ON THE ORGANISATION OF SCHOOL-FARMS.

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which English agriculture has fallen is to some extent a reproach upon the state of our national education, as it affects the agricultural classes. The actual losses may be accounted for by causes beyond control, and therefore beyond blame; but these losses have certainly been aggravated by defects which education might have removed or compensated. How much better might the bad seasons and low prices have been borne if

there had been freer intercourse and more mutual confidence between owners, occupiers, and labourers! And as regards the farmer's proper share of this depression, who will deny that there have been losses which neither bad weather nor low prices can account for, but which are due simply to bad farming-that is, to an ignorant perseverance in methods that have been proved to be wrong, or a no less ignorant refusal to adopt well-tried improvements? Such ignorance might certainly have been removed by a higher standard of general education, and by better technical instruction of those who are Perhaps also engaged in the business of farming. it may be added that the despondency which these losses have caused has been too often displayed with a certain lack of that fortitude and hopefulness under trouble which, inbred as we believe it to be in the English character, the spirit of good public schools might have more generally fostered and strengthened.

Personal qualifications are indispensable conditions in a farmer's success in wrestling with the forces of nature, and competing with his fellows. Such are skill, energy, a sound judgment in the choice of alternatives, and, more than all, a cheerful spirit invigorated from the honest springs of a buoyant heart. These personal resources, which, even more than abundant capital, are essential to a farmer's prosperous career, it should be the ambition of a true national education to bring out with an ever-improved supply. Each generation should be fitted to enter upon the labours and difficulties of life with sounder knowledge and braver spirit; for the actual work and struggle of life evidently does not grow less arduous with the progress-so complicated-of civilisation. Certainly there never was a time in which the English cultivator has needed all the qualities of manhood and all the resources of education more than now.

The severe losses which have befallen English agriculture may prove a blessing to the country if they should arouse the rural inhabitants generally, and especially the farmers, to a determination that public education in country districts shall be such as to fit

English boys not only to drive a good quill in a clerk's office, and failing this to become the rough servants of rougher masters in the colonies, but to be the best cultivators of the best-cultivated country in the world.

What is the best education for those who are going to be farmers? With every allowance for exceptional cases, whether of pupils or teachers, the general reply to this question may be given with confidence :- The best education is a public school education, continued as long as means and circumstances will admit, and completed if possible by a University degree, or at least by a public certificate. This general education should be followed, not interrupted, by a course of technical instruction. Whether or not this technical instruction can be directly annexed to the general education, and made part and parcel of a public school and University system, is at present an unsolved problem; but there is great reason to doubt whether any public system of technical schools can be satisfactorily maintained which does not rest for its foundation upon a complete and efficient system of public schools and examinations for general education. Probably Cirencester College would be even more successful than it is but for its isolation among the public schools and colleges of the higher class, and the non-existence at the time of its foundation of any public school system among the agricultural and commercial classes.

Till a few years ago, English boys whose career was to be commercial rather than professional, and their livelihood to depend on the profits of business, were sent almost exclusively to what are called commercial schools, conducted at the private risk and for the private profit of the teachers. But attempts have been made in the last twenty years to give a public char-Among these the acter to middle-class education. experiment of county schools has not been unsuccessful. That experiment owed its origin to a conviction that great public mischief would arise from the partial, divergent, and caste-inspired course which education was taking. On the one hand, the verdict of the upper classes had been unmistakably pronounced in favour of public school education, as generally preferable to private tuition, and further had implied that those only should be recognised as public schools which were costly and classical. On the other hand, the elementary schools were rapidly becoming organised into a public system of a very different type, in which the efforts of the charitable to provide gratuitous teaching for the destitute were being adopted, subsidised, and gradually superseded by the action of the State. To those who observed and reflected upon the tendency of these two most diverse systems-high and low-of public education, a conviction arose that the only hope of sustaining between the two an educated middle class in England depended on finding some principle and basis upon which public schools might be established less costly and more distributed than those of the higher rank, yet self-supporting, and therefore more honourable and more efficient than those which were springing up in every parish in dependence upon charitable subscriptions, and more and more upon State aid.

The county, as an ancient and honourable institution, affecting all classes and sections impartially, denominating at once a well-defined territory, and a community attached to its traditions, seemed to offer the required basis for a system of middle-class education that should be at once public and commercial, national yet not centralised, religious yet not exclusive, self-supporting yet not aiming at private profit as its main object. It is true that the county hitherto had not been connected with education, and was furnished with no scholastic machinery of its own. But the Universities, in establishing their local examinations, have shown themselves able and willing to furnish the standards that are required. And it will be in accordance with the recommendations of the best authorities, if a considerable share of the administration of the endowed schools and local charities should ultimately be devolved on provincial authorities connected with the counties.

As a sample of the kind of public education which has been proved to be practically attainable on this principle, I may refer to the Devon and to the Norfolk County Schools; not because they have not been equalled and surpassed by other schools of the same character, but simply because I have been cognisant of all the facts connected with both these institutions.

The number of boarders in both schools is about 150; the buildings in both cases being capable of holding from 80 to 100 more boys. It is believed, on high authority, that the full advantages of a great public school will be best attained when the number of pupils is not less than 200. As both these schools were started with a very small number, and have been gradually but steadily growing, it may be hoped that they will in course of time be filled. But already they are large enough to prove very fairly both the cost and the value of such institutions. A capital of £14,000 in Devonshire, and of £20,000 in Norfolk, has been raised, partly in shares and partly by loan. The liability of the shares is limited, and the dividend is not allowed to exceed 5 per cent. A considerable number of the original shares have been presented by the subscribers to the Scholarship Fund.

The governing body, in both cases, consists of an equal number of trustees and directors. Of these, the trustees are appointed for life, and alone appoint or remove the head-master. In other respects they share the functions of the directors. The head-masters are eligible for election as, and actually are, members of the governing body.

In Devonshire a varying charge to parents which averages about £36, and in Norfolk a uniform charge of £42, are found sufficient to provide the whole cost of board and tuition, together with interest on

capital. The buildings, play-grounds, &c., are very well adapted for the purpose; the board is plain, but quite sufficient, and satisfactory to the parents. The standard of education is high enough to qualify those who are intended for the University or professions to carry forward their studies into higher subjects, while it practically supplies a good general preparation for commercial pursuits. It is his own fault if any boy leaving these schools finds a career closed to him, on the ground that his education is below the standard of average English youths leaving school at the age of sixteen.

On the whole there are solid grounds for asserting that these and similar schools offer great advantages to those rural residents who cannot count upon having a good day-school within reach of their homes; and also to all middle-class families, whether resident in country or in town, who wish their sons to have, like the higher classes, the benefit of public schools, in which they may not only have the best tuition, but be thrown into living contact with the manners and characters of other boys, and so be prepared for the mixed intercourse and keen competition of after-life.

But the question has been in abeyance, whether a farther step could be taken by the promoters of these schools, and whether, without curtailing the general advantages they offer, some special or technical instruction, fitting boys for particular pursuits, and among others for farming, might be added. How much this object has been thought desirable will appear from the fact that the Devon County School was started twenty years ago as the "Farm and County School," and that one of its pupils has this year obtained the first of the Royal Agricultural Society's scholarships. But hitherto the work of establishing and developing a public school, properly so called, has employed all the resources which the promoters and directors of the school have been able to command.

Systematic teaching of any practical art, and especially of agriculture, implies a very serious addition to the cost and machinery of schools. Books and stationery comprise the whole movable apparatus, as schoolrooms and desks do the whole fixed apparatus, required for general school teaching. But as soon as any application of general knowledge to a specific study-for instance, to the fine arts, as drawing or music; or to useful arts, as engineering or agriculture -is attempted, the demand arises for extra room and apparatus. Instrumental music is one of those subjects which cannot well be included in the general charge for school-teaching, because it requires a special provision of rooms and instruments. The same holds good with chemical and mechanical studies. Workshops and laboratories must be provided. It is true that in all these cases the necessary outlay of capital is not very large, and the chief difficulty is in obtaining qualified teachers, and sparing time from the general studies. But agriculture is quite exceptional in its requirements both for space and apparatus. It is also a study which, to be effectively prosecuted, must absorb a great deal of time and of

physical energy. For these and other reasons there is, no doubt, some risk in annexing to a public school a secondary study so costly and engrossing. Where a public school is thoroughly established, and in a condition to stand the tug of a difficult experiment, the results would probably abundantly compensate the risk and anxiety of the attempt. It might, however, be as well to try the experiment of one or more school-farms locally detached from already established schools, whose promoters might join in the venture, and whose students would furnish several of the pupils.

Whether the following estimate of the capital required, and the conditions probably essential to success, will deter or encourage such an effort I cannot tell, but there must be very many persons deeply interested in the future prosperity of English agriculture, who might be disposed to join in the adventure, if, as has been the case in the county schools, a few public-spirited men of mark and influence would give it a favourable start.

If I were asked to suggest conditions for the experiment of a school-farm, I should recommend its being worked within the following limits:—

I. The farm should be large enough (a) to show a regular system (such as the Norfolk four-course) in effective operation, and (b) to have ample experimental ground both for alternative crops and also for primary works—e,g., draining, fencing, reclaiming waste, breaking up and laying down grass.

2. The capital should be sufficient but not extravagant, so that the results, if very successful, should be due rather to extra skill and energy than to an extra credit at the bank.

3. Besides the capital required for the ordinary working of the farm, an additional capital for the purpose of adjusting the usual processes to the purposes of instruction should be provided.

4. The students admitted should be in proportion to the extent of the farm—say one pupil to ten acres.

5. The students should be in absolute charge of one responsible chief master, who should be well acquainted with public school discipline, having himself been a prefect and master.

6. The master should have assistant tutors in the proportion of one to twenty-five students, who with himself should be qualified to give all the instruction, general and special, required.

7. The farm should be in charge of an experienced bailiff, who should be responsible in the first instance to the master, but with periodical reference to and inspection by a small body of managers. These might be either selected by the proprietors out of their own body as directors, or appointed as professional agents.

8. The master himself should be responsible to a select council independent of the managers.

 The master, tutors, and the bailiff should have moderate fixed salaries, with liberal bonuses out of farm profits. 10. The proprietors' capital should be entitled to a dividend not exceeding 5 per cent., with adequate reserves for losses and deterioration, and the charge to students should be calculated so as to provide this dividend and reserve fund independently of any profits from the farm.

11. The charge to students should be capable of reduction (1) out of profits on the farm annually ascertained, (2) out of earnings by the students in profitable work upon the farm.

12. The students should be admissible at fourteen, and expected to reside at least one year. They might be admitted under three classes:—First, shareholder-students—those who would be able and willing to advance capital to the farm, upon which a preference dividend of 4 per cent. might be guaranteed, with a bonus out of farm profits. Secondly, paying students—those who would pay the current charge. Thirdly, apprentice-students—those who would give work, time, and attention, to be valued towards a reduction of charge. Scholarships might also be provided by benefactions or surplus profit.

According to these conditions, a farm of 500 acres would be required for 50 students, and this number should perhaps be considered the minimum for which it would be worth while to conduct such an enterprise.

The ordinary estimate of $\mathcal{L}10$ per acre for farming capital would have to be increased, first for the provision of suitable buildings for the residence of masters and students, and farther for the extra requirements which a farm conducted not only for profit but for instruction would involve. Perhaps $\mathcal{L}20$ per acre, or a total of $\mathcal{L}10,000$, would be sufficient, allowing $\mathcal{L}5,000$ for ordinary, and $\mathcal{L}1,000$ for extra farm capital, and $\mathcal{L}4,000$ for erection or adaptation of buildings and furniture.

If 7 per cent. should be considered sufficient to provide for a reserve fund and an annual dividend not exceeding 5 per cent., this would require a payment per student of £14 besides the cost of board and tuition. These *need* not exceed £30, but perhaps might be estimated at £36, so making up the total charge to £50.

The salary of the master might be fixed at £300, with the same amount to be divided between two tutors, and the bailiff's salary would be charged to the farm.

The profits of the farm might be expected to range from \mathcal{L}_1 to \mathcal{L}_2 per acre—*i.e.*, from $\mathcal{L}_5\infty$ to $\mathcal{L}_{1,0\infty}$ —and if these profits were divided into fifths, one might be assigned to the head-master, one between the two tutors, one to the farm bailiff, and two to the students.

Of the capital three-fifths, or £6,000, might be raised in ordinary shares of £10 each, and the remainder be obtained either by the "advance fees" of students, or by loan, or by gift, or endowment.

We trust these suggestions will lead to some practical steps being taken to organise school-farms in suitable places throughout the country.