

ery, in cattle and in grain, and we are thankful for the enlarged and prominent space allotted to us, but our fruit, ah! we feel that the worst. That would have told a story for us to those wondering and astonished visitors of all climes that can never be so delightfully and successfully done by means of machinery, cattle, or grain, however high the excellence and value of these may be. The fruit sent, in consequence, will be but a few fragments, a paltry pittance and the merest remains after the bulk of the fruitful harvest was disposed of, to represent abroad a country so plentifully and so fruitfully supplied.—B. G., Arkona, Ont.

Fish Culture.—I have seen several letters in your valuable journal in regard to fish culture, especially the German carp, and as anything in that line interests me very much, I will give you my experience in pisciculture. Some three or four years ago I went down to Newcastle, got some 5,000 young trout fry from Mr. Wilnot, who very kindly gave me the use of his large tin cans to convey them to Guelph, his son coming as far as Toronto with me, where he was depositing some 75,000 white fish and salmon trout fry in the lake. The water requires changing every 3 or 4 hours in the cans. I had a large round pond prepared, about 30 feet in diameter and 4 to 5 feet deep, through which flowed a never falling spring. I here kept the young trout for one year, feeding them boiled and raw liver grated up fine, chopped worms, etc. When about three inches long I opened the sluice and let them all down the creek into the River Speed, about 150 yards distant. I preserved them there, allowing no one to fish for two years. Last summer I had magnificent fishing for myself and friends. We got these same trout about 6 to 8 inches long in large numbers. I may mention that there is, about two miles below my place, an old beaver dam, which makes the river from 6 to 8 feet deep in summer, where the young trout found shelter, and dense woods on either side, also any amount of springs flowing into the river on both sides. Now, sir, I was thinking if I could stock this part of the river with these same German carp we have been hearing so much about, what capital fishing and valuable food we would have. The river is at present swarming with young chubb and shiners, which make excellent food for trout (I would suppose for carp also). In looking over my poultry paper for November, I saw a letter from Mr. Baird, Pittsburgh, Pa., in which he says: "Carp fish do not even require running water; they do better in still water, even in swamps. They delight in mud; they are excellent fish and command a good price everywhere. Each female carp lays from 40,000 to 50,000 fish every year; they increase amazingly fast." I think I will inclose you the whole letter and you can publish it for the benefit of your readers. Now, sir, I do not see, when this is such a paying business on the other side, why our Government does not at once seize the golden opportunity and get the eggs, hatch them out and supply us farmers with the young fish at a moderate figure, or for nothing at all, as the American Government seems to do. These hard times hundreds would take advantage of it and be as successful as I was with my trout (speckled) enterprise. Hoping this may meet the eye of some of our fish-loving M. P.'s, who have some influence at court, and who will set a good example to the rest of us fish-loving farmers, I will not have written in vain, as there are hundreds and thousands of places in the Dominion where, if one-half of Mr. Baird's letter is true, German carp breeding could be made a very profitable occupation for our leisure moments. I think it would be well for you to publish Mr. Baird's letter in full, and use your influence with some of your M. P. friends to get some eggs from the other side at once, and have them hatched out at Newcastle. It would cost the country nothing, and I am sure we would all be willing to pay expenses of express charges, etc., in forwarding them to their destination.—J. A., Guelph, Ont.

[We sincerely thank Mr. A. for his valuable letter, and we are sure our readers will also feel grateful to him. We shall take his recommendations into consideration. Mr. Baird sent us a letter on carp culture which we published in our November issue. We hope to hear from other fish-loving friends, especially those who have any experience in fish culture.]

Land Plaster.—1. Please let me know where good land plaster could be obtained. 2. What effect would it have upon peas, oats or wheat, and also upon roots? 3. Would it exhaust the land? 4. What effect would it have upon the growth of clover and timothy? 5. Would it be most effective upon sand or clay? 6. What quantity per acre would be required? 7. How and when applied?—J. T., Orleans, Ont.

[1. Look through the advertisements of the leading papers, or consult the dealer in fertilizers in your nearest town. Many seedsmen also deal in fertilizers. 2. Land plaster is a sulphate of lime, that is, a chemical union of lime and sulphuric acid, and would benefit all soils deficient in these constituents. Some plants also feed largely on these compounds. Turnips are fond of the sulphur, and leguminous crops, such as clover, beans and peas, are exceedingly fond of the lime. Experiments have proved that plaster upon wheat, oats and grasses has had a tendency to increase the stem and woody fibre, without producing much

benefit to the grain, but good results are usually obtained from its application to clover fields. 3. If used in excess it will exhaust the land very rapidly, but it enriches soils which are deficient in the constituents above mentioned. 5. Sandy soils are most apt to be deficient in sulphate of lime, but clay soils are benefited by its application more as a means of improving their texture. Plaster is also useful for preventing the ammonia in soils from escaping, but the same thing can be effected by keeping the soil rich in vegetable matter. 6. You should test what quantities would be best suited to your soil. 7. It should be spread on the plowed field, and thoroughly mixed with the soil by the cultivator and harrow. We would recommend the use of superphosphate instead of plaster, for it contains a large percentage of sulphate of lime in addition to phosphoric acid, the latter being a very valuable fertilizer for most all soils.]

Soils for Turnips.—As a subscriber to your valuable paper, I wish to ask for some information in regard to turnips. I have just been reading a work entitled "First Lessons on Agriculture," by Egerton Ryerson, in which he states in a chapter on soils that "sandy soils are well adapted for the cultivation of the turnip." I have always understood that turnips do better upon a clay or heavy soil, and have shown the above statement to farmers here, and they express some surprise at the statement. Your opinion through the ADVOCATE upon the matter will be appreciated.—YOUNG FARMER, Richmond, F. Q.

[Little was known about the science of agriculture when Dr. Ryerson wrote his book, and many of his statements must be regarded as theoretic. Good turnips have been grown in all kinds of soils, so that farmers cannot agree as to what soils are best. The turnip is shallow rooted, and must therefore have its nutriment in the surface of the soil. A clayey soil, if the drainage and texture are good, usually produces the best turnips, because it retains its plant food at the surface better than light soils, and it is usually rich in phosphates, which turnips like to feed on; but when light soils are properly fertilized, they will produce as good turnips as other soils.]

Feeding Mangels, Turnips and Potatoes.—1. In feeding mangels to milk cows, is it best to feed them early in the winter or not until near spring? 2. Is it best to feed out all turnips first? 3. I am feeding three quarts mashed barley and peas together with three quarts wheat bran and one peck of potatoes a day. Will it pay to feed higher? 4. Are mangels better than turnips in feeding for milk? 5. Is a peck of potatoes equal to half a bushel of turnips?—E. A. C., Truro.

[1 and 2. As mangels do not keep as well as turnips, it is usually better in practice to feed them first, although otherwise it would be better to feed them mixed together. 3. Your ration is high enough. We wish every farmer could be induced to feed as well. 4. All depends upon the other portion of the ration. Mangels should be fed with a higher ration than turnips, as they contain less nitrogen or casein-forming material. In your ration we don't think you would find much difference in the feeding values of turnips and mangels. 5. A peck of potatoes has not so high a feeding value as a half bushel of turnips.]

Milking Once a Day.—Will you please answer the following in the columns of the ADVOCATE: Can as much milk be obtained from cows in winter by milking once a day as by milking twice a day? Is the milk injured in the least by being retained in the cow's udder 24 hours instead of 12 hours, as before?—ENQUIRER, Dorchester, N. B.

[All depends upon the cow and how she has been accustomed to be milked. Some cows may be milked once a day, and others may require three milkings. Never let the udder get unduly distended with milk. If your cow gives a large flow of milk, more than she can easily retain for 24 hours, you should milk twice a day, especially if you have made a practice of doing so. You may, however, milk once a day for a short time before drying off. You will never make a mistake by milking too often; but the danger in not milking often enough is that more milk may accumulate than can be absorbed into the system.]

Appointing Judges.—As the ADVOCATE will be in the hands of your numerous readers before the annual meetings of agricultural societies, I would suggest that more care should be taken in selecting judges, for instance, in horses. It is very unfair to exhibitors to have valuable animals pronounced unsound by men who never had any experience in that class of stock that they are looking over. The direc-

tors should have a qualified veterinary surgeon to examine all animals as to soundness before prizes are awarded; also on cattle or other stock. One of the judges should have a knowledge of the export trade. It is impossible for a man to judge butter and cheese who has a pipe in his mouth or a chunk of tobacco. These are only a part of the reforms needed.—C. C. H., Brussels, Ont.

Notes from Owen Sound.—In reference to the past season we have, like most other places in Canada, suffered very much from rust, the Spring wheat being almost an entire failure. Fall wheat was badly winter killed, although what survived the winter turned out well. I may say here that I got one pound of the Martin Amber wheat from you two years ago. Unfortunately the package burst on the way, when only about $\frac{1}{4}$ lb. arrived. I sowed it and it stood the winter well, and also yielded well. I sowed the product of the $\frac{1}{4}$ lb. a year past last fall in the middle of a 19-acre field of Democrat. The Democrat was badly killed, but the Martin Amber stood the winter well and yielded a bushel to the stook cut with the self-binder. I have sown the Martin Amber alone this fall. Barley was a fair crop here, but discolored very much. Oats and peas are both good crops and are turning out well. Turnips, where they escaped the fly, are good. Mangels, although very few sown, are an excellent crop. Potatoes are the largest crop known for many years. Apples are not so good as a general thing, although in some orchards a very large crop is harvested.—W. G., Owen Sound.

Curing a Kicking Colt.—I have a two-year-old colt which I have harnessed to the double wagon a few times. She kicks so badly now that I cannot drive her. I know no cause why she kicks. Can you let me know through the ADVOCATE how to prevent and cure her from this bad habit? I have often been benefited by the answers you have given in the ADVOCATE.—B. A., Newcastle.

[There are so many circumstances to be investigated that we fear we can give you no substantial advice. No two horses can be cured by the same remedy. There must be some cause, and that cause must be removed, and the treatment will depend to a very large extent upon the temper of the animal. You had better take her to some man who makes a specialty of breaking in horses.]

Galloway Cattle—Watering Horses—Curing Inflammation.—1. I am asked by a farmer's wife in the State of Ohio to give her the history or origin of the black Galloway cattle of Scotland; whether they are as profitable a stock as others—milking, buttering, etc. I was only twenty years old when I left the old country, and therefore had little experience in them or any other, although there was hardly any other breed, except here and there a small herd of Ayrshires, which were supposed to be better milkers. Now, sir, I ask you to give their history and such information as would be good for the farmers, in your next number. 2. I wish you would also give your opinion on watering horses before or after feeding; which is the better practice? My neighbors say it makes no difference. 3. There are a good many horses dying in my neighborhood with inflammation, some in the bowels and some in the lungs. Probably you could give a remedy.—T. G., Kimberley.

[1. The Galloway is one of the old original breeds of Scotland, and there is nothing definite known about their origin. They are neither deep nor long milkers, but their milk is of excellent quality. They are a beefing breed, and have no competitors in the quality of their beef; but they are late maturers, and do not reach a large size. They are very compact and neatly rounded off, which gives them a handsome appearance. They are very popular in some parts of this country on account of their great hardiness. 2. Veterinarians differ on this point. Large quantities of water should never be given immediately before or after meals, as it interferes with digestion, and distends the stomach too much. If more than a bucketful at a time is to be given, it should be done between meals. For farmers who give little rest to their horses, we would recommend giving a bucketful or less five or ten minutes before and after meals; this quantity becomes absorbed in a very short time, and will do no injury. 3. In Enteritis or inflammation of the bowels, the treatment depends a great deal on the cause of the disease. If there is a veterinary surgeon in the neighborhood, it would be well to get his services. The disease may be brought on by colic, by constipation, by diarrhea, by chills, over driving, by hurts, and a number of other things. To give a treatment that would suit in all cases would be impossible. We will give a list of medicines that may be used. If the bowels are constipated, give laxatives; if the pulse is quick, give aconite; give laudanum to alleviate the pain; apply fomentations to the abdomen; give anodyne clysters. Allow him a comfortable and well ventilated box stall to lie down in. Keep him as quiet as possible. For pneumonia or inflammation of the lungs, if the horse is in high condition, bleed to relieve the action of the heart; if he is thin in condition, give aconite instead of bleeding; give stimulants; apply counter-irritants, as mustard, to the sides over the region of the lungs; give diuretic medicine freely; give soft and nutritive food. Keep him in a comfortable place. Any druggist will be able to make up the proper doses.]