

some clear cement before the other is thoroughly dry. This will give a hard finish, and will give a foundation that is cheap and durable. While the cement is soft it is a good plan to strike the circle which will mark the line upon which the staves are to be set.

Hemlock, white and yellow pine, make very good staves. Perhaps hemlock is the cheapest and most satisfactory wood that can be used. It should be sound and free from loose knots. If the silo is to have a diameter of twelve feet or less, the staves should be made of either 2 x 4 material, unbevelled on the edges and neither tongued nor grooved, or of 2 x 6 material bevelled slightly on the edges to make the staves conform to the circular shape of the silo. If the silo is to have a diameter of more than twelve feet the staves should be 2 x 6 material, and neither bevelled nor tongued and grooved. If the staves are left perfectly plain, then when they are set in place and drawn together the first point of contact will be the inner edge, and the tighter the hoops are drawn the closer will become the contact of the staves at the inner edge. The staves should have a smooth inside surface.

There are several methods which may be followed in setting up the silo. Bulletin 167 of the Cornell Station, from which most of the facts in this article are taken, gives a method by which four 6x6 posts are set upright to run the height of the silo. These should be securely stayed in place and when they can be safely used as part of the scaffolding. The work of setting up and preserving the circular outline may be materially aided by the use of old barrel staves. For a silo 12 feet in diameter the curve in the stave of the sugar barrel is best adapted, for a 16 foot silo the flour barrel stave is best and for a 20 foot silo or more in diameter the stave of the cement barrel is recommended. The first stave setup should be made plumb and should be toe-nailed at the top to one of the posts and in like manner succeeding staves should be toe-nailed to the preceding stave. When a silo stave is set in place nail to it on the inside a barrel stave at bottom or top with shingle nails. This is one plan. When small silos are built the same plan might be adopted as in building a cistern of any kind. Where staves are not long enough to reach to the top of the silo they should be carefully spliced by squaring the ends and toe-nailing securely together and by breaking joints.

The hoops for the stave silo are usually made from five-eighths inch round iron or steel rods. When these are used it is recommended to have each hoop in three or four sections. If the four posts are used as described then the hoops would need to be in four sections. The ends of the sections could pass through the posts and have a thread and nut for tightening purposes. The bottom hoop should be about six inches from the base of the silo, the second one two feet from the first, the third two-and-one half feet from the second, the distance between the hoops being increased by one-half foot until they are three and one-half feet apart, which distance should be maintained except at the top, where a hoop every four feet will be sufficient. The hoops should be drawn tight enough to draw up the cracks before being filled. Suitable doors can be made by cutting the staves between hoops at convenient distances apart. The staves should be sawn so that they can only be put into place from the inside and a piece nailed across on the outside to keep them together. The places where the doors are to be should be known when the silo is building when, by sawing one of the staves for the door, then the others can easily be cut afterwards. When constructed in the barn no silo roof is needed. If constructed outside some kind of a roof is needed. If the silo is at the end of the barn a lean-to roof will serve the purpose. A plan of hooping a stave silo with fence wire is described by John Gould, Ohio, which seems to work well at least on small silos.

The above will give those who contemplate building a round silo some idea of how to go about it. Cheaper methods can no doubt be found. But it is well not to build too cheaply if permanency is required. A good foundation is necessary as well as a good bottom or else there will be a big waste.

Ensilage for Poultry

A good way to provide green feed for poultry during the winter months is a small silo. For this purpose a barrel, tank, hogshhead or box will do if good pressure is provided. The *Poultry Keeper* gives the following advice in regard to making ensilage for poultry:

"Corn, clover, alfalfa, grass, bean tops, pea vines, or anything may be put in this silo, but all materials must be packed in firmly and then weighted. All materials must be as near maturity as possible; that is, corn is used when the ears are about beginning to glaze, and clover is cut when in blossom, before the blossoms turn brown. This is because very young plants contain too much water. Everything that goes into the silo must be cut as fine as possible so as to pack well. The material will then be ready for use for poultry in the winter season. The contents will keep for a year or more provided the pressure is sufficient to exclude the air. If the air enters fermentation will result. Cabbage and such watery substances are not suitable for ensilage.

"A silo should be about 8x8 and eight feet deep, though it may be smaller. A barrel is too small, as the top and sides of the ensilage spoil first. To explain how to give pressure suppose that a barrel is used. Have the head of the barrel a trifle smaller than the opening. Pack the contents into the barrel, put on the loose head, and then put heavy stones on the head, the more the better. Keep on filling in the material until the barrel is full, leave the head on and set a heavy stone on it. When using the material always replace the head (or top), and the contents should be so closely packed as to require picking out with some instrument. A silo four feet deep and 4x4 feet will hold more material than will be wanted."

Dairying and Beef-Raising

In this country there is plenty of room for both beef raising and dairying to be carried on with profit. While there may be some farms better adapted for one line of practice than the other, yet whether beef raising or dairying will be carried on depends more upon the inclinations of the individual farmer than upon any special fitness of the land for producing milk or fattening cattle. The question of profit is an important factor in enabling the farmer to decide which line he will follow. For the past five or six years dairying has, perhaps, been a more profitable line for the average farmer to follow than beef-raising, and, as a result, the milk-producing qualities of the common cattle throughout the country have been given prominence at the expense, perhaps, of the beef-producing qualities. Because of this tendency during recent years there is a dearth of really choice beef cattle in the country at the present time, when prices for these are higher than they have been for years.

Of course we do not wish it to be inferred from this that this improvement of the milk-producing quality should not have taken place. Far from it. The farmer who keeps cows for milking purposes should aim to keep only the very best cows, and those that will give him the largest amount of profit. On the other hand, where beef-raising is carried on, the aim should be to produce the very finest beef cattle possible. Whether it is possible to produce good beef and to keep good milch cows on the same farm there may be a difference of opinion. The fact is, however, that a great many farmers in this country who supply milk to the cheese factory or creamery also raise beef cattle. And it is this class of beef cattle that has deteriorated very much in quality during recent years. The specialist in beef-raising, as a rule, either raises good cattle or none at all. He realizes that there is no money in raising any other kind, and he makes it his particular business to fit and prepare his cattle properly for market, a quality that is very much lacking in the general farmer.

The situation is very well summarized by Mr. John Campbell, Woodville, Ont., a well-known cattle feeder in a