college, believing that the benefits to be derived therefrom would not be at all equal to the expense.

It is our firm conviction that the real independent farmers, of which class our subscribers principally consist, will approve of the supplement sent to our legislators. Strong party men of either side of politics may take umbrage, but as your advocate we should be failing in our duty to you had we not done our utmost to check what we considered a measure likely to be of greater injury than benefit. Once sanctioned, it must be put in operation and maintained. Private enterprise, unless to a favored few, must be in a great measure made subservient to this institution; fat berths for favorites must be made, and stock must be purchased to suit particular parties. A few wealthy individuals may profit by it, but the thousands of poor toiling farmers, farmers' wives and children who are struggling for a bare existence, even the thousands that are struggling to keep life in them and their charges, must directly or indirectly be taxed for the support of this institution and its leeches.

The political papers may be made subservient to it, and through their influence actual injuries may be made to appear to you as great benefits. Party speakers may address you, pointing out the great good it may have done or will do, but there are enough scattered independent and practical farmers, that have not yet bowed the knee to its mighty sway, who will yet sift this institution to its foundation. Every mode was adopted to get this measure through the House; a very meagre number carried it, yes, carried it in the face of the farmers' petition against it; against the voice and condemnation of nearly 100,000 farmers.

We believe the institution is not established for farmers; it is merely taking a name to give it an appearence for such a purpose. Considering the opinions expressed by farmers and others, and from positive knowledge about its whole origin, we look upon it as the most unjust and dishonorable act that ever was introduced or passed in any Legislative Hall in Canada.

However, we do not profess to be always right in our views, and will be happy to insert an article of reasonable length or this subject from any member of parliament, warden of a county, president or secretary of any agricultural society, mayor of any city, or any leading farmer, that will furnish the proper name and address. of aiding the Had they been desirous farmers, one-tenth part of the money that this establishment will annually cost might have been expended in the different townships to establish farmers' clubs and procure an agricultural library, and a thousand times more good would have l een done. By aiding societies and farmers' clubs, we would be commencing at the foundation, but by commencing with the college it is like building your roof first. What we want is to distribute information among the whole farming community, not keep it among a few. Thousands of experiments are tried every year by the narmers through the country, more valuable than anything which probably will be tried at the Agricultural College. All that is needed is that everyone should have some means of knowing the results.

Rotation of Crops.

A Western Farmer "wishes for full information on the rotation of crops. What are the advantages he may expect? How is he to commence and carry on a suitable rotation on a farm of 100 acres, such a rotation as is best adapted to the country? Wishes the reply to be easily understood and easily followed."

REPLY.—The advantages to be derived from a well carried out rotation of crops are: His farm will be in better condition -more fertile and free from weeds than if

greater from a rotation embracing soiling. Such a system we recommend.

His farm will be more fertile and freer from weeds. Wheat or any other cereal exhausts the soil of much of the elements of fertility; and when wheat follows wheat in unbroken succession, the soil must be greatly impoverished. have seen in this vicinity a large field that had been so cropped for twenty years.-The crop that it then bore was not worth the labor; it was more weeds than oats. When one-fourth or one-sixth, as the course adopted may be, is every year sown with clover to be ted to cattle on the farm, and one-fourth or sixth is well manured and sown with turnips, mangolds and other roots, the soil must be always in good condition.

He will feed more cattle on his farm .-American agriculturists say that three acres of their pasture are required for each cow. Now, we have no doubt that less than half of three acres will feed a cow well by following the system we recom-We can say, from our own knowledge, that cows have been fed by soiling, two cows to the acre. It is true that there we pastured one cow to the acre, but one-half that acre was enough for soil-

The yield of the cereals will be increased as the land becomes more fertile. Soiling the cattle in the farm-yard will greatly increase the manure heap. This is an unfailing source of increased fertility. An American writer has well remarked: "It is certainly true that the culture of roots has been the salvation of English agricul-ture." The very preparation for the root crop and its subsequent culture convey to the soil nearly all the benefits of a summer fallow, and to this we have to add the manure applied. And the crops sown for soiling tend of themselves to improve the soil. Even the cereal grasses do not impoverish, as they are cut when green. Clover especially serves to enrich the soil. It sends its long large roots deep beneath where the roots of other plants have not reached, to bring out the hidden stores of plant food, and when ploughed down, those roots converted into plant food as carbon, furnish rich food for the plants of other succeeding crops. In a proper rotation each crop serves to prepare the soil and to provide nutriment for the crop succeeding it.

The number of years through which a system of rotation extends varies according to circumstances, as the area of the farm, the nature of the soil, &c., but in all instances there is a regular system and an adherence to it; and in nearly every system it is a principle that one grain crop does not immediately succeed another. At the expiration of the term of years embraced in the course, the system recommences. A four years' course is in many nstances pursued, and very advantageously. This is especially so in small farms and on light soil. The four-year course is as follows: 1st, root crops; 2nd, cereals; 3rd, soiling (clover, &c.); 4th, cereals. In this course one half the land is always yielding grain crops, one-fourth is manured every year, and there is no pas-

The rotation I practised for many years is the six years course. I think it would be suitable to the farmer who makes the enquiry. By following it he will have one-third of his arable land under pasture, onethird under wheat or other grain crop, and the remaining third will be divided between root crops, meadow and crops for soiling. I will describe it briefly: Let us suppose this 100-acre farm to have 72 acres cleared, arable land. This we divide into six fields of twelve acres each; one field is to be manured every year for root crops, &c.; with this crop we begin. This field then, the 1st of our course, we plow lightly the previous autumn, as soon as some farmers. we can after the removal of the former tilled without such a system; he can feed a much larger stock, and the grain crops will be increased. The quantum area from the femoval of the former from the judges appointed to examine the crop. Plow it again deep and rough because a says on carrot culture, and to award the fore the winter sets in, having the furrows prize were Thomas Routledge, President clean that the ridges may be dry. As to of the East Middlesex Agricultural Asso-

is used, and one acre with western corn. These three acres will need manuring preparatory to the next year's crop. Second year, wheat or other grain crops, sown with clover and grasses. Third year, clover, grasses for hay, and three acres cut green for soiling. Fourth year, pasture. Fifth year, pasture; plow rough and strong early in the fall, manuring for the next crop. Sixth year, wheat or other

cereals.

This ends the course; the next year it commences anew. Field No. 2—1st year, grain crop; 2nd year, root crop and soiling, and so on as above. Field No. 3—1st year, pasture, soiling; 2nd year, wheat; 3rd year, roots and so on. Field No. 4— 1st year, pasture; 2nd year, pasture, then wheat, then roots and soiling. Field No. 5—1st year, meadow and soiling; then pasture for two years, then wheat followed as said above by roots and soiling. Field No. 6—1st year wheat; 2nd year, clover (meadow and soiling); 3rd and 4th years, pasture; 5th year, wheat or other cereals, followed by root crops and soiling, as di-

rected for No. 1.

The only difficulty in the rotation will be the getting the several fields into it at first, the culture of them not having been according to such a system; however, if the necessary manure can be obtained, this difficulty can be easily overcome. It may be found necessary to use some of the fertilizers now easily procured, such as superphosphate, gypsum, salt, &c., at first: as for the first year or two, at least, the farm-yard manure will not be suffici-

There can be no good farming without sufficient manuring. Farmers in England, in addition to all the manures that can be procured at home, import manures from every land where they can be procured bones, woolen rags, &c. from the continent of Europe, guano from South America. and they are getting from Australia the bones of the animals killed there for the hides and tallow. These bones are ground there and pressed into cakes for shipment to England, there to be dissolved and applied as liquid manure. The English know the profits to be realized by the increased fertility of the soil. Let us take a leaf out of their book.—A. ED.

Prize Essays on the Cultivation of the Carrot.

In the February number of the Apvo-CATE we offered a prize for the best article on the cultivation of the carrot, stipulating that it was to be confined to actual practice, such as the majority of good farmers might adopt; and adding that chemical analysis and technical terms were not necessary. We are pleased to say that we have received eight very good essays on the subject.

There can be no doubt of the good effects of giving these prizes. The essays are of great benefit to the writers themselves as well as to the readers. They lead to more exact observation and reflection. It has been remarked that while plants. realing stores the mind with knowledge, writing has the invariable tendency to produce accurate, correct conclusionswriting makes a correct man." He who dilligently studies an agricultural subject, that he may place the results of his observation in their best aspects before the public, will not be apt to follow the careless, hap-hazard ways too often seen with

The judges appointed to examine the

ment would not establish an agricultural tity of his farm-yard manure will be much the time of manuring there is a difference ciation, and late Warden of the County;

The manure must be well Henry Anderson, Secretary of the East rotted if not applied till the time of put-ting in the crop. Of this field let root crops occupy nine acres; the other three acres are for crops for soiling, one acre of this part to be some with acres are for crops for solling, one acre of this part to be sown with rye in the fall they were very much pleased with all the this part to be sown with rye in the fall essays—so much so, with some of them, for the earliest soiling, and, after the rye essays—so much so, with some of them, is cut, plowed at once, manured and sown in particular—that they intend to make with rape for late fall feed. One acre sown trial of some of the suggestions therein with rape for late fall feed. One acte sown with oats and peas for soiling after the rye is used and one acre with western corn. contained, thinking them improvements on the modes generally practised. They express their entire approval of the bring-ing out of essays by the offering of the prizes.

The prize, after most careful examination of the essays, was awarded to W. C. St. John, of Sunderland. They unanimously came to this decision; their reasons are: "The ideas are new, and the preparation of the ground and the general cultivation are thorough. They are so highly pleased with his ideas that they intend to give his method a trial themselves, persuaded that it will give good Some of his ideas have been results. proven in garden culture, and found quite feasible.

The judges also highly commended the essay by "Young Farmer," of Castlebar, and add that all of them meet their ap-

proval. We publish the essays of W. C. St. John and "Young Farmer," without any comment for the present. In our next issue we purpose to give a digest of the eight essays, with remarks. Meantime, we would thank any of our readers who have had experience of carrot culture, to let us know their opinion on the ideas brought before them. On the sowing of the seed in November we would be much pleased if any having experience in the matter would say what has been the result. We know that in the old country the sowing of carrots, as well as parsnips and onions, has been attended with great success. be equally successful here ?—A. Ed.

ON THE CULTURE OF THE CARROT. The following is my method: -

In the field you intend to summer fallow select as much ground as you intend to allot for the raising of carrots. In the latter part of May plough and harrow it well and let it remain till about the 15th or 20th of June; then plough it with a sub-soil plough as deep as possible, and harrow it till it is mellow and level.

The next thing is to manure it heavily with

sible, and harrow it till it is mellow and level.

The next thing is to manure it heavily with well-rotted manure; then plough it under and work it the same as the other part of the fallow the remainder of the summer. About the 25th of October drill your land so as to be able to carry off the surface water in the spring, the drills to be 16 inches in width and as high as possible. Then manure between the drills and drill them back again. The ground will then be mellow, and on account of the first manuring the young plants will easily penetrate the ing the young plants will easily penetrate the ing the young plants will easily penetrate the soil, and, when they come in contact with the manure below, will grow rapidly, and the ground being loosened to so great a depth by sub-soiling and the pulverizing action of the frosts, will better retain its moisture and will be a great help to the carrots in a dry season.

On or about the first of November (according to the gasson) sow your seed, placing a weight

to the season) sow your seed, placing a weight on the machine so as to put them down a good depth, and roll with a hand roller. My reasons for sowing in the fall are, let—it gives sons for sowing in the fall are, let—the gives a better chance to prepare the land; 2nd—the seed is more apt to germinate, and on account of the carrot not being easily injured by the spring frosts, they will get the start of the weeds and will grow more solid and large than when grown in the spring.

weeds and will grow more solut and targe than when grown in the spring.

In the spring, when the plants are about three inches high, thin out to four inches apart. When any weeds make their appearance hoe with a hand hoe, never using a cultivator for fear of destroying the drills, they being rather close for it to work without injury to the

Some fine morning, towards the latter part of October, commence pulling your carrots, putting three rows into one till you think you have sufficient to bring into the cellar in the afternoon. Then take a sharp knife and cut afternoon. Then take a sharp knife and cut off the tops close to the carrot, and place two rows (six rows) into one. By pulling them this way they will be free from the tops and the sun will dry them perfectly, and being placed in a frost-proof cellar they will not rot as quickly as when placed in a damp one. If kept from frost carrots will remain sound till June, but if they are frozen in a cellar they will rot almost as soon as they are thawed out.

These suggestions I respectfully offer,

WM. G. St. John.

Sunderland, Ont.

The soil f loam, free f select a pie very weedy and pulveri ticable to at have remov coating of as you can has remain that are ne harrowing, ing once of get as man to plough it freezes up, If the soil fall may be soon as the level it wit deeply, har about 24 to sowing. ing the soil thoroughly well incorp the land is it is possib As carrot s the young the seed in for some to without in

AN ESSAY

place to dr the sowing portion of to sow a lib can be easi seed will three lbs. t When the easily, thir apart. So from nine teaches me per acre at them very of the soil rots will g hest kind t which you the orange what it la In cultiv perfectly of to any gre pr perly p

these roots are very h them is to necks just gether and piece of a take a sti and saw a the hoe bl then take your carro person car But if grow alm best plan

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