

the snow is too deep or hard to permit of the sheep working down to the natural feed, though in the Highlands this run had to be much increased. Under such natural conditions, the ewe stocks live and do well, 80 to 90 per cent. of lambs being an average crop, and 4 to 4½ pounds of unwashed wool an average clip. The lambs run with their dams till four or five months old, and are then sold off, with the exception of the best of the ewe lambs, and a few selected ram lambs retained for the upkeep of the breeding flock. The wether lambs may be retained for wethers, but are generally fed on the arable farms on turnips and grains, and sold fat when 12 to 18 months old. The carcasses may weigh from 40 to 60 pounds, and realize the top price in the London Dead Meat Market, being full of lean meat and free from that excess of fat found in some of the heavier breeds. The surplus ewe lambs and draft ewes, when four to six years old, are taken to the farms at a lower elevation, where the pastures in spring can be supplemented with roots and grain, and are there mated with Border Leicester rams to produce the well-known half-bred lamb. These half-bred lambs are extensively bred all over Scotland and the North of England, and are in great demand, owing to their early fattening properties and heavy clip of valuable wool. So extremely prolific and profitable have half-bred ewes proved when kept on good dry, arable farms, where a plentiful supply of roots can be grown for winter food, and luxuriant young grasses for spring and summer, that in large parts of the Border Counties the whole economy of the farm is based on the return from the half-bred ewe stocks. Under such circumstances, and with careful management, 120 to 150 per cent. of lambs may be looked for, and these, with generous treatment, grow rapidly and realize good prices while quite young. The fleece of the pure-bred Cheviot forms an excellent covering from the winter storms on the exposed hills, being of moderate length, thick, dense, and not given to shedding along the back, as do some of the long-wools. Of a good quality, the wool is used for many purposes in the hosiery and tweed trades, in competition with New Zealand cross-bred and other foreign wools of that class. Though admirers of the Cheviot may proclaim them the most handsome of all the British breeds, their claim to popular favor rests on more substantial grounds. At the Scottish National Fat-stock Exhibition, held at Edinburgh in December, 1911, the winning pen of three wether lambs scaled 526 pounds, five weight, the three shearing wethers 750 pounds, the three ewes 750 pounds, while the shearing wethers were awarded the Champion Cup as the best pen of sheep in the show.

Native to the border hills, Cheviot sheep are found all over Scotland, England and Ireland, where the fine carcasses of mutton are of most value; also in large numbers in the far-off Falkland Islands and Patagonia, where the wool is the principal asset. Experiments have lately been made with Cheviot rams in British South-east Africa, where the native sheep are a woolless, hairy breed, but, unfortunately, the pioneer ram, after surviving all his British confreres, fell a victim to a hungry lion. The old Spanish proverb says, "Sheep have golden hoofs," and to all engaged in agriculture for a living, the remarks of Judge Fitz-Herbert in his Book of Husbandry, printed in 1534, are of more than passing interest. He says: "An husbander can not well thryve by his corns without he has other cattell, nor by his cattell without corne. And because that shepe in myne opinion is the most profytablest cattell that any man can have, therefore I purpose to speake first of sheep."

No believer in the place of sheep on the farm can say more, or say it better, than this old writer on English agriculture in the time of Henry the Eighth. JOHN BORLAND. Dumfries, Scotland.

**A Bigger Slice for the Farmer.**

Editor "The Farmer's Advocate":

You are doing a great deal to maintain the right of your paper to its title, and there is certainly a call on the part of the farmer, who bears the part of hewer of wood and drawer of water for the Dominion. The products of his labor are exploited by the men who have too much money already, and still are hungry for more—a feature of the trouble. Mr. Duthie, when over here judging Shorthorns at the exhibition, remarked, with his natural shrewdness, that he thought the Canadian farmer was not getting enough remuneration for his labor. He was right there. Alongside of that condition of things, those who buy and manipulate his produce are disbursing dividends up to 100 per cent. I was turning this over in my mind, especially in respect to the pork packers, when a contemporary published an account of co-operative packing factories in Denmark which made satisfactory results. Could not such a system be inaugurated in Ontario, so as to retain

the profits for the producers, after paying expenses of handling and marketing?

Then, cattle-feeding is one of the least profitable lines in this country, and prices will not allow of the production of best beef. Animals drag along half starved till about three years old, when extras are applied to put them in a half-fat condition, making the toughest beef. It is the rarest thing to see marbled beef, the result of animals being well fed all along and fit for the block at two years. I write this from the standpoint of one who, engaged in cattle-feeding for forty years in Scotland. I think, also, the system of handling and distribution there is more economical. Every butcher of any standing has his own slaughter-house, or a booth in the public or municipal one, and buys his cattle himself at the auction marts, which only takes him out of his shop a few hours at a time, and thus only one middleman comes between producer and consumer, and is a necessity. Scotch farmers are coming to their own now, getting \$10 a cwt. (112 pounds), live weight. For long, American competition brought them to \$8, and at that they did not pay; and I do not see that they can be fed more cheaply here, all things considered. B. E. Halton Co., Ont.

**Approximate Gestation Periods of Farm Stock.**

Mare, 11 months; cow, 9 months; ewe, 5 months; sow, 16 weeks. The goose sits 30 days; hens, 21 days; ducks, 30 days; turkeys and peahens, 28 days; pigeons, 14 days.

**THE FARM.**

**A Plank Frame Without Truss Construction.**

Editor "The Farmer's Advocate":

I have seen a number of plans of plank-frame barns in your valuable paper, but these are all truss-frame style. Is this stronger than a frame with beams, and purline post running from the floor straight up? I intend building a plank-frame next summer, 100 ft. by 45 ft., posts 18 ft., with gambrel roof. I would like to put up two or three hay-fork tracks, to save work in spreading, one track at the center, and one as close to

ing a round roof, or, if the span be not too great, a self-supporting roof will offer the same advantages. Either form of construction gives great storing capacity, but requires much care in designing and building, and for that reason I have never presented the readers with designs of either, not because they cannot be built, but from a fear that someone would try to build with too light material, or endeavor to alter the design, either of which would have disastrous results, and give the whole plank-frame construction such a blow as would cause the loss of many dollars to the farmers of Canada, through a fear of the same misfortune befalling their trussed-bent frames. This fear would be entirely misplaced, as the truss frame has large factors of safety in every timber and joint far above any that it will ever be called upon to meet; whereas the other frames have a sufficient allowance for safety if built exactly according to the design under which they are intended to be erected.

A round roof presents more than ordinary difficulties in erecting, and requires a good, careful, well-equipped contractor to carry out the work to satisfaction. However, all these difficulties have been overcome, with results that are pleasing, and, with the leave of the editor, I feel that I may, after giving the above cautions, safely present drawings of a round-roof barn as soon as they can be prepared.

In order to have the readers put confidence in the frame which I will submit for their attention, they should know that I am well acquainted with this style of building, as I have built one having a span of 80 feet, and one with span of 72 feet, both of which have no interior post or column in this tremendous width, yet these buildings have been standing for several years, with no appearance of any defect or buckling.

I have also seen a building with a span of 52 feet, covered by a self-supporting roof, which looked as if it was going to be all right; but, in writing for "The Farmer's Advocate," I eliminate all these "freak frames," and only advocate good substantial construction, and quite agree with the editor when he said, some weeks ago, "Build solidly and well."

The difficulty of keeping the cut straw from falling out of the mow can be overcome by building a battery 3 or 4 feet high, and bracing it to the floor on the bay side, while the end bent is stiffened by a 2 x 12-inch plank spiked flat on top of the 2 x 8-inch beam planks, which cross at the level of the side plates, and the ends of this are tied across to the side plates by a 2 x 10, running diagonally across the corner and spiked securely at each end. This presents the edge of the plank to the pressure, and this is the feature that makes the plank-frame so strong; all stresses are met by the timbers being laced edgewise to the thrust.

The purline plate is made of two planks 2 x 8 in., set 2 inches apart, and resting edgewise on the sub-support and top of the purline post, thus presenting the upper edge to the thrust. The purline plate is made of two planks 2 x 8 in., set 2 inches apart, and resting edgewise on the sub-support and top of the purline post, thus presenting the upper edge to the thrust. None of your timber in the trussed bent would be of such a length as to be impossible to get, as the purline posts would be 2 x 10 in. x 32 ft., and the roof support 2 x 12 in. x 33 ft. 6 in. The number required is not large, and it seems to me that you can get these from any lumber company. The rafters of both roofs are the same length, exclusive of projections, and will be 16 ft. 6 in., the lower rising 12 inches in a run of 8 inches, and the upper 8 inches in a run of 12 inches.

I have taken up quite a lot of space in answering this question, but I think it is well to look into the question of each subscriber, and give him every aid in his undertaking, to insure the building of structures that will be an ornament to the farm, and a monument of substantiality, as well. A. A. GILMORE. Huntingdon Co., Que.

Every year we are more strongly impressed with the supreme importance of drainage—not tiling, merely, but surface drainage as well. Every gallon of free water run off the surface by furrows or through it by tiles makes for an earlier seeding, a warmer seed-bed and a better crop. Drain, drain, drain!



An Attractive Farm Home. Residence of Wm. Thomas, York Co., Ont.

the purline as possible, but with truss frame this would be impossible. Also, it would not be possible to keep cut straw from the blower into the mows at all. I would like to hear from Mr. Gilmore or anyone who has such a frame. Would like a little more information in regard to strengthening the end bent. Is the purline plate made hog-trough style, same as plate? How many planks are used, and what widths are in same? FARMER'S SON.

I have built plank-frames having the purline posts extending straight up from the floor timbers and having cross timbers or beams across from post to post. These are strong, and quite a good deal cheaper in material and work than a timber frame, but the truss bent is stronger and cheaper, and for these very good reasons I have been advocating its use. A few years ago it was a doubtful kind of frame, but now it has been improved and studied, until it surpasses all others, seeing that it is designed to meet all stresses that are all likely to be imposed upon it, and having the interior timbers so arranged as to present no obstruction to storing or settlement of the fodder.

The only kind of frame that will allow of the hanging of hay carriers at any point is one hav-