MODEL SHEEP BARN.

Dryness and Ventilation Are the Two Chief Essentials.

Dryness is one of the essentials of a good foundation for a healthy shed.

Second only to this in importance is the ventilation. Warm, close sheds mean the downfall of the sheep that are folded in them. A sheep is warm in body, as its blood temperature is high, and then the nature of the fleece is such as to be very retentive of the body's heat.

SHEEP SHED.

The amount of room required by a sheep will vary considerably, ranging from 10 square feet for the Merino and Southdown to 15 square feet for the larger breeds, including the Cotswolds and larger Downs. It is not advisable to crowd breeding ewes into a small area. A breeding ewe weighing 150 pounds will require fully 14 feet of space at the fodder rack.

Sunlight particularly encourages the growth of the lambs, and it is to them that the shed will do the most good. To further the entrance of sunlight the windows may be higher than they are wide.

In addition to these things a shed should be large enough to supply storage for sufficient fodder to feed the sheep while they must be sheltered. Estimating that a ton of hay requires 500 cubic feet, and that a sheep will not eat over three pounds of hay per day, it would require about 125 cubic feet of space to contain the hay needed to maintain a sheep during six months. There should also be room available for a root cellar and for storage of straw.

For the comfort of the lambs and lambing ewes an apartment should be provided with small pens for them. This room should be made warm and well lighted and the partitions removable, so that when not in use during the fall and winter it could be used as a run pen. This room is a necessity; for it is almost impossible to rear lambs with any degree of success unless the ewe may be put in a quiet place by herself a day or so previous to lambing and permitted to attend to her lamb undisturbed by others for the course of three or four days. These pens are of use also for sick or injured sheep.

Another room should be opposite to these pens to serve the purpose of a shepherd's room, as well as supplying a shearing floor and a granary. Here a stove is in this room. Figures 1 and 2 represent a building 9 feet high, 40 feet wide and 60 feet long. It has two stories, the first being 9 feet high and the upper one 6 feet from the floor to the eaves. The studding are 16 feet long. It is advisable to make the height of the ceiling of the lower story 9 feet to secure the best results in ventilation. The sills are 6 by 8 inches, resting preferably on a wall, and if put on posts they should be heavier.

The ground of the inside as well as that of the outside should come close to the sill, so that no obstruction is offered by the sills to the free passage of the sheep through the doors. The doors are all 4 feet wide, and those that are used for the sheep are sliding. The windows are 2 feet wide and 4 feet high. In the center of the sheep apartment there are double doors 10 feet wide. When both are open and the center post removed, a wagon can be used to remove the manure from the pens.

There are chutes at each end of the feed racks down which the hay is thrown from the loft. From where it falls it is easily distributed into all the racks. At the ends of the racks are small gates, which open into every pen.

The lower story is divided into four pens, each of which will hold at least 25 large sheep. It would be well to retain the pens at the south end for the use of breeding ewes and their lambs, and the other two for fattening sheep. The doors and windows have been arranged so that these pens may be again divided. This will be advantageous when the ewes lamb and it becomes advisable to divide them up into small lots, with the lambs of equal ages in each. The partitions between the pens are all movable.

GROUND FLOOR.

The loft above is given altogether to the storage of fodder and straw, with the exception of a small apartment above the shepherd's room, which makes a place for the storage of wool. A stair way leads up to it from the shepherd's room. The loft is reached from the sheep-fold by means of two ladders, one at each end, where chutes are situated.

Ventilation is provided for by shafts, which run from both sides under the roof to the cupolas on top. These shafts are made of inch boards and run from three different points on each side of the fold. There is a square opening at the lower end, with a cover that by being pushed in regulates the size of the opening. In addition, the hay chutes are open. The hay is taken into the loft through an end door with a hay truck; otherwise it would be better to take it in through a door situated above the double doors of the lower story.—Professor J. A. Craig.

EARLY BITTERS.

Observations Made and Reported Upon at the Ottawa Experiment Station.

Last season's observations made at the Ottawa station, where there is a demand for sitters in the early hatching season, have been reported upon. It was noticed the sitting varieties were seemingly tardy in becoming broody. In the case of the farm fowls the majority of the mixed breeds kept for sitters did not become broody at any period of the season, and the thoroughbred Buff Cochins had to be used as early sitters. The first hen to be put on eggs was a colored Dorking on the 26th of March, followed by two Buff hens on the 5th of April and four others on the 15th, 22d, 27th and 29th of the same month consecutively.

In the next month 4 Buff Cochins, with 3 Brahmas, 3 Plymouth Rocks, 1 Black Russian, 2 Wyandottes and 3 mixed breeds were used as sitters. It will be seen that of the total number of sitters three only were not thoroughbreds. Apart from their late laying qualities the Buff Cochins, in two successive seasons, have proved invaluable as early and reliable sitters. Had their services not been required for hatching out chickens they would have been broken up and made to lay again. For an early sitter, when it can be had, a light hen is to be preferred, for at that time eggshells are apt to be thinner than at a later date.

At this station, while the chickens were hatching, care was taken that the sitters were not disturbed. This is most important. For if the sitters are disturbed after the eggs are "pipped" the young chicks just coming into the world are apt to be chilled. If the hen is irritated or frightened, she is likely to become restless and crush the young ones to death. After the chickens were hatched the broken eggshells were removed to make the nest more comfortable. But this should not be attempted by any but an old hand. It is best to leave the hen alone if she is a reliable sitter.

Previous to being put into the coop with her brood the hen was fed and allowed to drink apart from the chicks, otherwise she would have greedily eaten up the dainty food intended for the tender youngsters. It must be remembered that for two or three days or nights the careful mother has not left her nest, for had she done so while the chickens were hatching (except in very warm weather) there would have been no chicks. As a result she is so hungry and thirsty that she will voraciously eat and drink what is placed near her.

Occasionally it happens that a hen will become so nervous or excited at the "peeping" of the chicks in their efforts to break out of the shell that she will trample them to death. Such a hen should be snatched and not set on eggs again, as she is not reliable. One case occurred in which the hen was discovered eating the eggshells before the chicks were actually disengaged from them, the result being the loss of four chickens. A spare sitter was fortunately at hand, and the remaining half hatched eggs were at once placed under another and the lives of the chickens saved. After hatching the chicks were allowed to remain under the hens for 18 or 24 hours until thoroughly dried. With the mothers they were then placed in coops outside in the sunshine. If hatched before the grass had grown, they were kept indoors, the bottom of the coop being covered with sand. The dry board floor will soon have used the little ones up—literally put them off their legs.

Cabbages.

Early cabbage is one of the foremost crops of the market garden and usually yields a fair profit. The winter plants are set out early as possible in highly enriched soil, in rows from 2 to 2½ feet apart, the plants 16 or 18 inches apart in the rows, and down into the ground to the heart. Cultivate and hoe frequently to keep the ground mellow, moist and free from weeds. Occasional dressings of nitrate of soda, at the rate of 250 to 300 pounds in the aggregate, will seldom fail to pay exceedingly well.

This is the market gardener's method. The home gardener is less anxious to get cabbages for the table in May or June. If he is content to wait until nearly July for a really superior article, he may adopt Greiner's method of sowing early in the spring (March or April) in open ground in drills 2 or 2½ feet apart, and thinning to 15 or 18 inches in the drills, leaving the best plants. For a second early crop the market gardener can also sow seed in April and transplant in May to the permanent patch or thin to the proper distances apart.

Selection of soil for the crop is also of utmost importance. Nothing can be better than a rich calcareous or sandy loam, naturally drained.

In the Vegetable Garden.

Succession cabbage is a new kind that promises well. It is classed as a second early variety.

The Bush Lima bean is generally conceded to be valuable. It is very productive and is an early variety.

It is claimed for the Snowball cauliflower that it is early, a sure header and very profitable.

A novelty among medium early varieties of sweet corn is the Country Gentleman. The ears are smaller than some other sorts, but the quality is said to be excellent.

The new pea Carlos is a wrinkled variety, dwarf and extra early.

The Burbank potato is one of the earliest varieties. It is very productive.

Rural New Yorker No. 2 is an intermediate potato of fine quality. It is a big yielder.

The Jersey Wakefield cabbage is generally conceded to be a first class early variety.

The Hanover is one of the best varieties of lettuce.

The Bunch sweet potato, one of the newer varieties, originated in Mississippi. It is claimed that it combines all the better qualities of the best yams, without being so large and coarse.

Methods of Seeding Wheat.

At the Ohio station the results from drilling wheat at depths of from one to four inches as compared with those from sowing broadcast are very favorable to drilling in 1892. The average results for four seasons at the same station also favor drilling. Cross drilling has given better results than drilling one way. The roller following after each box of the drill did not add materially to the yield of grain.

Tabulated data are given for an experiment at the Indiana station, in which wheat was sown in drills on four plots at a depth of from one to four inches, and on five plots at rates of from one half to two bushels of seed per acre. The depth of the drills seemed to make little difference in the yield, but in general the yield increased with the amount of seed used.

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