

at first and increased as maturing time approaches; also to have free access to salt and ashes, sods or soil.

6.—At six months old a fair pig should dress 170 to 190 pounds.

7.—A pig should never be stunted in its growth, it never will compensate afterwards for a halt; they should be pushed as rapidly as health will permit from birth until marketing.

8.—You might increase the corn somewhat with good results, still I would not get very far from the balanced ration.

9.—I would refer your readers to the Central Experimental Farm reports: 1891, pages 83 to 87; 1892, pages 64 to 70; 1893, pages 71 to 76; 1894, pages 78 to 86; and 1895, pages 191 to 195.

We can produce pork, live weight, during the summer for 24 to 34 cents per pound.

JOHN FITZGERALD, Farm Foreman.

Dominion Central Experimental Farm.

Feeding Fat Cattle and Young Dairy Stock.

I have fed cattle for export for a number of years; always bought my steers from farmers. I bought the best I could find. It paid well when cattle sold for five and six cents per pound, live weight, but times have changed; we have to do things differently to compete with other countries. I found that I could not feed cattle if I did not build a silo, so I built one and liked it so well I had another built the next year, and I have been feeding ensilage for five years. It was the first in this section, and the farmers are commencing to see the benefit of the silo. There have been quite a few built the last two years, but not as many as there ought to be. As a rule, I have fed steers to be ready for May market, and also some pretty well finished to put on grass about the 20th of May. I never had cattle do better than when fed on ensilage made from corn when matured, with cut straw and cut cornstalks (what you will very often see in a great many of the farmers' barnyards tramped under their cattle's feet and going to waste), with a little meal, about 3 pounds a head per day for the first three months, and from 4 to 6 pounds at the finish. With this ration I can turn them out fit for any market. The meal should be mixed with one-third bran. I always let my cattle out every day for exercise; if weather is too cold, only when stables are being cleaned. They should be washed with kerosene emulsion, say three applications, when first tied in, about ten days apart, and curried between applications. They should also be curried once a day the last three months. I do not believe in turning them out to "curry themselves on a knotty pole." When cattle are uneasy they are not putting on beef. If cattle are free from vermin and have the proper care and food, you will find them quiet and contented; this is a sure sign they are putting on flesh. To have cattle fatten fast you must get your work done as soon as possible and get out of the stables in the forenoon, so they can lie down and rest until the next feeding. Allow no strangers in your stables to disturb cattle until evening feeding. If these rules are carried out you will have fat cattle fit for export in six months, if you put in the right quality of steers.

The last two years I have given my attention to dairying. I am making butter. Keep from 60 to 75 cows. I am raising the heifer calves from my best milkers, and also my best steer calves. The first year I raised nine calves for an experiment, on skim milk. After the calves were ten days old they got nothing but skim milk fresh from the separator, and when a month old and beginning to eat, fed a little clover hay and whole oats. The way I teach them to eat oats is, as their nose is always moist place some on it and they will take them in with their tongue and will soon learn to eat. I find whole oats better for calves than ground oats or chop; it gives them better stomachs for feeding when grown to be older cattle. The first nine did so well I raised 23 last year; they are about a year old now. I think they are as large as the common run of two-year-olds. The yearling heifers I am having bred so they will be milking next fall. I believe in having my cows to come in in the fall, say September, October, and November; you will have more milk in the year from your cows, for when they strike the grass in the spring they will milk as well as new-calved cows. The fall calves when turned on the grass in spring grow like weeds. You all know how they grow. As for taking care of the young stock in winter, I tie everything up in the cattle line, even the calves, so I know just what each one is getting. I let them have plenty of exercise every day in yard or barnyard; calves should have a couple of hours' exercise in a warm place. I do not believe in feeding young cattle very much grain when growing; ensilage, when well matured and fed with plenty of rough fodder, such as cornstalks and straw, and a little bran and some clover hay, will make fine feed for young cattle and will bring them out in fine condition for grass.

Bothwell, Ont.

R. C. ALLAN, Northumberland Co., Ont.:—"Permit me to congratulate you upon your Christmas number, which, in artistic merit and the excellence of its contents, exceeds anything in farm journals that I have ever seen. No farmer can afford to be without the ADVOCATE, and it has a place among my reading that no other paper seems to fill."

Winter Care of Brood Mares.

BY JOHN SPENCER, V. S., CHAUTAUQUA CO., N. Y.

At this season of the year, especially where the breeder is cramped for room, and in inclement weather when we do not wish to turn our idle brood mares out in the barnyard, some provision for exercise is quite desirable, and, in fact, in some cases decidedly necessary. It is a well-established fact that if a mare does not receive sufficient exercise the foal is liable in his movements in the womb to become abnormally placed, and any man who has found it necessary to have a colt taken from a mare can readily understand and appreciate what that means, for it is next to impossible to save a colt after several hours' labor, and if the mare escapes with her life she is most dangerously exposed to metritis (inflammation of the womb), as well as several other conditions undesirable. Yet exercise is not all a brood mare needs in the winter, but if it be possible to furnish every mare in foal with a large, roomy box stall, well ventilated and sufficiently lighted, it will pay good interest on the investment every time.

Some—yes, a great deal—attention is also necessary in feeding such animals. Too rich and stimulating food produces great damage, as does entire liberty at foods of coarse quality. Too much rich food produces too great plethora, which renders any animal more susceptible to febrile conditions, consequently more dangerously exposed to metritis, mammitis, peritonitis, laminitis at parturition, and a host of less important maladies; and after the foal is born the result upon it is anything but beneficial, providing it escapes that fatal form of indigestion peculiar to young colts—the direct result of too rich milk, traced back to the mare's abundant supply of rich, heating grain; or, if it escapes this, the bowels become overtaxed, and either diarrhoea or constipation results, either of which is very fatal.

Again, on the other hand, too much coarse food, such as straw, chaff, pea straw, too many roots, etc., have their bad effect, producing indigestion (acute or chronic), colic, lymphangitis, constipation—any of which are sufficient to produce abortion, especially so from a sympathetic, spasmodic contraction of the womb, or from pressure upon it from the distended bowel, from generation of gases; and here let me say that mares in foal are peculiarly susceptible to conditions of indigestion when closely approaching parturition, which may terminate in enteritis, constipation, and death; or anemia may result, as shown by the swellings in the legs and most dependent portion of the abdomen.

Too much clover hay has been known to produce very bad results in mares far advanced in foal, bringing about a premature secretion of milk, which appears to have a very weakening influence on the colt. I presume from the fact that nature intended only to supply the young from one source, and when the milk is secreted long before the little animal is born the umbilical supply is modified or diverted, both supplies not being kept up, and in such a case the colt, if not born dead, is so weakly that he soon dies. Therefore it pays to avoid extremes in feeding mares from which we expect good returns, and I would suggest that as a diet a moderate allowance (not abundance) of good, clean, well cured hay, sufficient oats and bran to maintain a strong, healthy condition; occasional bran mash, containing a regular allowance of salt, or a mess of boiled oats and bran every other or even every night, with a comfortable, roomy, well-ventilated box, and plenty of exercise, or better still, moderate work in careful hands, avoiding extremes of pulling and backing, especially the latter, and never allowing full liberty to ice cold water in winter. When the country was new and farmers had to work their mares right through the year, very rarely any of the difficulties with which we have to contend presented themselves, and many a mare had to be unhitched from the plow to foal, usually resting only a few days.

Tar for Sheep Cough.

To the Editor FARMER'S ADVOCATE:

SIR,—I read a number of letters in your paper on feeding sheep, which I think are very useful. I brought home a small flock of thirteen last fall, and when we had them a few days I saw that almost all the old ones were coughing. I treated them to a good dose of pine tar on their noses, and made them swallow a little. I then fed twice a week raw flaxseed, a small handful to each sheep. It has cured them all. I find there is no better grain than field beans to feed sheep to keep them healthy and make wool grow, either in the straw or threshed. We mostly thresh ours so we can tell best how much we feed.

Manitowin.

THOMAS H. THOMPSON.

Tuberculin Test.

In reply to an enquiry addressed by us to Hon. Sydney Fisher, Minister of Agriculture, as to who were qualified veterinarians authorized to apply the tuberculin test, under the new regulations published, we have the assurance that the Government, feeling the responsibility of the correctness of the test, has decided, before making any appointments, to hold an examination, both written and oral, of all applicants for the position. A Board has been appointed by the Government to conduct the examinations, and they will take place as follows:—London, the 19th inst., at 10 o'clock a.m.; Toronto, the 20th inst., at 10 o'clock a.m.; at the Ontario Veterinary College; Kingston, 22nd, at 10 a.m., in the Dairy School Building.

Annual Meetings of Live Stock Associations.

Canadian Horse Breeders' Meeting.

The second annual meeting of the Canadian Horse Breeders' Association was held in Toronto on February 5th, 1897. President Robert Davies occupied the chair. Secretary Henry Wade stated in his report that the object of the Association is to encourage and assist the improvement of all the better classes of horses, and especially so by holding and assisting shows at different times of the year. The committee appointed last year waited on the Provincial Government and explained that the same grant as was given last year (\$2,000) to this Association in the interest of the Canadian Horse Show was again necessary in order to insure success at the coming show. The committee was given to understand that the grant would in all probability be renewed.

The financial statement showed that the receipts for the year, including the grant, were \$2,939.24, and the expenditure \$2,349.35, leaving a balance on hand of \$589.89.

The following directors were elected: To represent the Hackney Association—Robt. Beith, M. P., Bowmanville; John MacDonald, Toronto. Clydesdale—R. Miller, Brougham; Robt. Davies, Toronto. Thoroughbred—Dr. Smith, Toronto; W. Hendrie, Jr., Hamilton. Trotters and Pacers—Dr. Hodgson and J. Ross Robertson, M. P., Toronto.

Delegates to the Toronto Industrial Exhibition—R. Beith, M. P., and H. N. Crossley. Western Fair—R. McEwen and Mr. O. Sorby. Ottawa Exhibition—Wm. Hutchinson, M. P., and Robert Graham. Montreal Fair—Jas. A. Cochrane and Robt. Ness.

At a meeting of the directors held after the adjournment of the annual meeting the following officers were appointed from among themselves: President, Robert Davies; Vice-President, Dr. A. Smith; 2nd Vice-President, R. Beith, M. P.; Secretary-Treasurer, Henry Wade.

Horse Breeding.—Mr. R. McEwen, Byron, read a highly appreciated paper on the subject of "Horse Breeding." In the outset the writer acknowledged that the present lot of the horse breeder is not altogether a happy one. Many stables now contain numbers of mature horses that could well be done without, but unfortunately they are not of the sorts wanted by the market. Too many who attempt to breed horses fall because of a want of purpose. Every breeder must have an object in view to avoid increasing the ranks of the nondescript sort, and to produce a salable animal. Reference was made to the fact that a few years ago a company of remount officials visited Canada to investigate the chances for a supply of cavalry horses in this country, and determined that we had not a sufficient number of their class of horses to warrant them depending upon us, which indicates that we can well pay attention to the breeding of horses suitable for remounts, and thus secure a market that is waiting for us. Mr. McEwen stated that too often the best mares are kept at work, and those which are worn out or otherwise inferior are kept breeding. Success depends upon proper mating and proper keeping. A bad horse cannot be made a good one by feeding, nor can a well-bred colt ever grow to a good horse without good care and feeding. A wise breeder will investigate the cause of failure and profit by the lessons received. The same stallion cannot get good colts from all sorts of mares. The object in view must be considered in both the sire and dam. One of the great mistakes made is that of starving colts, which prevents them ever developing as they should. Our horse shows should be a great teaching factor, as no starved colt ever became a prize winner.

Hackney Horse Association.

The Canadian Hackney Association held its fifth annual meeting in Toronto on February 4th. President Robt. Beith, of Bowmanville, occupied the chair, and H. Wade filled the position of Secretary.

Reference was made by the President, in his address, to the remarkable progress made in Hackney breeding in Canada since the inception of the Association. A good deal of money has been spent on importations during that time, and now the fruits of good returns are being realized. The admirable quality and excellence of the Hackney breed was touched upon in the concluding remarks.

The Secretary reported that thirty-three Hackneys had been recorded during the last year, which now makes the number sixty-seven stallions and eighty-five mares, which will no doubt be soon published in volume form. The financial statement showed receipts, including a balance of \$101, to be \$234, and expenditures \$101.90, leaving a balance of \$132.10.

A circular from the English Hackney Society was presented, offering to affiliated associations two silver medals as premiums—one for males, the other for females—with the following options: (a) For best Hackney mare or filly registered in the English Hackney Stud Book; (b) for best Hackney mare or filly from imported sire and dam, both registered in the English Hackney Stud Book. When not less than \$125 are offered in classes for Hackney stallions or colts registered in the English Hackney Stud Book, or (c) for best Hackney stallion or colt from imported sire and dam, both registered in the English Hackney Stud Book. Affiliation is secured by paying to the English Hackney Society one guinea. It was resolved to apply for the medals for (b) home-bred stallion and mare at the Canadian Horse Show, and for (a) imported stallion and mare at the Toronto Industrial.

A letter was read from Mr. Jas. A. Cochrane, of Hillhurst, suggesting that mares by Standard-bred or Thoroughbred stallions, and out of full registered Hackney dams, be eligible for half registry. This matter was left to a committee composed of Messrs. Crossley, Cochrane, and Beith, to consider and report at the time of the horse show.

It was proposed to draw up a memorial on the death of the late Mr. George Haslam, who occupied the position of second vice-president of the Association.

A paper prepared by Mr. R. Gibson, of Delaware, was read by Mr. R. McEwen, of Byron, on "Lessons from the Horse Shows," who pointed out that the Hackney horse sixteen hands and over is not the sort to struggle after, but rather to follow quality. Action is not the all-important feature; we must possess that breediness that marks the finest of the race. It is important that the shoulders be well laid and sloping, and that the limbs be clean, hard, and flat. A suggestion was expressed to further popularize the breed. This is even more necessary with mares of the "dudes" on the long white lines. In crossing as much as possible of Thoroughbred blood. In choosing Hackney sires the families producing the most prize winners should be adhered to.

It was resolved to appropriate \$100 to the following: \$25 for the best Hackney stallion at the Canadian Horse Show; \$25 for the best Hackney mare at the same show, and the same prizes at the next Toronto Industrial.

Officers for 1897.—President, Robt. Beith, M. P., Bowmanville; 1st Vice-President, H. N. Crossley, Roseau; 2nd Vice-President, John MacDonald, Toronto. Vice-Presidents from the Provinces—Ontario, A. G. Ramsay, Hamilton; Quebec, Jas. A. Cochrane, Hillhurst; Nova Scotia, W. W. Black, Amherst; New Brunswick, Hon. D. McLellan, St. John; Swan Lake, Directors—O. Sorby, Guelph; Robert Graham, Guelph; Toronto, Davies, Toronto; Dr. A. Smith, Toronto; Brougham, John Holderness, Toronto; Robt. Bond, Toronto. Delegates—To Industrial Exhibition, H. Wade; to Western Fair, R. McEwen and A. G. Bowker; to Montreal Fair, James Crossley; to Ottawa Fair, R. Beith, M. P. Recommended as directors on the Board of the Horse Breeders' Association—R. Beith and John MacDonald. Mr. R. Gibson was recommended as judge at the coming Canadian Horse Show. The following