THE FARMER'S ADVOCATE.

STAVE SILO FOR SMALL HERD GROWTH ON MARE'S LEG.

1. How many feet in diameter would you advise building a stave silo to feed 14 head of cat- "Questions and Answers" especially helpful. In tle, so that silage would not spoil between feedings ?

2. Would a clover sod plowed this spring yield a satisfactory crop of corn, without manure? J. D. Waterloo Co., Ont.

Ans.-1. A stave silo 10 feet in diameter and 21 feet high will hold about 28 tons of well matured corn silage. A 10 by 24 ft. silo will hold 34 tons; a 12 by 20 ft. silo will hold 38 tons, and a 12 by 24 ft. will hold about 50 tons. On the basis of feeding a daily allowance of 40 lbs. per head for a feeding season of 180 days, and a crop of 10 to 12 tons per acre, 14 cows would require the product of 3 to 4 acres of corn. Considering all things, we would advise a 12 by 24 ft. silo, as one has to allow for about 10 per cent. shrinkage. That is, if 90 tons of silage is wanted, about 100 tons must be placed in the silo, and from a silo 12 feet in diameter enough would be fed off each day to keep the silage from spoiling, while 16-ft. lumber would work in all right, part of the boards being cut in two for splicing, breaking the joints; besides, it is desirable to have some silage left over for summer use in a dry time, if pastures fail.

2. If the land is rich, or in real good heart, a fair crop of corn may, with good cultivation, be grown without manure from clover sod plowed this spring. We have seen a very heavy crop grown from sod top-dressed with short manure before plowing

CONVEYING WATER BY SIPHON.

A subscriber inquires as follows : " I have a good well at my house, but the well at the barn, 300 feet distant, does not supply sufficient water for the stock. There is a very slight fall, less than a foot between the two, the ground at the barn being a shade lower. The well at the house is 21 feet deep and the well at the barn about 20 feet. The latter is a clay bottom and will hold water emptied into it. The well at the house has about ten feet of water. I do not want to go to the expense of a windmill and tank at the house. Can I get the water from that well to the well in the barn by pipes, using the principle of the siphon, and if so, how? If that is not workable, can you suggest any other inexpensive plan?'



Ans .- The water from the well at the house being 10 feet deep, and therefore standing about 10 feet higher than the bottom of the well at barn, a siphon will operate successfully in this case. A 1-inch or 11-inch iron pipe extending near to the bottom of the well at the house, and laid in the accompanying diagram, running someas what below ground, and at the other end extending near to the bottom of the other well, is the principal part of the apparatus required. In addition, an air pump will be required to start the siphon and to pump out the air which may occasionally accumulate in the siphon. A hydrant, with check valve or stopcock below, may be placed at the highest point of the siphon (at E in the plan), and to this an air-pump or ordinary suction pump may be attached to fill the siphon and occasionally to pump out the air if any should accumulate. I believe this siphon will work continually except for an occasional gathering of air which escapes from the water. It will be necessary to have both ends of the pipe below water, then the air-pump at E will exhaust the air from the pipe and fill the pipe with water. The pump may then be stopped and the siphon will work of its own accord so long as there is a difference in level between the water surfaces in the two wells. So far as leaking air is concerned, there is less danger of a slight leakage stopping the siphon if the siphon is built exactly in the shape indicated by the sketch, viz., running up to the hydrant and down again at an angle, instead of a considerable length of horizontal pipe. With considerable slope, the air is more likely to be carried out. J. B. REYNOLDS. Ontario Agricultural College.

FOUNDED 1866

REMOVING HAIR FROM HIDES.

We enjoy your paper very much, and find the the edition of January 15th, a recipe is given for tanning skins for robes or mats. 1 am quite anxious to learn how to remove the hair in tanning, as this is something I do not understand. WM. HUNT. Algoma District.

Ans .- Tanners remove the hair from hides by soaking them in a bath made by slacking lime in water, leaving calfskins in for about two days and cow hides for three or four days. The length of time depends upon the nature of the hide and the sort of leather for which it is intended. Experience will tell when it has been in the solution long enough to loosen the hair so that it has to be pulled or scraped off with a knife. The particles of lime must all be carefully washed out. otherwise the skin will be left in a hard condition. If you have only one or two skins to remove the hair from, it would probably be better to put some lime to slack in the evening and next morning work the lime and water into a soft paste and carefully rub it into the hair all over the hide. If the hair does not begin to loosen in a couple of days, apply more and test by pulling with the hand occasionally.

WEIGHT OF SILAGE – SILAGE VS. HAY – OAT SHRINKAGE.

1. How many cubic feet are there in a ton of ensilage in the bottom of a silo? 2. What is it worth compared with the price of hay? 3. What is the shrinkage of stored oats? I threshed in August, leaving the grain in the barn until the following spring, when I drew it to the storehouse, where it remained for ten months. When I sold it, the buyer asked 6 per cent. off for shrinkage, which I consider too much.

J. S. McGURN. Hastings Co., Ont.

Ans.-1. Corn silage varies in weight from 30 lbs. to 50 lbs. per cubic foot, according to the depth in the silo from which it is taken and the amount of moisture it contains. On an average, 1 cubic foot weighs about 40 lbs., or 50 cubic feet to a ton.

2. In a test at the Maine Experiment Station, Jordan, comparing hay with silage in feeding milking cows, and estimating the latter at \$10 per ton, found that the silage used would be worth \$2.25 per ton; but it was very watery, and had it been silage of average quality, its

value on the above basis would have been \$2.62. 3. We believe that oats shrink more than any other grain, next barley, and then wheat and peas. The amount of shrinkage varies with the condition of the grain when threshed, chiefly its dampness. But after being threshed some seven months and then stored, if in good condition at that time, there should not subsequently be more than say 2 or 3 per cent. shrinkage, if free from mice and in proper bins.

TURNIP BLIGHT.

About the beginning of September last, my turnips took a blight-the leaves turned yellow, and they did not grow much more after that. In October, at digging time, about one-half of the turnips had rotted. I dug what was sound and let the bad ones remain in the field just where they grew. Would it be safe for me to put turnips on this same piece of ground this year? The land must be rich enough, as it had a fair dressing of manure last spring. G. C. Simcoe, Ont.

A two-year-old mare had a raw spot about the

size of a five-cent piece on one of her hind legs, just where the tongue or tug would rub her. She The raw surface has has been idle all winter. been gradually increasing in size and is now about as large as a silver dollar, stands out about an eighth of an inch above the level of the skin, is raw all the time and occasionally bleeds when she W. J. P. lies on it.

Grey Co.

Ans.-The growth is an epithelial tumor. Apply a little butter of antimony once daily with a feather. When it is reduced to the level of the skin and all diseased tissue has disappeared, dress three times daily with carbolic acid 1 part, sweet J. H. REED, V. S. oil 60 parts.

Miscellaneous.

RESCUING A BLACK MUCK SWAMP.

I have about sixty acres of black mud swamp, and spent about \$1,000 draining it. It overflows in the winter and would dry off about the middle of June, too late to do anything with. I put in a stone drain, 70 rods through a piece of upland, some places 20 feet deep. I made the drain about 2 feet square and 3½ feet below the surface of the mud. I have two open drains through the lake, as we call it, and underdrains through about 20 acres, every 26 feet, 3 feet deep, of sawed lumber. I first got my ditch the right level, then I put planks in the bottom, laid a piece of scantling on each side (2 by 4), then a plank on top spiked to the scantling; next, plenty of brush and filled it in with the mud. The place was covered with hardhack bayberries. I have about 20 acres cleared and about 4 acres crop. Last year I topdressed with barnyard manure and sowed oats on the most of it. They grew all right, but lodged some. I seeded it down with timothy and clover. I tried a small piece with potatoes, planted a half bushel of seed and I had eight barrels. I would like to get this place into hay as fast as I can. I find it wants something to make it produce a good crop. Barn manure and wood ashes seem all right, but it is hard to get either in large quantity. If you could suggest some kind of fertilizer that would be as good and cheap as barn manure at 50 cents a load, I would be very glad. I wish to plant say 10 acres of potatoes this spring. How would lime work? How much per acre would it require, if you recommend it at all ? I had a few turnips last summer, they all ran to tops five feet high. What was the cause of it? Some stalks of the oats grew 8 feet long

ALSTON GODDARD. King's Co., N. B.

Ans .- Our correspondent deserves praise for his energy and enterprise in attacking the big swamp, and we trust he will be well repaid for the labor and money he has expended. The draining so far has been done thoroughly and the depth correct. Turnips on such land are apt to run to tops, though if left thin enough, say two feet apart in the drill, and drills 24 feet apart, immense crops of roots are often produced. The crop mentioned was probably much too thick. A few seasons' cropping should, we think, tend to correct the tendency on such a soil to rank growth. Though per load is pretty high for stable ma nure, we know of no artificial manure that is in ordinary farm practice anything like as good value. Lime is not, properly speaking, a manure -it is a stimulant. The increased crops which result from its use are taken directly from the soil, not from the lime, and impoverishment sometimes results. Caution in applying it is therefore necessary. On peaty soils, such as our correspondent has and which are already rich in nitrogenous material, its use is recommended and gives almost uniformly good results. Apply one to two tons per acre every five or six years. Prof. Harcourt answers a question as to lime on land in Feb. 15th issue. Writing on the question of the effect of various manurial elements, Prof. Roberts, in a recent work, says : "Nitrogen stimulates the vegetative system and tends to produce rapid growth and dark foliage. Phosphoric acid, among other effects, has that of producing well-developed, plump seeds and fruits; potash may augment these effects as well as increase and intensify the color of the bloom."

B. C. RANCHING.

On page 119, of February 15th issue, you give a view of a cattle round-up in Kamloops, B. C. Can you give me the name of the proprietor or of any rancher in that section of the country. We wish to go out there this fall, and would like to correspond with someone there with a view to getting necessary information.

E. A. WILLIAMS. Middlesex Co., Ont.

Ans .- Write John Peterson, "Willow Ranch," or Chas. Humphrey, Kamloops, B. C. Useful information regarding the Province could also be secured from J. R. Anderson, Deputy-Minister of Agriculture, Victoria, B. C., or Thos. A. Sharpe, Experimental Farm, Agassiz, B. C.

WEIGHT OF CREAM.

How many pounds of cream are there in one gallon? We sell our cream by the gallon, and are anxious to know the right amount

Halton Co., Ont. SUBSCRIBER.

Ans .- There is no standard weight for cream in Canada. Owing to its larger fat content, the specific quantity of cream would be slightly less than milk, but not sufficient to make a material difference in the weight. The weight of milk of good average quality is 10.3 lbs. per gallon.

Ans.-The turnips were probably affected by plant lice, which breed on the under side of the leaf and suck the sap from it, causing the turnips to rot at the crown. This trouble is liable to occur during a season of drouth. As a rule, earlysown turnips are more liable to this visitation than later-sown. The best remedy is spraying with kerosene emulsion, which is readily done, having the spramotor in a cart or wagon, and spraying half a dozen rows at once. We would think it quite safe to sow turnips on the same land this year, and moisture can be better retained by not plowing in spring, but harrowing and cultivating occasionally after showers, and sowing on the flat or on slightly-raised ridges.

WIDENING A BARN.

Having heard of a new way of sawing barns through the center lengthwise to widen them, I wish further particulars. I have a barn 30 x 50 feet. How can we best make it 14 feet wider and raise it on a 9-foot wall? Have any of the readers sawed a barn through the center lengthwise, spliced the beams and put the extra piece in center? Is a hip roof preferable to a straight one? If so, why? SUBSCRIBER. Haldimand Co., Ont.

Ans.-Barns are widened both by splitting them, moving one half out and putting in a new section in center, or by putting an addition to the side and altering roof, but we believe the former is less troublesome. In that case, the barn must be altered before being raised up for building basement wall. Better consult your framer and show him the barn. The writer's preference is for a hip roof.