

365 consecutive days. The following butter records are also recorded in the same report: Juniper 4th (4578) produced in 7 days 17.11 pounds; Duchess of Smithfield (4256), owned by H. R. C. Watson, Brandon, Vt., produced in 7 days 19.6 pounds. In 365 days, Queen Selga (9545), 404 lbs.; Rosa Electa (10836), 409 lbs.; Lovely (9596), 448 lbs.; and Rena Myrtle (9530) gave 546 lbs. of butter.

Shorthorn.—The following Shorthorn records are taken from the World's Columbian test report: Nora gave in 1 day 40 lbs. 9 ozs. of milk, producing 1 lb. 11 ozs. of butter. In 90 days she gave 3,679 lbs. 8 ozs. of milk, producing 167½ lbs. of butter. In the thirty days test, Kitty Clay 4th gave 1,592 lbs. of milk, containing 62 lbs. 4 ozs. of butter. In 1 day she gave 52 lbs. of milk, containing 2 lbs. 1 oz.

Holstein-Friesian.—The following Holstein-Friesian records are taken from the American Advanced Register, and sent us by its Superintendent, Mr. S. Hoxie, Yorkville, N. Y.:

Milk Records.—Pietertje 2nd, 479 H.R.—Record: 1 day, 112 7-16 lbs.; 1 month, 3,289½ lbs.; 10 months, 26,757 7-16 lbs.; 1 year, 30,318½ lbs.; owned by Dallas B. Whipple, Cuba, N. Y. Princess of Wayne, 2 H.R.—Record: 1 day, 113 1-16 lbs.; 1 month, 3,182½ lbs.; 10 months, 25,135 5-16 lbs.; 1 year, 29,008 11-16 lbs.; owned by T. G. Yeomans & Sons, Walworth, N. Y.

Butter Records.—Pauline Paul, 852 H. R.—Record: 30 days, 128 27-32 lbs.; 365 days, 1,153 63-64 lbs.; owned by J. B. Dutcher & Son, Pawling, N. Y. Clothilde 2nd, 156 H. R.—Record: 90 days, 320 7-64 lbs.; owned by Smith, Powell & Lamb, Syracuse, N. Y. Natsey, 646 H. B.—Record: 7 days, 34 9-16 lbs.; owned by Enrich & White, Colorado Springs, Col. Lady Baker, 645 H. R.—Record: 7 days, 34 9-16 lbs.; owned by Thomas B. Wales, then of Iowa City, Ia., now of Boston, Mass. De Kol 2nd, 412 H. R.—Record: 7 days, 33 6-16 lbs. (age 4 yrs. 9 mths. 27 dys.); owned by J. B. Dutcher & Son, Pawling, N. Y.; second owner, Henry Stevens & Sons, Lacona, N. Y.

We are not aware that any Hereford records have been kept.]

TATTOOING SHEEP'S EARS—SHEEP BOOKS.

DAVID GATON, Simcoe Co., Ont.:—"Would you kindly inform me, through your valuable paper, how tattooing sheep is performed? Is it a good mark? Where can the needle be secured, and what would be the probable cost? 2. Where can some really good books on sheep raising be procured?"

[1. There is a tattoo ear marker sold by F. C. Burch & Co., 178 Michigan St., Chicago. It is built in the form of nippers, having letters or figures, which are interchangeable, made of rows of needles. The letters are half an inch square and cut out of solid metal. Tattooing is performed by first smearing with the tattoo oil; punch the ears and rub the oil well into the punctures with the thumb and finger. The marker, fitted with three letters or figures, \$2.00; extra letters or figures, each 35 cents; tattoo oil per bottle, marks 500 ears, 50 cents. 2. One of the latest and best works on sheep husbandry is Vinton & Co.'s Live Stock Hand Book, a treatise on sheep breeds and management, a notice of which appeared in April 1st issue of the ADVOCATE. Another good work is Stewart's Shepherd's Manual, issued by the Orange, Judd Co., New York. Either of these works can be obtained through this office.]

SPRING WHEAT ALONG WITH FALL WHEAT.

G. W. Anderson, Prince Edward Co., Ont.:—"What would you say as to the advisability of sowing spring wheat in a piece of fall wheat, and what effect would dragging it in have on the alsike already sown this spring?"

[The above inquiry would indicate that the land in question bears a partially winter-killed crop of fall wheat. We might say that it would not be wise to sow spring wheat under such circumstances. If there is any fall wheat living it would be ripe before the spring variety, and would be largely lost. We have never known a crop of spring wheat to amount to anything sown where fall wheat has winter-killed. It would seem wise to sow early oats or barley among the thin wheat and thus secure a feed crop. If the alsike has not sprouted, harrowing would do it no harm, but if showing through the ground it would likely destroy it.]

CRIMSON CLOVER.

JOHN LE D., Grey Co., Ont.:—"I write you in regard to scarlet clover, as I don't know much about it. I understand that seed sown this spring will give a crop of hay this year. But what quality is the hay, and is it good for all kinds of stock; also, is it of any benefit to the soil or does it impoverish clay soil, and how much per acre is an average crop? I was thinking of sowing some this spring."

["Crimson" or "scarlet" clover was tested pretty generally in 1895 for spring sowing over the Province by the Ontario Agricultural and Experimental Union. The average results of the co-operative work go to show that in some sections crimson clover did well, while in others it was a failure. The average height of the crop was 11.1 inches, and the average yield of green crop per acre was 4.35 tons. In four years' trials of sowing crimson clover in the spring, at the Ontario Agricultural College, an average of about 11-10 tons of hay per acre was obtained. When the seeding took place in April, May or very early in June, the plants bloomed during the same season, after which they immediately died. Ten and fifteen pounds of seed per acre have produced about equally good results. The fact that crimson clover and other leguminous

crops of a similar nature are able to make use of the free nitrogen of the atmosphere is of great importance, not only in the enrichment of the soil by the addition of this expensive element of plant food, but also in the production of animal food of high nutritive qualities, owing to the large amount of nitrogen in its composition. The hay is also very palatable when well cured.]

GIANT YELLOW MANGELS AS KEEPERS.

R. S. T., Wellington Co., Ont.:—"Kindly let me know, through ADVOCATE, if yellow mangels—Giant Yellow Intermediate—are as good keepers as Long Red. I grew them last year and pitted them for the first time, three to four feet thick in pit, and put in ventilators, three-inch pipe, every eight or ten feet, yet about one-quarter of them were spoilt, apparently heated; yet odd red mangels which were mixed with them were sound and good. I have been told that mangels will not heat in pit like turnips; is that generally true?"

[Members of our staff have grown and pitted Yellow Intermediate mangels and Long Reds side by side and have never noticed any difference in keeping quality. We would suppose the trouble lay either in too much ventilation, permitting freezing, or a touch of frost before being covered in the fall. Mangels will not stand frost like turnips, neither will they heat nearly as readily in the pit. When they are pitted perfectly dry and given a good covering of straw beneath the earth, very little trouble is likely to arise, even though little ventilation is given.]

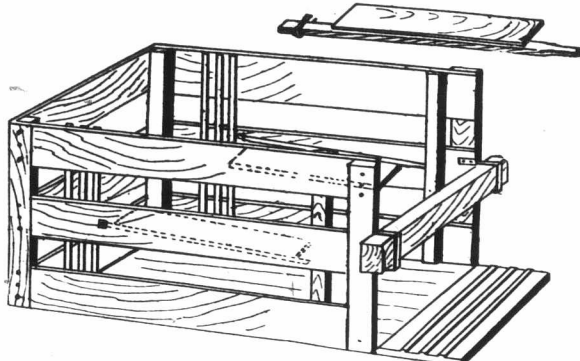
BUCKWHEAT AS GREEN MANURE.

JOS. N. REID, Wellington Co., Ont.:—"I have not enough manure to cover a field I had intended putting in roots, potatoes, etc. How would it do to sow buckwheat, plow it down, and then sow rape? The soil is gravelly loam, gravel bottom, in very good state of cultivation."

[We see no reason why a crop of buckwheat plowed down would not answer a good purpose. In fact, we are following that very plan on one of our own fields this season, except that we will use rape for plowing down. Unlike the legumes, neither rape nor buckwheat actually add fertility to the soil, but appropriate plant food that might possibly be lost by leaching, etc. Such crops also smother weeds, and greatly improve the mechanical condition of the soil when plowed down. They also add humus, which is valuable in retaining moisture.]

BREEDING CRATE.

R. D. NODWELL, Wellington Co., Ont.:—"Would you be kind enough to give a cut and measurements of a breeding crate for small sows and large boar?"



[A breeding crate in which to place sows while being served is almost indispensable, and will be found to save time and trouble as well as to facilitate the service, especially of young or small sows, or, for that matter, sows of any age or size. A breeding crate is built the same as a shipping box, with the top left off, and open at the rear end. It should be four feet ten inches long, two feet wide, and two feet nine inches high. The corner posts had better be two by four, and the side boards six or eight inches wide. The front is closely boarded, and slats are nailed on the inside of the side boards, at intervals of say six inches, near the front end, into which a false front is slid down from the top to shorten the box for small sows. Two iron staples or keepers are nailed on the inside of the rear posts, extending an inch and a half behind the posts, through which staples a four-inch slat is run, to keep the sow from backing out. This should be about fourteen inches from the bottom. (The artist has shown this slat too thick.) A platform behind the crate, for the boar to stand upon, is essential in the use of a small boar to large sows, and, indeed, in most cases, irrespective of the size of the sow. This platform may be of two by four scantling, with boards across them, and inch slats on these to prevent slipping of the boar's feet. If it is required to be higher it can easily be raised by putting pieces under it. The foot rests for the front feet of the boar (shown above the box, and also by dotted lines), to sustain the weight to the relief of the sow, is one of the most important parts of the box. In its construction, a piece of strong, tough wood is used, two by two inches, and two feet eight inches long. Round it, at the rear end, to fit into holes in the rear posts; of the holes there should be three, at intervals of say four inches. The front end of the strip should be left square, and fitted into a square staple which goes through the middle side board at the distance of two feet eight inches from the rear post, and is secured by nuts on the outside of the board. On the top of the two by two strip you nail a six-inch board, say about four inches shorter than the strip, leaving the strip extending

beyond the board at both ends. This board is the foot rest and also prevents the sow from moving sideways, if it is a small sow. If it is a large sow, and more room is needed, you turn down the side rests, which gives six inches more space. To do this, loosen the nuts on the front staples, pull out the rounded end of the strip, and then change the square of the front end so as to let the shelf fall down. Thumb nuts, such as are used on wagon rods, are handiest for this, since they need no wrench. This crate should stand in a corner of the pig pen, and a short hurdle is handy to guide the sow into the box. J. C. SNELL.

CHICORY CULTURE.

JOHN LOCKIE, Lambton Co., Ont.:—"I would like to know how to grow chicory; also tell me to what extent it is dried?"

[Chicory is a perennial plant (*Cichorium Intybus*) of the aster family of Europe and Asia, naturalized in America, with heads of large, bright blue flowers and dandelion-like root. The ground is prepared somewhat similar to that for carrots or turnips, and the cultivation is much the same. About four pounds of seed per acre is required. It looks like parsnips when growing and after it is harvested. When grown, the roots are cut into thin slices and kiln-dried until free from water. It is then roasted and ground, being used as a substitute or in adulterating coffee. Green roots are said to be worth from \$50 to \$75 per ton, and dried, as much as \$200. It has been grown in Canada to a certain extent for some years. We believe nearly 10,000,000 pounds are imported into the United States yearly, though in one State as much as 400 acres are devoted to its cultivation. Enormous quantities are grown in Belgium, yielding some 80,000 tons of dried roots.]

LIVE STOCK MARKETS.

Toronto Markets.

Although the quality of the cattle on offer have somewhat improved, prices did not advance. There was a very good attendance of buyers from all points, but the market was poor; many remained unsold at the close of the day. Buying for Montreal was slow, only six carloads being taken for that market. **Butcher's Cattle.**—To-day's trade was bad. A few drovers disposed of their cattle at a loss. Some of the cattle were in prime condition and sold freely, others were poor and hard to sell. Deals were hard to make, and prices very wide apart. We heard of nothing over 3½c. per lb., that price being the exception. Some good, useful cattle sold for \$2.40 per cwt. Another bunch of cattle sold at 2½c. per lb. A bunch of poor ones sold at 2c. per lb. These were a few sales: One carload, 900 lbs. average, \$2.40 per cwt.; eleven cattle, 1,100 lbs. average, 3c. per lb., and \$5 over on the deal; one carload of cattle, 1,055 lbs. average, \$2.90 per cwt.; one carload of cattle, 1,015 lbs. average, 3c. per lb., less \$5 on the deal; one carload of heifers, 1,000 lbs. average, worth at least 3c. per lb., only realized 2½c. per lb.

Export Cattle.—A few cattle were picked up for export preparatory to making up a cargo for the first boat from Montreal. For three head of steers 4c. per lb. was paid. They would average about 1,250 lbs., and were really the choicest cattle on the market.

Bulls.—One bull of extra quality sold for 3½c. per lb. Choice bulls for export bring about 3c. as a rule. Mr. Thompson paid 4c. for a fine bull; this was the highest quotation for the day. Mr. Lunness sent 500 head for St. John's from the Walkerville buyers, the first shipment of the season. The Beaver Line S. S. agents are soliciting cargoes for the opening of navigation.

Stocks and Feeders.—Selling fairly well; quite a few feeders were taken at from 3c. to 3½c. per lb. Some good feeding cattle, 1,100 lbs. average, sold for 3½c. per lb.; a couple not quite good enough for export touched 3c. per lb.

Sheep and Lambs.—Good grain-fed lambs sold to-day at 5c. per lb., a few yearlings getting as high as 5½c. per lb., but the market was quiet. Spring lambs are not coming in freely yet. The market dull. No demand. Very few on offer, 3c. to 3½c. per lb.; only 220 on the market.

Calves.—Offerings very heavy—150 head; they sold slowly at from \$2 to \$4 per head, only choice veals going above this figure. Too many poor ones on offer.

Milkers and Springers.—This line was not very good. Prices ruled low at from \$20 to \$35 per head; 30 on offer, and it is of no use farmers sending in anything but really choice, newly-calved cows and forward springers; people won't buy them; about 20 remained unsold.

Hogs.—Were in exceptionally heavy supply to-day, but all sold at firm prices; 3,400 on offer—6,000 for the week. Choice selections of bacon hogs sold at 4c. per lb., the ruling figure being from \$3.50 to \$4.00, weighed off cars. Stores were in fair demand at from \$3.70 to \$3.75. Farmers were buying some of these, and quite a few were consigned to cheese factories. Thick, fat and light were rather quiet at \$3.60 to \$3.70. Breeding sows are going at 3c. per lb. Stags, 2c. to 2½c. per lb.

Dressed Hogs—Street Market.—A few hogs were in. Farmers' loads sold higher at \$4.50; for an extra choice lot \$4.75 was paid. There is nothing offering on the track. Reports from Old Country markets are improving.

Hay.—About 25 loads of hay were on the market to-day; sold at \$14 to \$17; high. Baled hay still holds firm, \$15 for No. 1 on track here.

Straw.—Four loads of straw sold out at \$12. Nothing doing in baled straw; quoted at \$8 to \$8.50.

Oats.—Only 100 bushels on offer, selling at 27c.

Wheat.—Very little on offer; prices a little steadier, holders asking 90c. Manitoba wheat at Fort William, 67c.

Eggs.—From the present receipts it looks as if the supplies would be in excess of those of former years, and it is expected that the market will go easier shortly; dealers opened at 10c., sold to 10½c. per doz.; the demand keen. The American markets are all lower, and this will no doubt have its effect here. Buyers outside have been instructed to purchase next week at 8c. per doz.

Butter.—Is lower; large rolls, 14c. to 16c. per lb.; shading in prices is frequently done by dealers. We quote dairy tubs 13c. to 16c. per lb. Creamery pound prints, 21c. to 22c. There is too much butter, prices falling daily. Lot of the stock coming is off condition and light in color. A large quantity of butter, Northwest make, has been shipped to Japan, via Vancouver, by C. P. R. steamers, with very satisfactory returns. It was shipped in tins, and the trade promises to develop.

Cheese.—Although local stocks of cheese are not large, the number of exporters who are offering lots would indicate that considerable was held outside at country points. Small lots quoted 8c.; October's, 9c. per lb.

Poultry.—There is very little coming in, but all choice birds bring top prices. Turkeys, 8c. to 10c. per lb.; geese, 6c. to 8c. per lb.; chickens, 40c. to 60c. per pair.

Hides, Skins, and Wool.—The market remains quiet, with prices easier and in some lines lower; all moving very slowly at unchanged prices. Hides—No. 1 green, 5c. per lb.; No. 1 cured, 5½c. Skins—Calfskins, No. 1 green, 6c.; No. 1 cured, 7c. to \$1.00 each. Wool—Piece combing, 21c.; tub washed, 20c.; selections, 17c. to 18c. April 24th.