wherever it rests upon the support, but first cut the sharp bottom corner of the pieces that go in the inside of the trough. This will let the swill water run from one compartment to another.

Warning Them Before They Know It.

The Humane Society of Connecticut ordered from F. Bruneau of Paris machines for killing horses and cattle. The device consists of a mask which goes over the animal's head and fastens behind the ears by a strap. A plate in front comes in contact with the frontal bone, well up on the forehead. When the plate is struck with a mallet, a spike passes through the bone into the brain. The animal loses no blood, suffers no torture, death is instantaneous. Four of these machines ordered by the society are killing horses and two for cattle.

THE MANEGE.

Training of Trick Horses For the Sawdust Arena.

"Manege" is a French word, and it means a circus where trained and gaited horses perform various difficult feats. There is not in English apparently a word that exactly expresses its meaning, and so it is coming to be used in this country and in England. The "e" is pronounced like long "a" and the "g" like "z" in azure. R. H. Dockrill, the famous trick horse trainer, explains the meaning of manège as follows: "The manège is the exhibition of a trained horse under the saddle with a rider."

In an interview in the Chicago Tribune Mr. Dockrill explained his methods thus: To teach a horse the steps of waltzes, galops, etc., and to take the cross foot steps so unnatural are the hardest. Trick horses, who are taught to pick up a certain handkerchief or several different colored ones at the trainer's behest; who stand upon their hind feet, lie down, kneel and do countless other things, can easily be trained in a few weeks, as they simply obey signs and words. But, while I have trained countless trick horses and ponies, I have in the thirty odd years of my career turned out only 30 or 40 manège horses. I began as a boy of 11 years in Paris 34 years ago at the Cirque d'Imperatrice as a rider, and until I was 21 years old I did little except as a rider. I then began a course of instruction under Professor Bousche of the Cirque d'Éto, who was certainly the finest manège and high school riding artist in the world. He soon saw that I had been an observer of his methods, as I had, for I had trained and broken two or three horses before I began studying with him. I did not give up riding at first, but devoted myself to my new work when other performers were asleep.

My methods? Well, I never use brutality in training a horse. That is the worst way to begin. Many horses are wild and must be subjugated and be compelled to acknowledge their master. Gentle force is necessary in subduing a wild or vicious horse, and you must take all the fight out of the animal, or he is liable to kill or badly injure you when you are not expecting an attack. The fiery Trachena stallions and Orloffs from Russia and many of the full blood Arabian horses are among the hardest to tame. I attack the horse gently from the outset, beginning with the front feet. With the whip I touch him smartly on one leg. He begins to paw with his hoof and finally raises it in the air. Then the groom lifts it up as I want the horse itself to do.

This process is repeated until the horse learns what is wanted of it, and after that it is easy. The animal will obey the motion of the whip or even of the hand or a gesture with the head. To change "tempo" or time comes next, and here the work begins to get hard. To teach horses to take steps, crossing one foot over the other, to make them acquire gaits which nature never intended that they should learn, and to teach them such accomplishments as dancing, marching, etc., are all done in a similar way with spur, whip and bridle hand for guides.

I never hurt a horse with a spur, though I use spurs even after the animal has become thoroughly trained. My spurs are as blunt as your knuckles, and they are never used to punish a horse, but simply to give him the right "cue," which he must have the same as an actor in making his speeches in a play. The right spur gives the horse the "cue" to use his left leg, and vice versa. In case I need to correct a horse I use the whip, never severely, but merely to give him a switching and show him he has not done well. When he has behaved admirably, I pet and reward him, and he is then ever ready to repeat his clever act. In riding I play to the audiences with my bridle, which, however, does little in directing the horse's movements, the feet and motions of the body being of principal importance. The most difficult feat of training I ever accomplished was teaching a horse to take a live fish out of a bucket of water with his mouth. It took me eight months to do it, beginning, of course, with a "dummy" fish. The trick was not worth the time expended upon it, and I believe no other horse was ever trained to do it, though many have been educated to pick up a silver dollar from a bucket of water.

Live Stock Points.

The ventilation of basement stables is a vexed matter as well as a vexing one. The best way is to have galvanized iron ventilators running from the stable out through the barn roof. The pipes should be protected with shutter hoods at the top. An unventilated basement stable not only poisons the animals confined in it, but the moisture from it rises and drenches the floor above it and the rest of the barn, molding hay and grain and rusting anything that has iron connected with it.

There is in England a school where poultry raising is taught. Pupils learn how to "buy, classify, house, breed, hatch, rear, fatten and kill the birds in a scientific manner." Incubators and brooders are also used, besides all other chicken machinery.

We ought to have in this country a school that would teach pupils how to make hens lay plenty of fresh eggs in winter, when people most want to eat eggs, so that the hen fruit could be had for something less than 5 cents a piece.

At the New York experiment station it was found that eggs packed in salt during March and April, after wiping with vaseline to which salicylic acid had been added, kept four or five months without loss, the quality after four months being much superior to ordinary, the temperature of each box varying little from 60 degrees F. Each box was turned over once in every two days.

The Indiana experiment station has found that wheat brings 77 cents a bushel when lambs and sheep are fattened for market on it.



ALL ABOUT CAPONS.

How the Caponizing Is Done—Best Breeds to Operate On—Growth of Capons.

T. Greiner of New York, whose experiments are always worth knowing about, gives a very interesting account of raising capons in a communication to Country Gentleman. His first trial was made last year with many precautions. This year, however, he has got at it in a business way and makes short and successful work of it. He writes: My way has been to shut up from 8 to 12 cockerels at night, leave them without food and drink until the second day following and then caponize them. As soon as caponized the birds are placed in a small pen with an earthen floor, where they are well fed with soft food for a few days, during which time they are examined once or twice and relieved of "wind puff," if such happened to occur, by a slit made into the puffed up skin with the point of a keen bladed penknife. In a week or less we give the birds their liberty and let another lot, just caponized, take their places. I find, however, that the birds when skillfully operated on are so little affected by being caponized that they will eat on the operating table while undergoing the operation. Whether kept in confinement for a few days or given their liberty at once, whether fed soft food or whole grain, they are sure to heal up and recover perfectly in about a week's time.

Usually I open the birds on both sides, first on the left and more expediently than to try to remove both testicles from one side. Only when the lower testicle appears in plain sight and in a favorable position do I take both from one opening, but even then, contrary to the ordinary directions, I take the upper one first, as I find no difficulty to remove blood (should any appear) by means of soaking it up with a little piece of moist sponge, and thus bring the lower testicle in plain sight again. When I first began, I used the horse-hair canula. I am now using thin tin-rod wire, such as bookkeepers use for fastening artificial comb foundations in their frames, and find it far superior to the manufacturers' wire and to horse-hair as well. Its use simplifies and shortens the task materially, for the horsehair often breaks and frequently requires repeated trials before it can be slipped around the testicle.

For years I have kept the Black Langshans, and I yet consider them the best general purpose fowl. As winter layers they are to hard to excel, but if I were to make a business of raising broilers I think I would prefer Plymouth Rocks. Leghorns are too small. For a heavy, plump bodied broiler or capon the Indian game will be hard to beat, and its crosses are also excellent, but as egg layers the breed ranks very, very low. We can caponize Langshans, Cochins, Plymouth Rocks, Games, Leghorns, etc., and their crosses with about equal ease. Only the Brahmas have given us some trouble on account of the wormlike shape of their testicles. Game Langshan crosses sometimes have too much flesh on the ribs to show the latter well, and we sometimes make the incision more by guesswork than by sight or feeling of the exact spot. Dealers in caponizing supplies almost invariably assert that capons grow faster and reach a greater weight than roosters, but such is not my experience. I have not been able to discover much difference in their respective rate of growth. But it is certain that capons grow fatter and plumper, and that their meat is much sweeter and more tender. I dislike the smell and flavor of roosters when it comes along in the winter or toward spring, but I can find no fault with the taste of capon meat. The price alone, compared with that of rooster meat, proves the superior table quality of the capon.

Keeping Turnips and Potatoes.

The average farmer in the west looks more favorably at practices within his means than upon appliances more costly and which require more or less of experience to accomplish successfully. Now, turnips can be kept in the ordinary cellar fairly well about half way through winter. But nineteen-twentieths of the farmers have reached the conclusion that to kill them is by far the best plan. There is no art required beyond industry, a spade and a wagon load or two of manure. The turnips should be topped close to prevent sprouting, and dirt and straw and manure sufficient to keep them from freezing should be heaped upon them. A Prairie Farmer correspondent writes: "I have made long hills of turnips and been able thereby to feed my cows a winter. Turnips make cows pour the milk down and are almost a substitute for green stuff. They are a good second to grass. It was never any trouble to me to get at my turnips all winter, and all the winter, too, they were welcome on the table."

Potatoes take more kindly to the cellar than any other root crop. If the cellar be kept just above freezing point and they be kept dry, they will keep quite well through the winter. Nevertheless I prefer to bury them the same as I bury turnips and apples. They keep with the crispness of the potato just dug, and in my judgment are better every way than those in the cellar. The objections people have to burying fruits and roots grow out of the difficulty at times of getting at them, because of storm and snow. But the hill can be made in the lee of a fence or building and in addition a couple of days' supply may always be kept on hand.

New York is to have a Wool Exchange, which will handle imported wool almost entirely. An immense building is to be erected where wool may be sorted, graded and stored and held or sold on certificates.

FORAGE PLANTS IN DRY SEASONS.

Professor Pammel's Observations as Expressed in The American Agriculturist.

The past season was a remarkably droughty one over a large section of the country. At Ames, central Iowa, the rainfall in May was only .93 inch, June 3.37 inches and July .04 inch, with an utter absence of dew except for a few days after rains, and the humidity of the atmosphere below 15 per cent for several days in succession. Naturally many forage plants could not grow nor thrive. Blue grass through this dry weather withstood the drought. True, it made but little growth, and that during May and part of June. During July and part of August pastures and meadows were dry. The grass cured in the fields, and in many cases where pastures were not cropped too close horses and cattle fattened. The wet weather during the middle of August revived blue grass in this locality, so that pastures, meadows and lawns look green. This shows that blue grass is a wonderful drought resistor, and it will always remain one of the best general purpose grasses for Iowa. Professor Beal correctly states that "June or blue grass starts quickly in spring after mowing or feeding unless the weather is quite dry. It is very rarely injured by the cold and very hard to kill by dry weather, hot sun, the tramping of hoofs or close mowing. It is a perennial, living on and on almost indefinitely." In regard to its nutritious qualities it stands nearly at the head of all grasses, being almost twice as nutritious weight per weight as timothy. Although blue grass is appreciated more and more, it is not as much in favor as it deserves to be. Its chief value is in its leaves, which, as Professor Fletcher says, "although freely produced from early spring till late autumn, are not always recognized as belonging to the weak flowering stem which appears in June."

The tenacity of this grass is due to the abundant development of root stocks which occur near the surface of the ground. These are produced in great profusion during the damp weather of early spring. Dry weather therefore does the plant little injury. It is not generally considered as valuable for meadows as some other grasses. However, if cut early, it makes nutritious hay. With sufficient moisture two crops can be cut. The second crop will only contain the leaves and succulent stalks if mixed with clover. For cattle no other hay will compare with it. I have seen three crops cut in Wisconsin where irrigation was used.

Experiments in Silage.

The Wisconsin station has reported on an experiment in siloing corn. It has discovered that there was a loss of 7 per cent in dry matter where the ears were picked off and dried and the stalks siloed more than where the corn, ears and all, was siloed. When feeding out the corn, it was found that the cows ate a little more of the silage containing the ears and also drank a trifle more water while on this food, but the difference in either case was small. They also ate a little more of the silage containing the ears than of the other feed, which had the dried ears added to the silage. The cows, however, produced more milk and more butter when fed the silage, ears and all. The difference in milk yield was 411.6 pounds, or 3.6 per cent, and of butter 16.5 pounds, or 6.9 per cent.

Figuring on the basis of the amount of dry matter, it was found that 100 pounds of dry matter in the siloed corn ration produced 68.9 pounds of milk and 3.18 pounds of butter against 68.3 pounds of milk and 3.08 pounds of butter from the ration composed of siloed stalks and dried ears. Add to the greater feeding value of the corn when siloed, ears and all, the greater amount of dry matter attained by preserving the corn in this way, and the difference between the two methods is more marked. Then, taking into consideration the extra labor of picking, husking, drying the ears and grinding the corn, the economy of siloing the ears with the stalks is very apparent.

Irrigation Experiments.

The result of irrigating wheat at different dates from May 13 to Aug. 3, at the Utah station, although not conclusive, indicate that early and late irrigation increases the yield of grain at the expense of straw. In case of oats and potatoes early irrigation (May 11 to July 25) produced a smaller yield than usual irrigation (June 1 to July 7). Tests of methods of irrigation were not entirely satisfactory, but the results favor flooding and bed work irrigation.

Odd Mention.

There is a shortage in the broom corn crop.

The manufacture of sorghum is rapidly becoming a feature of farming in southeast Kansas.

There will be more wheat fed this year in southern Ohio than for the past 25. Nearly every farmer is feeding wheat, and very large amounts are being fed to hogs.

The Kansas farmer says that the practicability of profitable irrigation by wells and windmills has been demonstrated in that state.

The arrival of the Russian thistle in Ohio has been announced.

The canaigre plant is coming to the front as a new source of supply of tanning for use in the leather industry.

Seed corn selected from plants which in an arid season have maintained a sufficient measure of vitality to produce ears of full length, well filled with plump kernels, possesses the requisite qualities for high breeding. A series of such years would possibly develop a species of maize of sufficient hardness to thrive with even a modicum of moisture.

Authentic reports from Manitoba assert that the total wheat yield of that province is close on to 20,000,000 bushels, nearly 5,000,000 bushels more than last year, and every particle has been saved.

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