

of potash or soda. Again, wheat and other grain crops require a large amount of phosphoric acid. If the soil be deficient in this, it will be impossible to raise good crops. A partial knowledge of chemistry will enable a person to determine that question, and the same partial knowledge will point out to him the substances or manures which contain this ingredient, viz: bone dust, guano, &c. The nature and quantity of the various ingredients contained in the different manures are, of course, explained by chemists, and may be ascertained by reference to their works.

We mean therefore to say, that a sufficient amount of chemical knowledge may be obtained from study and observation, by an intelligent farmer, without resorting to the laboratory of the practical chemist to enable him to form a tolerably correct judgment of the nature of his soil, and whether any of the substances absolutely essential to the growth of crops are in excess or deficient. He will probably be able to learn enough in this way for all the practical purposes of cultivation. Professor Johnston's Catechism of Agricultural Chemistry, a little book of 74 pages, contains a rich mine of information, almost sufficient in itself for the purposes mentioned. His lectures on chemistry and geology are more full and scientific in their character. The works of Liebig, and numerous other writers on scientific agriculture, may be studied by the intelligent farmer with great advantage.

We know of no person in this country qualified to give lectures, and illustrate them by experiments, except Mr. Buckland. Professor Crofts, (of the University,) is, we believe, a first-rate analytical chemist, and if we were anxious to know the constituent elements of our soil, we should prefer sending a portion to him to be analyzed with scientific accuracy. Mr. Buckland studied under Professor Johnston, the best agricultural chemist of his day, and might, we dare say, be engaged to deliver a course of lectures to any club or society that would pay a reasonable remuneration.

An apparatus sufficient to perform all the experiments mentioned in Johnston's Catechism, may be had in Albany, N. Y., for about four dollars. We are not aware that any thing additional would be required, except perhaps a few tests, to make an *unprofessional* examination of a piece of soil.

AGE OF POULTRY.—Farmers usually sell poultry alive, excepting in some part of the country, such as the Borders, where geese are killed and plucked for the sale of their feathers before being sent to market. Poulterers in town, on the other hand, kill and pluck all sorts of fowls for sale, so that the purchaser has it in his power to judge of the carcass; and if he buys an inferior article at a high price, it must be his own fault. It is easy to judge a plucked fowl, whether old or young, by the state of the legs. If a hen's spur is hard, and the scale of the legs rough, she is old; whether you see the head or not; but the head will corroborate your observation, if the under bill is so stiff that you cannot bend it down, and the comb thick and rough. A young hen has only the rudiments of spurs, the scales of the legs smooth, glossy, and flesh colored, whatever the color may be, the claws tender and short, under bill soft, and the comb thin and smooth. An old hen turkey has rough scales on the legs, callosities on the soles of the feet, and long, strong claws; a young one to the reverse of all these marks. When the feathers are on, the old turkey-cock has a long beard, a young one but a sprouting one; and when they are off, the smooth scales on the legs decide the point besides difference in size in the wattles of the neck and in the elastic spot upon the nose. An old goose, when alive, is known by the roughness of the legs, the strength of the wings, particularly at the pinions, the thickness and strength of the bill, and the firmness and thickness of the feathers; and when plucked, by the legs, pinions and bill, the coarseness of the skin. Ducks are distinguished by the same means, but there is this difference, that a duckling's bill is much longer in proportion to the breadth of his head than that of an old duck. The young pigeon is discovered by its pale colored, smooth scales, tender, collapsed feet, and yellow long down interspersed among the feathers. A pigeon that can fly has always red colored legs and no down, and is then too old for use.

AGRICULTURAL COLLEGE AND EXPERIMENTAL FARM.

We are pleased to receive such marks of approval of the movement to which we have endeavoured to give an impulse, in the last two or three numbers of our journal, as are to be found in the communication below. It will be seen that our correspondent is in favour of a leading principle of our scheme as propounded in our last number—a joint stock company:

Whitchurch, March 12th, 1848.

MR. EDITOR:—

I read with much interest in a late number of the *Agriculturist*, the able communication on the above important subject, from the pen of George Buckland, Esq. The farmers of Canada owe that gentleman a debt of gratitude, for the zeal he most nobly manifests in the cause of agricultural improvement, and in my opinion, they will be neglecting their best interests if they do not unite their efforts in establishing and sustaining an institution, having for its object the noble and patriotic purposes pointed out by Mr. B. An educational institution of this kind has for some time attracted public attention in this country, and it appears strange, that, among a people so purely agricultural, so little should have been done towards its establishment. About six years ago, the farmers of this and the adjoining townships made an attempt to establish an Agricultural College; and if ordinary prudence and good management had been observed, by those who took the most prominent part in the matter, that institution would have been in most successful operation, and produced much good to the country. Nearly £3,000 were subscribed, and a very lively interest was manifested by many of our best and most substantial farmers, who attended the meetings and expressed a willingness to contribute a portion of their means and influence, in establishing a college in connection with a well-conducted experimental farm. Four hundred acres of land were bought for the purpose, but the person who was commissioned to enter into a treaty for the land, betrayed the confidence that was placed in him, and in the operation turned a land jobber, and pocketed a very considerable sum. This fact soon became known, dissatisfaction followed, a public meeting was called, and a thorough *expose* was made, and in short the whole fabric fell to the ground. I need scarcely add, that those who took a prominent part in this matter, are still of opinion, that under proper management, educational institutions such as have been so ably and fully described by your correspondent Mr. B., would tend much to develop the agricultural resources of this province, and likewise be a means of arousing the latent talents of the youth of our agricultural districts, enabling them the better to perform with credit, the duties which devolve upon them as agriculturists and citizens of this young and flourishing colony. As a plain practical farmer, and one too, who is anxious to aid in establishing, at least, one superior educational institution, upon a broad and scientific basis, for the education of my sons, with a view of making them intelligent practical farmers. I read with much interest, the warm and patriotic appeal, made by Mr. Buckland, to the agriculturists of Canada, and I heartily trust, that efficient measures will be adopted to second such noble efforts. Although I do not profess to be as well informed upon these matters, as are, doubtless, many of your readers and correspondents, still in order that "public opinion may be fairly tested in reference to the objects" so happily expressed by Mr. Buckland, I shall crave your indulgence, and that of your numerous readers, whilst I submit without further preface my own views regarding the mode in which such an enterprise should be undertaken, and the character of the institution so much required in this country. Although government aid is desirable in all matters, of a purely public nature, still I hold that the movement under consideration is of too great and too pressing a nature to be entrusted entirely to the action, and in the hands of government. I would therefore suggest the propriety of immediate steps being taken by those who are directly interested in the matter. And of the various ways in which such an enterprise may be undertaken, probably the one of organizing a joint stock company, for the purpose of realising funds, and for concentrating support and influence from various parts of the province, is, on the whole, the most feasible and practicable. I would therefore suggest that meetings be called without delay in various parts of the province, to consider the question, and when the public mind has become well prepared for the movement, a stock book might be opened, and collectors sent out to procure the subscription of those who are friendly to such a national enterprise. The shares should not be over £12 10s. each. An instalment of £2 10s. per share, would most likely be required soon after the stock was taken up, for the purpose of purchasing and stocking the farm, after which other instalments would be soon required for the erection of suitable and commodious buildings for superintendents, teachers, pupils, and workshops, &c., and for the purchase of philosophical apparatus, to illustrate the various branches that would be required to be taught at such a school. The capital to carry out an enterprise of this kind, upon a liberal and enlightened scale, would necessarily, be very considerable; £10,000 would be sufficient for the easy accomplishment of the objects contemplated. When once established under the management of a proper Board of Directors with efficient teachers and overseers, such an institution might, with tuition fees,