

The Complete Grazier (Youatt and Burn); *American Cattle* (Allen); *Feeding of Animals* (Stewart); *The Shepherd's Own Book* (Youatt, Skinner and Randall); *Treatise on the Pig* (Harris); *Veterinary Adviser* (Law); *Insects Injurious to Vegetation* (Harris); *Insects Injurious to Fruit* (Saunders).

Of these works they would be disposed to recommend especially *The Chemistry of the Farm* (Warrington); *The Soil of the Farm* (Sir J. B. Lawes); *Stock Breeding* (Miles); and *Feeding of Animals* (Stewart); and for beginners, *The Catechism of Agricultural Chemistry* (Johnston).

Every farmer in Canada whose son has a predilection for study should encourage him to prepare for these examinations. He cannot go over the above course of study without being greatly benefitted, even though not successful the first time in obtaining a certificate. No one should be discouraged by the formidable nature of the undertaking, for before earnest application every mountain in it will soon become a plain. If intending candidates do not deem it prudent to go up to the first examination they should to the second, and the commencement of the preparation therefor should not be deferred till to-morrow. The true pleasure which the acquisition of so much useful knowledge is sure to bring along with it, should of itself be a sufficient incentive. Further particulars may be obtained from H. Wade, Secretary of the Agricultural and Arts Association Toronto.

Inquiries and Answers.

MATERIAL FOR STABLE FLOORS.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Being about to build a new barn, and undecided as to the sort of stable floor to put in, would you give the probable cost of flooring a stable, say 30 x 70 ft., with Portland cement? Do you consider it the best floor? How do you like three inch rock elm or cedar bedded in mortar to prevent soakage, and water-lime for the passages?

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The cost of a cement floor of the dimensions indicated would be about \$120 for water-lime, Portland cement, and the wages of masons. This would not include sand, small stones or coarse gravel, and other labor, but it includes a ledge of stones to form a drop dressed on the top. It would take 35 barrels of water-lime and 10 barrels of Portland cement, to give a three inch coat of the former and a $\frac{1}{4}$ inch coat of the latter. A floor of cedar or rock elm bedded in mortar will do well as long as it lasts, but will give out in time. Water-lime, too, will break up somewhat after a while. The cement floor, if properly made, is really a very durable floor, but it is only a mason now and then who knows how to construct them properly. We prefer the cement floor.

ALSIKE CLOVER.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—Would you be so kind as to answer the following questions: 1. Where could alsike clover be obtained? 2. Is it an annual or a perennial seed? 3. What time in the year should it be sown? 4. What quantity should be sown per acre? 5. To what soil is it best adapted? 6. How much seed will it yield per acre? 7. Is the straw any good for feed?

A. HUFF.

Chatham, Ont., Jan. 11.

1. From almost any seedsmen of prominence in any of our towns. W. Rennie, Toronto; John A. Bruce & Co., Hamilton; John S. Pearce, London, will certainly have it in any quantity that farmers may want.

2. It is an annual in the production of seed—that is, it will produce seed every year after sowing it as long as it lives, but usually it is not well to take seed from it more than twice. The best yield of seed is got from the first cutting.

3. It should be sown the same time as other clover seed, and in much the same way.

4. As to the quantity per acre much depends on what it is sown for. If sown for seed production, from six to eight lbs. should be sown per acre, and no admixture of anything else. If timothy is sown along with it the seed is not easily separated. If sown for hay it should be sown with timothy and red clover, about equal parts of each; and the same for pasture, adding other grasses if desired.

5. It is best adapted to a damp soil. It will flourish in low lands where the red clover will not, but it will grow on almost any sort of soil.

6. It yields from one to four bushels of seed per acre, usually about two and one-half bushels.

7. The straw is as useful for feed as that of any other clover and more so, because it is finer. Of course the straw of any kind of clover is not of much account as to its feeding value, owing to the large amount of woody fibre which it contains and which is indigestible, but in case of emergency it may be used.

Alsiike clover is one of those useful exotics that has come to stay. It seems to adapt itself to almost all the conditions of our climate and soil. We promise our readers more regarding it shortly.

WOOD ASHES AS FERTILIZERS.

EDITOR CANADIAN LIVE-STOCK AND FARM JOURNAL.

SIR,—I will be pleased to learn through the JOURNAL your opinion as to the advisability of teaming hardwood ashes twelve miles, paying $4\frac{1}{2}$ cents per bus. for them and putting them on a nice mellow clay loam soil, and in what quantity should they be applied. The land is a farm that I have recently purchased and which has been occupied by one man for fully 30 years, and has been badly worked, and consequently requires some renovating.

S. DYMENT.

Barrie, Ont.

Mr. Dymont does not say if the ashes are leached or unleached, which very materially affects the case. If unleached we would not hesitate to draw them in our own case, providing the road was such that a full load might be drawn. If only half a load could be brought at once, then it might be money out of pocket. We believe that a farmer would be safe in giving up to ten cents per bus. for unleached ashes that can be got at his door. They are most excellent applied on land intended for or in meadow, the good effects of one application being visible for several years. They may be applied as heavy as 500 bus. to the acre, but 150 bus. will make a fairly heavy dressing. Leached ashes will well repay the handling where they can be got for little, and convenient.

The Dairy.

It has been stated over and over again by experienced men that it is easily possible to double the milk product of the average dairy cow. Prof. James Robertson, of the Experimental Farm, informs us that ten cows—ordinary Shorthorn grades—at the Experimental Farm during four months, less four days, commencing 24th May, averaged 3400 lbs. of milk. And good authorities, men who have spent a good part of a life-time successfully in producing milk, give it as their opinion that an average of 5000 lbs. per cow per season is easily attainable by giving proper attention to feeding, breeding and shelter. With possibilities so grand in reach, how can the dairymen be content? Why do they not arise and go forward?

The Western Dairymen's Association.

We regret very much that we were quite unable to attend the annual meeting of this Association, which convened in Ingersoll, on the 12th, 13th and 14th of January, and the report of it that we had

arranged for had not come to hand for some reason unknown to us at the date of our going to press. We understand, however, that it was a very successful meeting, and hope to give a digest of some of the papers read there in future issues. We could easily compile from the reports of the daily press, but these are often inaccurate, and information given on any agricultural subject that is not accurate is usually misleading.

Butter Dairying.

We shall fondly hope that the country is at last becoming fully aroused to the importance of this branch of the dairy industry. The tocsin of alarm, lest we should miss forever the splendid opportunities of establishing a flourishing trade in butter with the mother country, has been fully sounded, and at its echo the country is astir. The opening created for our butter in the exhibit sent over by the Government to the Indian and Colonial Exhibition, under the judicious care of Prof. J. W. Robertson, is a wide one, and it would be a woeful blunder not to follow up the advantage by the improvement of every means within our reach that may enable us to do so. There need be no fear that in the extension of the butter trade the cheese industry will be encroached upon. There is yet a vast amount of room unoccupied with either industry, and the extension of the former will, in a way, react favorably upon the extension of the latter in the keeping up of a large supply of dairy cows.

But it is not enough that a disposition is manifested by numbers of our farmers to go into the production of creamery butter, and it is not enough that creamery associations are extensively organized throughout the Province, nor is it enough that there be a plentiful diffusion of literature on the subject, scattered throughout the country. Something more is required, and that something is, we believe, the appointment of competent instructors, each to take in charge a number of the creameries, and exercise an oversight over the quality of the product made.

This plan has been adopted in its essence by the cheese dairymen, and after having given it the trial of a number of years, they are so convinced of its advantages that they are petitioning Government to subsidize them, that they will be enabled so to multiply the number of instructors, that every factory in the Province shall be properly supervised.

One great advantage of this supervision is, that it secures uniformity of product. Without this, the reputation of the country as to the quality of its make is sure to suffer, and as a consequence, what is really good is affected in price and readiness of sale by what is not so good or positively bad. The cheese dairymen have conceived the grand idea of having the whole of the make good, and we are quite sure that the Government will give them all reasonable aid in so laudable and enterprising.

Now, what the cheese dairymen are seeking to obtain after years of experience, butter dairymen should try and obtain at the very outset. The industry is really in its beginnings, and it is of vast importance that it should be rightly begun. No doubt aid will be required from the same source whence the cheese dairymen get theirs—Government—and we do not see why, when sought, that it should be denied.

The Government is now giving \$3,000 annually to encourage the cheese industry, and more than that sum additional is being sought. As long as this money is well applied, it should not be grudged. The revenue to this Province alone from the dairy industry sums up millions, and we feel safe in saying that this would not have been without the dairymen's associations,