

PAGES

MISSING

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"THE PROFESSION WHICH I HAVE EMBRACED REQUIRES A KNOWLEDGE OF EVERYTHING."

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The House Fly

Injury Caused by It and Method of Control.

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THE house fly is found wherever man is found, and is, perhaps, the most widely distributed insect known. It is a constant nuisance to man and is, in fact, his worst pest. This is well shown by the following statement by Hewitt, Dominion Entomologist of Canada:—

"Howard, 1911, has calculated that by September 10th the progeny of a single over-wintered fly which deposits its eggs on April 15th, would number 5,598,720,000,000—if they all lived; but they do not all live, nor do all eggs hatch. Nevertheless, these calculations serve a usefulness by indicating in a graphic manner the potential fecundity of a house fly."

The house fly has become such an important factor in the spread of some diseases, particularly typhoid fever, that recommendations have been made by prominent men to change its name to that of "Typhoid Fly."

BREEDING RATE AND PLACES

Some flies hibernate during the winter. They reappear with the warm spring weather. Then a single fly lays one hundred to one hundred and fifty eggs in a batch and as many as four such batches during its life-time. Three weeks after the first batch is deposited, the second generation is in a position to do its bit in laying eggs. Their capacity for reproduction and increase in numbers, therefore, seems remarkable.

Female flies breed in rotting materials and excreta of all kinds. Their eggs have been found in decaying vegetables and fruit; also in human faeces and in manure of the horse, fowl, cow, pig and rabbit, as well as in such materials as kitchen refuse, garbage, cess-pools, etc.

HABITS.

Young flies make their first appearance in the midst of filth and manure. They dirty their mouths and feet in all kinds of filth imaginable. They are great feeders; nothing is too unclean or bad-smelling for them to eat. In hurried feeding flies fill their crop (the storehouse for liquid food) and relieve themselves of it later by partly vomiting it. Many a time these vomitings are again taken up and used as food. When a solid food is met with, flies deposit some liquid on it and then suck it up. Plenty of food causes frequent defecation, especially during the hot weather, and so it is common to find a countless number of faecal deposits and vomit spots in places visited by flies.

FOODS CONTAMINATED

Flies divide their attention between excrements and food materials. When they leave the privy or the manure pile, or refuse of any sort, they may walk over foods and wipe their dirty mouth parts and hairy feet which have been aptly compared to miniature brushes that are hard to clean.

Their walking, feeding, vomiting and defaecating habits all tend to contaminate food-stuffs intended for human consumption and make them undesirable and objectionable to the extreme, especially in view of their foul association and filth-carrying capacity.

RELATION TO DISEASE.

But there is even a greater danger from flies when the question of certain diseases and their spreading is considered. At this point it may be of interest to note that the bacteria pro-

has come to be recognized as an infectious disease. Studies, particularly in Manchester, England, made by Niven during the periods of 1903-1909, show that "the disease has become more fatal only after house flies have been prevalent for some time, and its fatality rises as their numbers increase and falls as they fall." The same report shows that "there is an intimate relation between the storage of excreta in the privy and high diarrhoeal mortality."



ducing diseases in men have no effect on the house-flies.

The germ responsible for typhoid fever is found in the excrement, not of normal individuals, but of those that are either typically sick, or those that are "carriers" so-called; that is, mild, or dormant or convalescent cases. House-flies having access to such materials infect themselves and are likely to become important factors in distributing this disease by contaminating foods and drinking vessels and by tracking over sores or open wounds.

Summer diarrhoea, which is so fatal to children under five years of age,

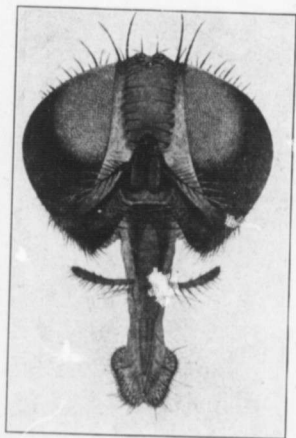
Flies feeding on the sputum of patients suffering from tuberculosis may become strong distributing agents. Especially in view of the fact that they can travel at least one-quarter of a mile when there is no wind. It becomes essential for this reason to exclude flies from this infected matter.

Under suitable circumstances, that is, when there are people sick with cholera and their faeces are available to flies, cholera may be spread about. Also under favorable conditions, flies may be instrumental in distributing anthrax and diphtheria, though this is rare.

In the case of infantile paralysis, let me quote from Graham-Smith's "Flies and Diseases": "Preponderance of cases during late summer and autumn months suggest an insect carrier of the infection. Though the precise nature of the virus of this disease has not been demonstrated, Flexner and his colleagues have shown that it is present in the throat and nose and also sometimes in the intestinal discharges. House flies can often gain access to infectious material and

least expensive and most effective in the end.

The open manure pile should be eliminated. The horse manure should be hauled out daily and distributed in the field, if possible. The important and practical point of such practice, as shown by Howard, of U. S. Department of Agriculture, is that only one generation of flies appears in this manure. If it is impossible to draw the manure out daily, it should be kept in a tight-covered box, and treated with chemicals. Air-slacked lime seems to be impracticable for this purpose as shown by experiments. The best material recommended is crude sodium borate, which is cheap, does not injure the manure or the soil, and acts as a deodorant. It should be used at the rate of 2 lbs. of powder per 8 bushels of manure.



can act as passive contaminators, since the virus survives on the body and within the gullet of these insects.

CONTROL THE BREEDING PLACES

The most important factor in controlling the fly nuisance is that of prevention of breeding, either by eliminating breeding places or by making them unfavorable through the use of chemicals. These methods of prevention (by the way, an ounce of prevention is worth a pound of cure) are the

Wherever possible the privy should be done away with, or else it should be built with regard to sanitation, freedom from flies and good ventilation. There, too, sodium borate or simply borax, will do the work if one-eighth lb. is dissolved in a gallon of water. Or else, lime-water, prepared as follows, can be used: Equal parts of building lime and water are used, resulting in the milk of lime. It is slaked when no more steam is given off, and when the appearance is fine and powdery. To a gallon of this slaked lime 4 gallons of water are added with stirring. It is then ready for use around drains, privies and water closets. It also makes a good white-wash for places where there have been cases of contagious disease.

Household refuse and garbage should be kept in tightly closed receptacles to keep flies from laying eggs there. Burning such refuse is a good way of getting rid of it.

Whatever other breeding places of

flies are found should be cleaned up or treated with borax, as above. The following formula has given good practical results in controlling breeding places:

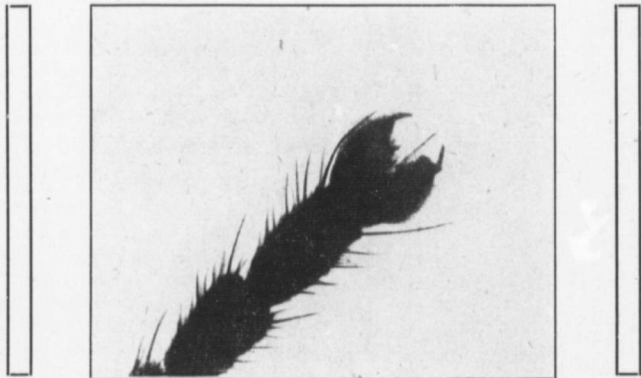
2 parts arsenate of soda or potash.
100 parts water.
10 parts treacle.

Foods that are not in actual use should be protected from flies.

People that are sick at home or in hospitals should have flies kept out by means of screens. Faeces from ty-

destroying them, and this part of the work is important, too. Flies may be destroyed by trapping, swatting and poisoning.

In the trapping method, which is perhaps the most common in the homes, use is made of wire or glass fly traps, which may be baited either with stale beer or syrup. The flies that are caught are then killed by immersing the trap in hot water. Sticky fly paper is satisfactory, too. A sticky mixture for use in shallow tin boxes can be pre-



phoid and cholera patients should be disinfected with 5% carbolic acid, which is nearly a saturated solution. This is a strong poison, should be handled with care as it readily attacks the skin, and should be distinctly labelled "Poison." It is also to be recommended for use in handling sputum from tubercular patients. As for soiled linen, bandages, etc., they should be rapidly disposed of so as to keep the flies from infecting themselves.

CONTROL OF ADULT FLIES.

The only method of dealing with adult flies is to limit their numbers by

pared at home simply by boiling even parts of castor oil and resin.

Killing flies by swatting them, large or small, is a very effective method of reducing numbers.

In using poisons for flies, a 2% formaldehyde solution is ordinarily made up as follows:

1 ounce 40% formalin.
8 ounces water.
8 ounces milk.

This is a sure cure for flies about the house, especially when left in shallow dishes. Flies are "dry" in the morning and drink this solution when no other

liquid is available. It puts them in a position where they can do no harm.

The department of Agriculture of West Australia suggests the following for rapid results where flies are troublesome. This is to be mixed and exposed where flies can get it:

1½ spoon black powdered pepper.

spoon brown sugar.

1 spoon cream.

Note—Cuts used in this article were taken from Bulletin No. 215 and 200 by Wm. B. Herms and R. H. Hutchison, U. S. Department of Agriculture.

CONCLUSION.

House flies are an indication of unsanitary conditions, and are most abundant wherever filth is present. They are a menace to public health, but they can be controlled by eliminating or treating their breeding places and by destroying the ones which enter houses.

The Mare and Her Foal

By DR. J. HUGO REED, Professor of Veterinary Science.

AS the general foaling season is approaching, a brief discussion on the subject may be considered timely. The mare about to foal should be in fair condition, and if she has been regularly exercised or used for light work during the winter, the prospects of her producing a strong, smart foal are greater than if she has spent the winter and early spring months in complete or comparative idleness. As the period of gestation approaches its end special care should be taken. She should be fed liberally on laxative, easily-digested food that contains a large percentage of nutritive material such as good hay, bran, rolled or whole oats, a little linseed meal and a few raw roots. Of course if the grass has reached sufficient growth, it will, with the addition of a small grain ration, supply all that is required, unless she is being worked, in which case grain should be given in proportion to the amount of work performed. It must be remembered that she has not only herself to nourish, but a foetus nearing maturity, hence she requires more food than a non-pregnant mare living under similar conditions. Daily exercise, light

work, or a run of several hours daily in the field or paddock, should be given until the foal is born. If she is to foal in the stable, she should be provided with a roomy box stall, in which there are no mangers or boxes into which the foal might drop if she should give birth to it while standing. The stall should be well disinfected by washing with a warm five per cent. solution of crude carbolic acid or one of tar antiseptics, or by giving a coat of hot lime wash. The stall should be thoroughly cleaned out daily, and slacked lime scattered on the floor each time before a fresh supply of dry, clean bedding is provided. These antiseptics measures are advisable in order to destroy germs, which, if present, may cause joint-ill or other troubles in the foal.

When the time arrives at which she is expected to foal, she should be carefully watched. In the majority of cases certain symptoms which indicate that parturition will take place in a short time, are noticed. These symptoms are a more pendulous condition of the abdomen; an apparent shrinking or dropping of the muscles of the croup; a fullness of the mammae and

of the teats, at the points of which, in many cases, a small lump of inspissated colostrum, generally called "wax" appears. There is usually also an enlargement of the lips of the vulva, and often a parting of the same, with a slight discharge of a viscid substance. It must, however, be remembered that in some cases these symptoms are not well marked, and that in some cases a mare foals without showing any well-marked symptoms indicating that parturition is about to take place; and in such cases we are often surprised to find that birth has taken place in a normal manner, or else parturition is difficult, and may have reached that stage in which there is no hope of saving the foal, and the dam's life may also be in danger.

While we know that the average period of gestation in the mare is about 335 days, we are also aware that the period differs greatly in different mares, and also in the same mare in different periods. Mares have been known to produce foals at apparently full term in ten months or even less, while in others the period of gestation reaches between 12 and 13 months. Under these circumstances it will be seen that the length of time that the mare has been pregnant does not definitely indicate when parturition will take place; and, even when the ordinary symptoms of approaching parturition are absent she may foal unexpectedly. The immediate symptoms are, of course, the appearance of "labor pains." These are exhibited by uneasiness, and, especially in primipara (a mare about to produce first young) a nervous or excited state. She walks around the stall, stamps, lies down, and usually strains. This is usually followed by a period of ease, which is succeeded by another attack; the attacks gradually becoming more prolonged and severe, and the periods

of ease shorter, until the pains become almost or quite continuous. If in the field the mare usually seeks solitude, by wandering away from the other horses. In some cases parturition is completed in a few minutes after the first appearance of pain, while in others, even when everything is normal, it does not occur for hours. Again, in some cases there are false pains, and although well marked, they pass off, to reappear at an indefinite time, probably not for a few days or longer.

We claim that a close watch should be kept on a mare about to produce young. The attendant should be a reliable, intelligent man, and, of course, the more he knows about the anatomy of both dam and foetus, the phenomena of parturition, the forces that affect it, the various conditions that prevent or complicate it, etc., the better. He should be supplied with a knife, a bottle containing a five per cent. solution of carbolic acid in which a is soaking a strong, soft string. Another bottle containing a strong antiseptic as a ten per cent. solution of carbolic acid or one of the coal tar antiseptics, or a solution of corrosive sublimate 10 grains to 8 ounces of water. The writer prefers the latter. In most cases he should keep as quiet as possible, be in a position practically out of sight, but able to observe the actions of the mare, as most mares become more excited at the presence of man. At the same time there are rare cases in which the presence of her master or groom appears have a salutary effect upon the mare.

Some of the reasons why we consider it wise to watch are (1) She may lie down so close to the wall that delivery is impossible. In such cases the attendant can either shift her position or cause her to rise; (2) Birth may be very easy, and the foetus and mem-

branes may be expelled without rupture of the latter, in which case, unless it be relieved, the foetus will suffocate very quickly. Instinct is supposed to teach the mare to rupture the membranes with her teeth, but we find that in most cases, even following an easy birth, the mare lies for a few minutes after the act, and in the meantime the foal perishes. The attendant, in cases of this kind, must rupture the membranes or make an opening with his knife, remove them and thus expose the foal to the air. (3) The membranes may be ruptured but remain attached to the foal by the umbilical cord, and interfere materially with its movements. Here, again, instinct is supposed to teach the mare to sever the cord with her teeth, but in many cases she fails to act. The attendant should now disinfect the cord with the bichloride solution or other disinfectant, and tie it tightly with the carbolyzed cord in the bottle, about an inch below the abdomen, and sever it by a scraping motion of his knife about an inch below the ligature. (4) The foal may be too weak to rise and nurse, and if neglected for several hours may perish. The attendant, in such cases, can assist it to rise and nurse, or failing in this, can draw some of the dam's milk and give it to the foal out of a spoon or a narrow-necked bottle, every half hour until it gains strength. (5) The mare may be unnatural and vicious with the foal and if left alone will probably injure or kill it. In these cases the attendant must interfere, and if he is unable to control the mare must remove the foal and send for or go for assistance. (6) There may be mal-presentation of the foetus, or other causes which prevent delivery. If the pains have been frequent and severe and still no progress has been made towards delivery, the attendant should make an

examination, and, if possible, ascertain the nature of the obstruction, or cause of non-delivery. If he has sufficient knowledge and skill to remove such obstacles, he must proceed to do so promptly, but not hurriedly, as this is a case in which things hurriedly done are often "not well done," but if it be beyond his skill to rectify the complication or remove the obstruction, he should at once send for an obstetrician. Prompt action in such cases is necessary, in order to save the life of the dam, and in many cases that of the foetus also. There are other reasons, but probably those mentioned are sufficient to convince a breeder that it is "good business" to watch. Many claim that it is not wise to watch a mare under such conditions, as in most cases nature effects delivery and after attention. Fortunately this is a fact, but all breeders know that difficulty in, or following parturition, is by no means uncommon, and we think that the liability of such occurring is sufficient to warrant the inconvenience and the time required to watch. Under normal conditions no attention is required after birth, other than removing the afterbirth and wet bedding, and supplying clean, fresh bedding, keeping dam and foal excluded from drafts, seeing that the foal gets nourishment, and giving the dam a nice warm feed of scalded bran and rolled oats, and attending generally to the comfort of both.

At the same time there may be unexpected abnormal conditions, hence it is wise to anticipate trouble. As a preventive to joint ill or navel ill, the attendant should dress the navel as soon as possible after birth with the antiseptic with which he has been supplied, and repeat the dressing several times daily until it is healed. He should carefully observe whether the

foal expels the meconeum (the contents of the bowels at birth). This exists in lumps of different sizes, of a blackish color and of about the consistence of putty in normal cases. It should be voided at intervals for about 24 hours, after which the faeces should be of a yellowish color, which indicate that the meconeum has all been expelled. In some cases this material is abnormally hard and dry, and exists in such large lumps that the foal cannot expel it. In such cases the patient will be noticed making ineffective efforts to defecate. The too common practice of administering laxative or purgative doses in such cases is very dangerous. The trouble is in the rectum. Medicines given by the mouth have little or no action on the contents of the rectum, hence, if purgatives be given they cause serious complications. When trouble is noticed the attendant should carefully trim the nail of his fore finger, oil it, insert it into the rectum and remove all of the meconeum that he can

reach. Then he should inject into the rectum a few ounces of warm, soapy water, or a mixture of warm water and raw linseed oil. This should be repeated at intervals until the faeces that are voided are yellowish. This is a condition that should be carefully attended to, as probably more foals perish from retention of the meconeum, commonly called constipation, than from any other one cause. Notice should also be taken to determine whether the urine is voided by the normal channel, or is escaping through the navel. If not properly voided, a catheter should be passed to break down the obstruction.

The mare and foal are liable to many complications. If any arise, the nature and treatment for which are not understood by the attendant, he should at once send for an obstetrician, as it must be remembered that this is a very critical time in the life of both dam and foetus.



The Soil Survey

BY JOHN WOODWARD, B. SC., DEPT. OF CHEMISTRY, O. A. C.

THE soil is a part of the farmers' capital. In it we found the chemical elements which are necessary for the growth of plants. Some of these plant food elements are present in such small quantities in most soils that fertilizer containing those elements must be applied if the productivity of the soil is to be kept up. Other elements are often present in large quantities, but the greater part is present in a slightly soluble form. It is necessary then for the farmer to follow a system of farming that will change these slightly soluble compounds into an available form as rapidly as needed by the plant and add, in a cheap form, those elements which are deficient.

In order to secure information on this subject, experimentalists have analyzed many samples of soil to find out what plant food elements are deficient and have conducted field experiments to determine how these elements may be applied to the soil with the greatest profit to the farmers. However, where the farmers have put into practice the recommendations of the experimentalists, varying results have been obtained. Some have had profitable increases in crops while others have had no increase or the increase was not sufficient to pay for the fertilizer. These results have caused some farmers to have doubts as to the value of the experimental work.

The trouble, however, is not with the experimental work but with the soil. All soils are not alike, as the farmer knows, and the same treatment will not do for all soils. Farmers who have soils similar to that where the experiments were conducted may expect results similar to those obtained

in the experiments. Those who have different soils may expect different results. These facts are now recognized by experimentalists and they are advising the farmers to follow methods of soil improvement that have been tried out on soils similar to their own. Before they can give this advice, however, they must know where the different soil types are located and what kind of treatment gives the best results on each soil type.

To secure this information three lines of soil investigation are necessary. 1. A soil survey which consists of classifying the soils and locating the different soil types on a map, and writing a description of the different types. 2. Chemical analyses of representative samples of the different soil types for the purpose of obtaining an invoice of the plant food in the soil. 3. Field experiments on the different soils to find out how the farmer can increase the productivity of his soil and do so with the greatest profit to himself.

The soil map shows where the different soil types are located, the chemical analyses shows what plant food elements are deficient and which are present in abundance, and the field experiments tell how deficient elements may be supplied most economically. All three lines of investigation are necessary if we are to secure adequate information about the soil.

In the United States, soil surveys have been made in many States but most of them have not followed the survey with chemical analyses and field experiments. In those states, the information is incomplete and does not benefit the farmers greatly. A few states, however, among which Illinois

may be mentioned, are making analyses of samples taken from the different soil types recognized on the soil survey and conducting field experiments on these types. The Illinois Experiment Station has analyzed thousands of soil samples and has field experiments on more than 30 fields representing a large number of soil types. As a result of these investigations the Illinois Experiment Station can tell the Illinois farmers what kinds of soil they have on their farms and what to do to produce profitable increases in yields.

In 1915 the Chemistry Department of the Ontario Agricultural College began a series of investigations of the soils of Ontario. These investigations include surveying and mapping the soils of the Province, analyzing samples from the different soil types and conducting field experiments on demonstration plots located on these different soils. A detailed survey like the Illinois station is making is slow work and it will take many years to survey an area as large as Ontario. That would mean that no information

about some sections would be available for several years. On this account it was considered best to begin with a rapid preliminary survey of the Province and then take up the detailed survey, beginning where the preliminary survey shows that more information is most urgent. The preliminary survey will give a general idea of the different soil types, their location and composition, and show where demonstration plots should be located. It will also make it possible to proceed more rapidly with the detailed survey when that work is begun. It is believed that the time and money necessary to make the preliminary survey and then the detailed survey will be no greater than to make the detailed survey, if no preliminary survey was made.

The greater part of Southwestern Ontario has been surveyed and mapped and demonstration plots have been located at several places, but the remodeling of the Chemistry Building has interfered with the analytical work. All three lines of work will be carried forward as rapidly as possible.



The Place of the School in the Rural Community

By J. M. SHALES, '19

UNTIL very recent years we have been accustomed to think that all the serious sociological problems of our country were to be encountered in the cities, and that the steadiness and sanity of our farming population would do much to offset the abnormalities and excesses of political and social life in the cities. But this happy illusion has been sadly dissipated by the appearance in our rural life of a problem, which, though engaging the attention of some of our foremost social reformers, stubbornly resists practical solution. The problem is that of rural depopulation, with its long chain of dependent evils.

A half a century ago we were a homogeneous people with agriculture as the basis of economic life; city and country were practically on an equality in their political, economic and social life. Today, the cities, with their great industrial and commercial undertakings, are becoming dominant and the children of our farms, and often whole families, are moving to the metropolis to enjoy its superior social advantages, and profit by its supposedly greater opportunities. This leaves the farms insufficiently manned, or causes them to be leased to tenants, who do not conserve the fertility of the soil, or become attached to the farms, since they expect to move on in a year or two to look for better terms of rent.

Under such conditions neither the land-owners, who pay the taxes, nor the tenants, who do not become a real part of the community life, are greatly interested in the common welfare. In the religious and church life, instead of

establishing independent churches and abolishing circuits, the movement has begun to retrace itself—churches are becoming appointments on circuits, and ministers find it difficult to earn a livelihood. Schools have greatly lessened enrolment or are consolidated with other schools. It is increasingly difficult to secure the voting of taxes for the improvement of educational facilities, since the families from which the young people have gone feel that they will receive no benefit, and the more transient tenant class would not remain to profit by the expenditure.

Thus, we are faced with the unpleasant fact that community life has become more or less stagnant, and, in some cases, actually retrogressive at the very time when conditions for its perpetuity and highest development seem most propitious. Isolation, the greatest drawback to country life, is being rapidly overcome by the construction of better highways, by rural free mail delivery, by telephones and by electric power, with its contribution of trolley lines. The possibility of travel during the winters, and the wide dissemination of reading material in the form of good daily papers and monthly magazines also help to bring the farmer into closer touch with the alluring, and hitherto far-distant outside world.

It has been realized with what tremendous consequences to the economic and social life of the nation the outcome of this problem is fraught, and some of the best thought of our reformers and statesmen is being directed towards its solution. It is now

clearly seen that forces must be developed, which will permanently secure a land owning population upon the farms. Rural life must be enriched to that point where it is just as attractive for those who are naturally inclined for the open country, as is city life to those who best enjoy stress and strain. Both country life and urban life are necessary for the prosperity of a nation, and the former should be considered at least equal to the latter in dignity, in worth and true happiness.

We may reasonably expect the work of organizations formed for the purpose of promoting better conditions among the farmers to be a prominent factor in rural life during the coming years. It seems reasonable, also, to conclude that, because of the practical identity in aims, the socialized school should receive strong support from these forces.

When we direct our attention to a consideration of the part the school may be expected to play in the amelioration of rural living conditions, we must remember that it is only one of the several institutions, which are to participate in the improvement. Organizations among the farmers themselves for economic, political, intellectual and social purposes, and among the farmers' wives for social, domestic, sanitary and literary ends, and the country church, with its subsidiary agencies, are factors of great importance. The school must co-operate with these forces, and aim to supply young people, who can effectively enlist their services in all branches of community life.

The prime function of the school in all society and in all ages has been to educate, but education in the past has meant simply a preparation for the secondary school and subsequent professional pursuits. But, within recent years a broadened interpretation of

rural education has grown up, and we believe that the country school should be a centre, not only for redirected education, which should reveal to the child the country life in all its richness, and thus create a genuine love for the open country, but of community building and rural institutional leadership as well. In districts where they are well established, the church, the farmers' institutes and other social organizations have unquestionably a profound influence upon rural welfare. But these agencies reach comparatively few of the country people, simply because they are not well known, and therefore not fully appreciated. This resolves the whole question into a matter of enlightenment or education, and makes the school the chief means of attack upon rural maladjustments. In other words, the school is the best and most easily available centre for the upbuilding of the rural community, and may become the most immediate and effective local agency in the solution of the social problems of country life.

The school has many distinct advantages for serving as a community centre and as a leader among rural social institutions:

1. The school is the chief agency of education, and we have seen that the whole rural problem is one of education.

2. It is a democratic community institution representing the entire district, and not a part, as does the church with its members, or the farmers' institute with its own following.

3. It exists everywhere; every district has a school, even though all other institutions are lacking.

4. Its financial support is legally assured, so that the school is more or less free from the humiliating penury which the church is usually forced to endure.

5. The school is a state institution, and has authority to compel support and attendance.

6. The effect of its work is immediate and is manifest along all lines, and through various other rural organizations.

7. It can early take the lead, because the country teacher, above all other rural social workers, is most easily and quickly trained for social leadership.

In discussing the legitimate functions, other than strictly educational, of the redirected school, we will make

preservation of the natural scenery of the community; the dissemination of agricultural and general knowledge; the preparation for the intelligent use of the golden hours of leisure; the improvement of home life; the conservation of child-life, girlhood and motherhood; the stimulating of social organizations to useful activity; and, in general, the development of a better rural society;—all of these are as much legitimate functions of the improved school as is the teaching of reading and writing. When teachers and school



Poultry Exhibit at Rural School Fair.

no attempt to formulate an ideal curriculum, but will merely indicate some of the branches which might reasonably come within its scope.

It would seem that the school ought to reach out into the community life and influence it positively for good. The great and fundamental interests of the home and the farming vocation should be touched and quickened by it. A new sense of responsibility, on the part of the country people, for agricultural improvement and social expansion should be awakened. The conservation of soil fertility; the improvement of farming methods; the

officials, and all those, who contribute to the support of the school, come to see this, then the school will be on the way to become a useful centre of community life.

In the average rural school of to-day there is almost an entire lack of union of interests of the home and the school. The sole interest of many of the patrons extends no further than to watch the teacher and listen for complaints, which are sure to come from some section of the district, with a view to finding fault. This is an unhealthy condition and some method must be devised, by which the rural school and the farm-

ing community can actually be brought into closer relations. There are more numerous channels for the co-operation of these two elements than we have been accustomed to recognize, and in some communities this closer relation has been successfully established.

One of the chief means of making the school a vital factor in its neighborhood, is by a closer adaptation of the course of study to the needs of the people it serves. It is a widely recognized pedagogical principle, that, in education, it is necessary to consider the environment of the child, so that school may not be to him a thing remote and foreign. Some flexibility in the educational system, which would allow both city and country child to become interested in the surroundings in which he has to exist, would work wonders in this respect. For the children of the farms, the introduction of nature study, or, in cases where it is already in use, a broadening of its scope to include the ordinary principles of agriculture would be especially helpful. The value of nature study is evident, not only in making possible an intelligent study of the country child's environment, but in teaching a love of nature, in giving habits of correct observation, and preparing for the study of agriculture in later years, as well as showing the possibilities of living an intellectual life on the farm. Nature study will, therefore, have a very direct influence in bringing the child into close touch with the whole life of the farm community.

But, it is not so much a matter of introducing new studies as of making the old subjects have a vital and intimate relation to the life of the child and his environment. Geography, for example, instead of being approached from the standpoint of the solar system, should begin with the school-house and pupils' homes, and expand

from the things the child sees to those which he must imagine. The following of this plan would result in a strong binding union of the home and the school. It would bring the farm into the school, and project the school into the farm. It would give parent and teacher a single common motive, which they could co-operate in developing. The parent would appreciate, and judge fairly the work of the school, and the teacher would honour, dignify and elevate the vocation of agriculture.

The study of the landscape of the nearby country of the woods and streams and soils, studies that have to do with the location of homes and villages, the study of the weather, of common plants, and domestic animals—all of these will give the child a better start in education, a better understanding of the life he is to live, a better notion of the business of farming and the importance of agriculture, and will tend to fit him for a wider life whether it be on the farm or in the city. But, whatever may be the special advantages of such a system, of instruction, the point to be emphasized is that the school and the community will be brought closer together; the school will be of more use to the community, and the community will take more interest in the school.

Another way of making the rural school a social centre is through the social activities of the pupils, and their joint effort to accomplish certain commendable purposes. This work will not only secure some good immediate results, but will teach the spirit of co-operation, a sentiment, which is to-day needed more than almost any other in our rural life. In this work such things as special day programmes, as for example, Arbor Day or Empire Day; the holding of various school exhibitions; the preparation of exhibits

for country fairs, and other similar endeavours are most useful. Great results have been accomplished in some sections of the United States by the work of School Improvement Leagues, which are in some cases highly organized for the carrying out of their three-fold purpose, which is to:

1. Improve school grounds and buildings.
2. Furnish suitable reading matter for pupils and people.

side. The average school is undeniably open to the objection that it is a sort of mill or machine grinding on in its inflexible course turning out pupils at a fixed rate, and in a uniform condition. But, this is partly the fault of the parents, who do not keep in close enough touch with the work of the school. It is not that the parents are uninterested in their children, but it is rather that they look on the school as something separate from the ordinary



A Plot of Corn in School Garden at Marden, Ont. Riddle—Find the Teacher.

3. Provide works of art for school-rooms.

This work is carried on systematically from year to year, and it needs no argument to show the value of such co-operation to the pupil, the teacher, the school, the parents and ultimately to the whole community.

A third method of extending the latitude of the rural school is by thorough co-operation between the home and the school, between the teachers and pupils, on the one side, and the parents and taxpayers on the other

affairs of life. Nothing can be more detrimental to the welfare of a community than this mistaken notion. There must be the closest co-operation between the home and the school, but it is perplexing to know how this bond is to be forged. It is often urged that parents visit the schools oftener, but commendable as the practice is, it does not seem enough. The teacher must know more about the home life of her pupils, and the parents should know far more about the purpose and spirit as well as the method of the

school. Some communities have solved the problem by frequent meetings of the teachers and the patrons of the school in which the two interests are brought into closer relation socially and intellectually. Such meetings inspire closer co-operation, create mutual sympathy, and are sure to arouse the interest of the entire community, not only in the school as an institution, and the possibilities of the work it may do, but also in the teacher, who is, for the time being, serving a particular rural school.

Another important method of widening the influence of the school is by making the schoolhouse a meeting place for the community, more especially for its intellectual and athletic activities. The more or less comfortable buildings, which occur at regular intervals throughout country districts, and which are used only seven hours of the twenty-four, are nothing short of monuments of wasted capital during the remainder of the time, and afford a veritable treasure store of possibilities for extending the social activities of the rural community. Among the more important uses to which such buildings may be put are as meeting places for literary societies, musical societies, men's and women's clubs for the discussion of problems with which each element must grapple. Dramatic clubs for the study of the better kind of plays and finer pictures would do much to encourage the appreciation of such things in the neighborhood. Courses of lectures during the winter months, and the exchange of educative talent by adjoining districts would instil fresh vigour into such projects. It would not be possible for the rural school to carry on such an extensive programme as this, but it teaches us to realize the possibilities of the school as a community centre. There seems

no reason why the country schoolhouse should not offer evening classes during a portion of the winter, when the older pupils, who have left the regular work of the school could carry on studies, particularly in agriculture and domestic science. There is a distinct need of this sort of effort, and if our agricultural colleges, and the departments of public instruction, school supervisors and teachers, and the farmers themselves, could effect a junction of their activities and ideas on these questions, we would not estimate the improvement which would result.

The last method we shall mention for making the school a social centre, is the suggestion that the teacher shall become something of a leader in the farm community, that is, that he be, not only a teacher of pupils but in some sense a teacher of the whole district. There is a crying need in every rural section that someone should take the lead in inspiring everyone in the community to read better books, buy better pictures, participate more extensively in wholesome games and amusements, and take more interest in those forces that make for culture and progress. There are very serious special difficulties in the country community. The teacher is usually transient, and secures a city position as soon as possible; she is often inexperienced and unqualified, and generally poorly paid; frequently the labour of the school absorbs all her time and energy. Regrettable as are these conditions, they must, as facts, be faced. But until we have conditions favorable to the kind of work described above, the ideal rural school will be an impossibility. The country teacher must, almost without exception, be born and brought up in the country in order that she may understand the country community, the problems the farmers have to face,

and an appreciation of the peculiar conditions of farm life. For country teachers especially the normal schools should require an extensive study of rural sociology, and teachers' institutes and reading circles should provide for this kind of education. There is perhaps no more potent means than this of bringing the school into closer relation with the rural community.

The programme needed to unite rural school and farm community is then: first, to enrich the course of study by adding nature-study and agriculture, and, about these co-ordinating the conventional school subjects; second, to encourage the co-operation of the pupils, especially for the improvement of the school and its surroundings;

third, to bring together for discussion and acquaintance the teachers and patrons of the school; fourth, so far as possible to make the schoolhouse a meeting place for the community, for young people as well as older people, where music, art, literature, social culture, recreation, the study of agriculture, and in fact anything that has to do with rural education may be fostered; and fifth, to demand stronger personality and qualities of leadership of our teachers and recompense them with adequate salaries in return for a knowledge of the industrial and general social conditions of agriculture, and a more particular understanding of the peculiar aspects of community life surrounding the stage of her strictly professional activities.

Agriculture and Empire

BY R. A. BRINK, '19.

"AFTER the War," says Mr. Lloyd George, "things can never be the same. Five democracies cannot shed their blood and treasure with a heroism and disregard of cost which has been beyond praise without finding a unity such as never existed before." The problem with which the British race is at present confronted is how to integrate the Empire by bringing the diversified elements into organized union so as to present a united front to the world, and to compete on equal terms with more highly organized rivals without destroying the freedom of movement and power of adaptation which built the Empire.

A magnificent demonstration of the strength of the ties of relationship is afforded to the world now when British contingents converged from every part of the globe to fight side by side in

France for a common cause. In such a soil as this sentiment will permanently flourish. The synthetic movement thus originated will be perpetuated and reinforced. Our present relationship in arms can readily be translated into a partnership in trade and the joining of the kindred British nation in the industrial and commercial activities necessary to preserve and enhance our former pre-eminence.

The crown of the integrating movement will be the final departure from "laissez-faire" in trade and the formulation of a scheme of inter-Imperial reciprocity.

The organizing of the Empire for co-operation within the national pale should begin at the base and source of its permanent wealth — agriculture. In every crisis of the past a peculiar dependence has had to be placed upon

the farming population and this dependence has hitherto been justified. But it cannot be justified in the future if agriculture is permitted to sink in the scale as compared with other employments. It has taken two years of war to drive home recognition of the elementary fact that the production of crops may prove as vital a factor in the issue of the war as the production of munitions. Once that is fully realized it follows that agricultural production all important as it is, must be organized on a national basis.

If there is one lesson taught by history it is that the permanent greatness of any state must ultimately depend more upon the character of its country population than upon any other factor. No growth of cities, no growth of wealth can make up for a deficiency either in the number or character of the farming population. The tiller of the soil is the one person whose welfare is most vital to the welfare of the nation.

Our civilization rests at bottom on the wholesomeness, the attractiveness and the completeness as well as the prosperity of life in the country. The men and women on the farms stand for what is fundamentally best and most needed in our national life. Upon the development of the country, rests the ability to continue to feed and clothe the hungry nation; to supply the city with fresh blood, clean bodies and clear brains, for the national life blood has in every age and in all lands flowed from the farm.

No nation was ever overthrown by its farmers. Chaldea and Egypt, Greece and Rome grew degenerate and ripe for destruction, not in the fields, but in the narrow lanes and crowded streets and in the palaces of their nobility. David Starr Jordan said, "steadiness of national character goes with

firmness of foothold on the soil."

"Public prosperity," in the words of a Chinese philosopher, "is like a tree. Agriculture is its roots, industry and commerce are its branches and leaves. If the roots suffer the leaves fall, the branches break and the tree dies." Trade, finance, science, manufacturers, in fact every avenue through human thought and energy is directed and developed, are like the spokes of a great wheel, the hub of which is agriculture. Whatever else may tend to enrich and beautify society, that which feeds and clothes the great mass of mankind should always be regarded as the great foundation of national prosperity.

No people in history have made substantial progress in civilization, the arts and sciences, and have remained long prosperous, if they neglected agriculture. It is the most universal of all arts, the parent of manufactures and commerce, and the basis of all other industries, and without which all others must decay and perish.

As I mentioned before, the British mind is now possessed of two ideas: the reconstruction of the British industrial and commercial system, along national lines and the extension of that system throughout the Empire. It may be through Imperial Preference that the common interests of the Empire may be most effectively drawn closer and the immense potential forces of the Empire be adequately organized. The adoption of a Preferential Tariff system would co-ordinate the colonies into an effective imperial organization in which the food and raw materials of the nation would be products of British subjects, carried over British railways to British ports, and shipped in British vessels to British people.

Canada comes first in the supply of natural resources within the Empire. The grand economic opportunity of

Canada, now and for years to come must be an agricultural one. For a long time, the distinctive part of Canada in the Empire must be the production of foodstuffs. This is a mighty trust of which we have to make ourselves worthy.

The limit of Canadian agriculture has not yet been ascertained. There is certainly no country in the world that is so attractive to the agriculturist. We have a climate and a soil which are eminently favorable for farming to the highest degree to which it may be developed. A great portion of our Dominion lies in a latitude in which man's staple food product, wheat, may be grown to perfection. Canada has within her bosom treasures on which Empires are permanently founded.

In fulfilling our mission as a unit of the Empire, many problems confront us. Immigration must be dealt with in a way that will ensure the future prosperity of the new colonist. Financial and railway policies must be directed so as to assist agricultural produc-

tion to the utmost. We have only to study the results obtained from the soils of countries of dense population to grasp the immense possibilities of the lands of this country, and estimate the importance of Canadian agriculture in the British Empire.

It is our obligation and our duty to do our best. We must be prepared to put into effect any aggressive policy which will increase our agricultural production. The complexity of the problem involves many questions, each a full occupation for many able men. It is a call to thought and to action. Let us who are in Canada now give it the immediate and spontaneous response our brave brothers gave the call to arms in August three years ago.

As our great Empire goes on to fulfill her high destiny in the world, industries will prosper and decline, fortunes will be made and lost, governments may change, but as long as the world stands, agriculture will the foundation of our national wealth and prosperity.

The Silver Black Fox Industry

BY A. SCALES, '18.

(Ed. Note—Mr. Scales has been engaged in this business for some time, and is therefore in a position to know whereof he writes.)

FOX-FARMING is now a well-established, paying business. It is an industry of which, speaking generally, the public has a very false impression. These impressions have had their origin in the fabulous and unwarranted prices which have been paid for foxes for breeding purposes, the big prices obtained for pelts, the stories which are usually untrue and which have been handed down to us from posterity regarding the various merits of the pelt of the silver-black fox, and

the financial returns obtained from companies organized to carry on the breeding of that precious species of fox—the silver-black.

The articles relating to fox-farming which appeared in magazines and newspapers from time to time while not usually untrue are often misleading or do not tell enough to give the reader a true and proper view of the situation. Such articles are usually written by reporters who, after obtaining information, write up only that which makes

attractive reading. Only one who has been intimately connected with the origin and development of the industry can discuss their weaknesses. It is because I am so connected that I feel justified in making such a criticism.

The industry has had three distinct stages—the experimental, the speculative and the commercial. The first two have passed and each has its own interesting history.

As far back as we are able to trace the comparative value of furs we find that the pelt of the silver-black fox has always predominated in value. Its value induced a few far-sighted men to attempt the breeding and reproduction of the fox in captivity. Little success was at first obtained, and nearly all of them became discouraged and gave up. Some, however, had faith that their objective could be obtained. By perseverance, and after many years of reversements and discouragements they were successful. Theirs was the costly school of experience but they had no other choice. They have been a great benefit to humanity and much credit is due them.

Foxes could now be easily raised. The prices obtained for the pelts often averaged for the output of a season one thousand dollars or more each. This was nearly all profit. The breeders were fast becoming wealthy. Their neighbors and friends wished to invest in such a lucrative industry and thus a demand for live foxes for breeding purposes was created.

Where big profits are being made the promoter is always to be found and naturally he appeared at this stage of the business. He widely advertised its big profits and great possibilities and he solicited investments wherever money was to be found. The demand for foxes was greater than

the supply with the natural result that prices soared.

Foxes of first class quality were hard to obtain at any price. Unscrupulous promoters often purchased ones of third rate quality and after forming a company would peddle its shares to the public at exorbitant prices. In doing so it was not unusual for him to misrepresent the quality of the foxes and have the public invest in them at the enormous rate of 30,000 dollars or more per pair. The innocent investor was duped, the promoter made big profits and the breeder had a ready market for his offspring at very high prices.

Most of such companies are now paying no or very small dividends and the shares are quite unsaleable. Therefore the investor and especially so the outside investor has become dissatisfied and not without just cause. It is chiefly this that has given many persons outside of Prince Edward Island, the home of the industry, an impression that the business is a thing of the past.

During this period the price obtained by the breeder for six month old fox pups ranged from 2,000 dollars per pair which was paid when the boom commenced to 18,000 dollars per pair which was paid when the boom was at its height. The demand was such that the anticipated young of a ranch were often all disposed of six months before they were born.

It was a period of great excitement and business activity. One when rich were made poor and poor rich. One which had Prince Edward Island as its centre and people from all parts of America as victims. And one which in many ways resembled the real estate boom of the West, the oil craze of Calgary, the tulip craze of Holland and the South Sea bubble of English

history. Only one who has been closely connected with such a boom can fully realize to what extent persons who usually show good common sense exhibit unsound judgment in their greed for big financial gain.

Boom days never last and are always followed by a relapse during which there will be stagnation of business. If the business is no good from a financial standpoint it never survives this relapse. If it is good it will survive but always on a sounder business basis. The fox business survived and is now being carried on in a sane, intelligent manner and is proving to be very remunerative to the intelligent investor.

Europe till recently was the great consuming market for furs. It is useless to offer them there at present and expect to get a decent price for them excepting those which are very serviceable. The silver fox fur is not

serviceable, but is one of luxury. For this reason the United States is now the only market for silver fox pelts. It is consuming more than was formerly consumed by the world. Notwithstanding this pelts are selling from 100 dollars to 1,500 dollars each.

Good fox pups suitable for breeding purposes are being sold at 1,000 dollars per pair. The cost of feeding and caring for a pair for one year and their young until fit to pelt will not exceed 100 dollars. The average young raised per pair under proper management is three. Let one take a very pessimistic view of the future fur-market and say that the prices obtained will not average more than 100 dollars each. Even at this the returns will be remunerative. Let one take a reasonable view and say that the average price will be 300 or 400 dollars per pelt and you will note that the investor will make about 100 per cent. on his investment.

The Value of Feeding Weed Seeds to Poultry for Crate Fattening

By R. OLIVER '19.

THE following article is based entirely upon experiments carried out by Mr. K. W. Welton, '16, in connection with his fourth year thesis.

The purpose of these experiments was to find out whether the western wheat screenings of weed seeds, chaff and small grains could be used profitably by the poultryman as a substitute for the more expensive grains in crate fattening chickens. Up till the present time no commercial use has been found for these screenings and they may be bought for little above the freight charges.

The Botanical and food constituent

analyses of these screenings are as follows:

KIND OF SEED.	PERCENTAGE.
Lambsquarters.....	23.170
Wheat.....	16.4
Black Bindweed.....	14.2
Hulls.....	13.2
Wild Oats.....	6.8
Hare's Ear Mustard.....	6.4
Rye.....	5.8
Russian Pigweed.....	4.2
Dust, etc.....	4.585
Russian Thistle.....	1.512
Pennycress.....	.974
Flax.....	.926
Black Mustard.....	.908

Ball Mustard.....	.453
False Flax.....	.280
Blue Bur.....	.1
Chickweed.....	.033
Curled Dock.....	.033
Unidentified.....	1.025

100.000%

Weed Seeds:—Moisture, 9.14; Fat, 7.56; Ash, 4.35; Fiber, 11.50; Protoid, 13.59; Carbohydrater, 53.86.

Four lots of birds of five groups each with four birds in a group were fed during the experiment. The groups were fed for from 15 to 18 days being fed twice a day with a batter of the different meals mixed with sour milk.

The following rations were fed to the different groups in each lot:

Group 1.—40% crushed oats; 40% weed seeds; 20% corn chop.

Group 2.—40% crushed oats; 20% weed seeds; 20% corn meal; 20% middlings.

Group 3.—40% crushed oats; 30% weed seeds; 10% peanut meal; 10% corn meal; 10% middlings.

Group 4.—50% weed seeds; 30% crushed oats; 20% corn meal.

Group 5.—(Check Mash).—40% crushed oats; 30% corn meal; 15% middlings; 15% barley meal.

Each bird was weighed when put into the crate and again at the end of

the first week. At the end of the fattening period the birds were weighed both before and after dressing.

The table below summarizes the whole experiment fairly well being the results of lot one.

Decimal points merely divide pounds from ounces.

The value of gain is figured on a price of 18c per pound for the milk fed chicken as compared with 13c per pound before fattening.

The average of the four lots in order of highest profits per bird:

Group 5, 12.9c; Group 2, 11.5c; Group 3, 10.5c; Group 1, 10.1c; Group 4, 6.7c.

These profits are figured on cost of \$15 per ton for the weed seed fed. The most profitable group fed on weed seeds gave a profit of 11.5 cents. If the weed seeds had been fed free of charge this would have given a profit of 11.8c which would be 1.1c less profit per bird than feeding barley meal to group 5. Labour or interest on investment do not enter into these calculations, being equal in both cases.

It would seem from this experiment that the feeding of weed seeds for crate fattening poultry is a practice which is unprofitable as compared with the feeding of other though more expensive foods.

Group.	W'ght at start	W'ght at finish	Lbs. gain	Dur-ation of exp't	Feed consumed in lbs	Value of feed c	Cost of milk c	Lbs loss due to dress'g	Value of gain \$	Profit \$
1	21.	22.7	1.7	17 days	11.13	17.01	3.4	3.5	.71	.51
2	19.15	22.9	2.9	17 days	13.7	20.6	4.0	3.6	.87	.63
3	21.2	23.5	2.3	17 days	13.2½	19.9	2.8	3.6	.85	.63
4	18.9	18.7	.2	17 days	10.1½	13.08	2.6	3.3	.34	.19
5	21.2½	23.½	1.14	17 days	13.11½	23.48	4.6	2.11	.91	.63

Tobacco==The Selection of Types==Soil Requirements

THE favourable prices paid last year will probably result in a larger area being planted to tobacco next spring and this may cause a tendency to plant on less suitable soil, thus reducing the quality and the market value of the product.

While the study now being made by the Tobacco Division of the tobacco-producing soils of Ontario is not yet complete, it has been noted that frequently a soil has the capacity of producing a poor quality of all classes of tobacco, but such adaptability is not favourable to the production of the highest quality in any one of the classes. To attain best results, soil and climate must be suited to the special needs of a certain type of product.

In Ontario, the chief varieties of tobacco so far recommended and principally grown are White Burley, which is air-cured; snuff, which is fire-cured; and Warne and Hickory Prior, which are flue-cured.

The soils giving the best results with White Burley are those known as "sandy" or "gravelly." They are rich in potash and humus, are of a greyish or brown colour and are well-drained. This land is usually rolling. The lower lands have not given as good results as they remain wet longer in the spring and are frequently higher in clay content. The best crops of tobacco in Ontario last season were grown on very open soils, having sandy to gravelly subsoils to a depth of three to four feet, underlaid with clay.

There are two distinct types of White

Burley now being grown in the Burley sections, namely; the original Broadleaf Burley and the Improved Standard Burley.

The Broadleaf Burley, as the name indicates, is a large type with broad, drooping leaves, large veins, a heavy yielder, and, on account of the large sap content of the leaves, it is inclined to cure up a little dark.

The Improved Standup is a somewhat smaller type than the Broadleaf Burley, with narrow, erect leaves, smaller veins, of a little finer texture than the Broadleaf, and, on account of a smaller sap content in the leaves, it is inclined to cure a little brighter colour. The narrow leaves also tend to decrease the percentage of wrappers in the Standup Burley.

Since the popularity of, and the returns realized from, any type of tobacco, depend largely on the quality of the cured product and the yield per acre, experiments were conducted at the Harrow Tobacco Station during the past season to determine the merits of the two types. Four plots of ground with as nearly the same texture, character and fertility as possible were selected. Two of these plots were planted to Broadleaf Burley, and two to the Improved Standup Burley respectively. All four plots were planted at the same time, with plants as nearly uniform in size and vigour as possible; fertilized alike; cultivated alike; and harvested and cured under the same conditions.

The following table gives the results obtained:

Type of Burley.	Plot No.	Yield per Acre in Pounds.	% Bright Leaf.	% Red Leaf.
Improved Standup.....	1	1073	79.2%	20.8%
Improved Standup.....	2	1125	83.4%	16.6%
Broadleaf.....	1	1370	72.3%	27.7%
Broadleaf.....	2	1228	79.5%	20.5%

Since the above table gives the results for only one year's experiments, and the past growing season was a very poor one, these results cannot be taken too conclusively. However, they are a fair indication that the yield obtained with the Broadleaf type is

appreciably greater than the yield obtained with the Standup type and also that the increased percentage of bright leaf obtained with the latter, is hardly large enough to offset the increased yield obtained with the Broadleaf type.

However, with the Broadleaf Burley, especially, too much importance cannot be attached to getting the crop planted early, letting it ripen thoroughly before harvesting, having a well-ventilated barn for curing, and properly regulating the ventilation during the curing season if a crop of good colour and quality is to be obtained.



THE SPEED BY NIGHT

The moon-magic is on the river, Bill,
I never saw the waters sleep so still.
They lie unwimpled in the streaming haze,
Reflecting bright the mist-enpiercing rays.

Go slow, old chap, let the canoe just drift,
The mood is on me to enjoy the gift
Of the clear blue vault and the gibbous moon,
The voice of evening and its soothing croon.
Isn't it spooky in those long dark reaches?
The bats flit by and a lone owl screeches;
All else is still. . . the night birds in the brake
They stir not at our paddles' swirling wake.

The banks are alternating inky shade
And bushy shores in floods of light displayed.
The moon-fire's glow on neighboring leafage plays
O Winding Speed, forgive my puny praise!

—S. RUPERT BROADFOOT.

(Ed. Note:—This poem is from Mr. Broadfoot's book of poems, "Canada, the Land of Promise." Proceeds from the sale of this book are turned over to the Red Cross Fund and have already reached one hundred dollars.)

THE O.A.C. REVIEW

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EDITORIAL:

INCREASED CROP PRODUCTION.

Are you playing the game fair? What are you doing in the way of increasing the supply of farm products? These are questions which everyone should ask themselves at this season of the year.

The importance of increased food production has been clearly pointed out by such noted men as Bonar Law, Lord Devonport, the Duke of Devonshire, Mr. R. B. Bennett, M. P.; Hon. Martin Burrell and N. W. Rowell, M. P. The Governor General of Canada says: "The supply of food is not only important but perhaps the most important problem which the Empire has to solve." "The British Government," says Bonar Law, Chancellor of the Exchequer, "regards the production of food of greater importance at the present time than

the sending of additional men into the army." As a result of the census of the man power of Canada, in compiling the names of men to whom an appeal for enlistment could be reasonably made, certain classes were exempt and amongst these were farmers. The importance of farming then is self evident.

What is being done? Everything possible is being done by the government to bring all classes of people to take a serious view of the situation. Lawyers, travellers, business men and those classes whose holidays usually occur in the summer are planning their vacation on farms. Surely this should be encouragement to the farmers to sow as great an acreage of crops as possible. With the government and the people of the country all striving in the same direction little fear may be held that the supply of help for the

harvesting of the crop will not be sufficient.

Dr. Zavitz says: "During the past few years there has been a decrease in livestock in Ontario and in the whole of Canada. Not only this, but there has also been a rapid increase in the acreage of pasture lands. In the last four years there has been an actual decrease in the acreage in Ontario of twenty-three per cent. in beans, fifty seven per cent. in peas, seven per cent. in winter wheat, ten per cent. in turnips and twelve per cent. in potatoes.

It is estimated that the average acre of beans produces as much real food material as is usually obtained from five to fifteen acres of pasture land in the production of either meat or milk. According to recent determinations and prevailing prices, as much valuable food material for human consumption could be obtained from the purchase of beans with twenty cents as from the purchase of cheese with forty-three cents, of beefsteak with seventy-nine cents and of eggs with one dollar and sixty-one cents.

Let us do our part as best we can for the good of humanity and for the prevention of a world's famine by producing in as large quantities as we can the essential food materials."

THE GRADUATING CLASS.

For the members of year seventeen their college course is over. No more for them will the breakfast bell go at seven-thirty; no more for them will the maids at Macdonald Hall hurry and scurry to and fro to find the young laides of their choice. Tobogganing parties, skating parties, Lits in Massey Hall and snow-shoe tramps are things of the past.

They are entering into a new sphere of life, into a new field of activity in which they may make use of those things they have studied and toiled for during the past four years. For them we hope it may be the beginning of a successful career in which each and everyone will carry out his duties, not with the thought of obligation and work but with the love which he should have for the profession of his choice. For them we hope that graduation day will be the beginning of a perfect life in which they will not only rise themselves but benefit those with whom they come in contact by precept and example, ever keeping before them the high ideals and noble teachings of their Alma Mater.

The Review extends its heartiest congratulations and best wishes to year seventeen.





ENLISTMENTS.

Since our last publication, the following O.A.C. men have enlisted: A. R. Dow '15, A Company 1280 B.C.E.F., A. B. Cutting 250th Battalion, Whitney Davidson '17, 8th Heavy Battery, Cobourg, Ont., and C. M. Flatt '19, Army Medical Corps, London, Ont.

NEWS ITEMS.

Major Norman D. Mackenzie, B.S.A. '09, formerly of Galt, has recently returned from the front, where he was an officer of the 111th Battalion. Major Mackenzie has since been appointed assistant superintendent of the Dominion Experimental Farm at Brandon.

H. S. Lewes '08 has been seriously wounded by a shrapnel bullet through the chest. He is recovering very slowly after spending six months in an English hospital.

J. M. Lawrence '17 has been heard from recently. He is at present stationed at Shorncliffe, having enlisted in the Mechanical Transport C.A.S.C. Lawrence has met many O.A.C. men at Shorncliffe including Sergeant's "Bud" Fisher and Norman Marshall '18 who are with the second Canadian reserves at Bramshott. His address is Pte. J. M. Lawrence 513164, Me-

chanical Transport C.A.S.C., Army P.O., London, Eng.

A letter has been received from Lt. Cecil A. Webster, 26th M.G. Co. B.E.F. Lt. Webster says in part: "You will be reading in the papers of the "raids" we are making. Every little raid means a toll of 20 to 100 German prisoners, but seldom it is that the wily German officer is caught, even if our raid extends to his third line. He must then either skulk in his dugout and perish or stay a long distance behind his men. The English are very adaptable. In two hours after our entrance to a village the men have erected cook houses, built fires and located wells and food supplies. I think we have "got our enemy's goat." Our guns and trench mortars are better; we still have the advantage in the air and his morale is very weak."

"Andy" Fulton '17 has been transferred from the 66th Battery to the 55th in which he is fulfilling the capacity of groom to the major. Major Kent at present has most of the O.A.C. boys scattered through the district helping the farmers with their spring ploughing and seeding, endeavoring to overcome the dual problem—labour and production. The boys are ploughing with the English plows and battery horses. It looks most comical to

see Ted Varey '16, sitting on one horse, military fashion, driving the team, while Jack Johnston '16 walks behind holding the plow. In spite of the oddity, they are doing splendid work which makes the English farmers, as well as the O.A.C. boys, marvel at the straightness and neatness of the furrows.

F. R. Kirkley an associate of the class '15 has been heard from recently. Frank has a commission in the Royal Horse Artillery and is now "Somewhere in France."

J. Griffin '16 recently visited the college. He is now farming in Lambton County.

OBITUARY.

The following is a copy of a clipping concerning the death of one of the most esteemed and highly respected members of year '16. The Review extends its sincere sympathy to his relatives in their time of sorrow.

The death occurred at Montague, on Friday last, after a ten days' illness, of typhoid fever, of Michael Harrington Coughlan, District Representative for King's County of the Provincial Department of Agriculture. The deceased, who was 40 years of age was a native of Hope River. He was educated at Prince of Wales College, and after graduating from that institution spent a number of years teaching school in his native province. He afterwards left for Western Canada, where he homesteaded and carried on teaching. Upon his return to P. E. Island he resumed teaching here and after the death of his father he devoted some time to farming at Hope River. He later attended Agricultural College putting in two years at Truro and two at Guelph. He entered upon

his present position with the P.E.I. Government in May of last year and was a zealous and devoted worker, who will be greatly missed. The body was brought to Charlottetown from Montague by train on Saturday forenoon and left by the afternoon train for his late home in Hope River. The funeral took place on Easter Sunday, a large number of friends paying their last tribute of respect to one who was generally esteemed by all.

The following interesting letter has been handed to the Review for publication. H. Castro Zinny was graduated in 1914 and is now in the employ of the government of the Argentine Republic.

Estacion Agronomica de Pergamino.
Pergamino, Argentine Republic.
February 26th, 1917.

Bert Maxwell, Esq.,
O.A.C. Guelph, Canada.

Dear Maxwell:

With great pleasure I received your kind letter of the 19th of last month.

You ask me information regarding agricultural possibilities in this country. To answer this question fully would take much time as I suppose you are entirely unacquainted with this our Republic, and it is difficult to explain by letter what can be done, as by my part I ignore your financial, technical, practical and especial position. Am also unaware of the idiosyncrasy that characterizes you as far as preferences are concerned. Anyway, and not withstanding the above considerations, I shall try in the lines that follow to design briefly the rural outlook in a part of this vast nation; and I'll do it, as you would imagine, with great pleasure, for I have a pleasing and grateful reminiscences from my Alma Mater.

I believe firmly that in this southern

land, free and far from the world conflagration, ruled by the most liberal and healthy Constitution that could have been thought of and governed by sound and well prepared men, any man that wants to work can make a good honest living, and than it can be made with less labour than any other where.

However, if your ambition is to make money I deem it necessary that you have some capital, the amount will vary according to the line of work you dedicate yourself to.

In market-gardening, near the Federal Capital (Buenos Aires) there is a good outlook. You can start there on a small scale with about \$6,000—or \$7,000—(U. S. money,) and expect if you know the job and the conditions of the country (which you can learn easily) to obtain easily a 90 per cent. or even a 100 per cent. dividend on your money, and I know of men that are getting as much as 150 per cent. on the capital invested. But of course all this kind of work, in this country, is done with irrigation, for it's the only sure way to get good crops and high interest. There is nothing more delicate in plants than legumes and if one's idea is to compete freely with suppliers and to insure his money—so to speak—he must apply water to his plants just at the moment when they need it.

The fattening of cattle is another lucrative occupation, but for it you need more capital, a thorough knowledge of the market and of the agricultural and pastoral conditions of the country. Starting in it with less than \$10,000—or \$11,000—(U. S. money,) would be dangerous. Here you could apply pretty well all or nearly all the good teachings of Prof. G. E. Day in respect to silo and silage and animal feeding. The judging of stock comes in very useful also.

Getting back again to the market-gardening business, I think you could even start with \$4,500—(U. S. money), but of course that would be much more speculative than with the quantities above recommended.

Fruit growing, again, is a money making "proposition" as would say our old friend the lecturer of vegetable-growing. I know of peach orchards that give as much as \$450.—(U. S. money) per hectare of bearing trees. Land for such can be got now at \$250.—(always U. S. money), a hectare, sometimes for less. In the province of Buenos Aires peaches are grown without irrigation, but in other parts of the country they need to use it, and besides that it is almost a real mathematical proposition when irrigation is used.

Dairying in all its branches: milk supply, cheese and butter making, casein manufacture, etc., is also a good business. I believe there are some firms that are exporting casein to the States now for making tires, etc. Milk prices vary from 10 to 15 cents a litre at Buenos Aires, and in some parts of the Province of the same name as much as 20 cents a litre is paid in some seasons of the year. This time I'm speaking in Argentine money. Ten cents are about four and a half U. S. cents. In general, fairly good milking cows with a great per cent. of Shorthorn blood give about 15 or even more litres per day, milking once a day, as it is usually done here. Those cows vary widely in prices, sometimes one may buy them for \$70—(U. S. money), others as much as \$110—need to be paid, and of course, often, you may get them for less than \$65. It depends entirely on the market and the meteorological conditions of the zone where you are in. Chester cheese is beginning to be one of the

favorites, although Cheddar is also well appreciated both for exportation and home consumption. Good money can also be made in making cheeses of this country, which are soft cheeses and are easily made and have always a good market.

Also in crop-growing money is to be made, although I believe it to be more speculative on account of the great plague of this country: the locust. You can easily combat all the stages of its life, except the adult one. Some experiments have been made recently by the Government with asphyxiating gases but with no practical results.

And so I could continue relating to you money making businesses, but I believe you should have enough with the ones I have named.

As far as Government positions are concerned, I don't think you particularly may have much outlook. In this country we have two faculties of agricultural (Universities of Buenos Aires and La Plata) and veterinary sciences which are fairly good, and where they come out too many men to fill any vacancies or new positions that may be created by Congress.

You are in a good College where there are good professors, practical and theoretical ones, where there is a good President, and a very kind one; he'll surely give you more and better counsels in five minutes than I could in a month. Try and appreciate what he may tell you and you will benefit by it.

I am enclosing to this letter \$10—Argentine pesos which you may get changed anywhere, and that I would thank you if you would be so kind to give whatever you may get for them to the Review men as I should like to receive it. You should get about \$4.50 for them.

I also would be obliged to you if you

would remember me to Mrs. and Doctor Creelman, Prof. Day (G. E.), Prof. Wade, Prof. Squirrel, Assistant Prof. of Animal Husbandry, whose name in this precise moment I don't remember, except that he was a very fine gentleman, Prof. Harcourt, Prof. Fulmer, A. W. Baker, B.S.A., Prof. Cæsar, Prof. Howitt, Prof. Crow, Shorty Culham, Britton, B.S.A., Prof. Graham (Poultry) from whom I've got some good data for the study of inheritance in fowl), Prof. Graham, (Physics), H. H. LeDrew, Prof. Dean, (who probably won't remember me, but to whom I am obliged to for getting me a job when I was in a pretty bad financial situation), my room-mate S. G. Freeborn, Bill Hunter, Nourse, Archie Campbell if he is there, Pres. Spencer, B.S.A. (tell him to write me), Gray, a Spanish chap who was in the '15 class, I have no news about him, Jim Creelman, Winslow, Hirst and to a lot of good fellows who were very kind to me.

If you have at hand a College Calendar send it to me, as I want to know if there have been changes in the College. Also a list of the books sold by the Co-operative Book Selling Association, which I suppose exists still.

Well, dear Maxwell, I believe I have asked about enough from you, surely you'll be so kind as to excuse my abuse of your patience.

Yours very sincerely,

—H. Castro Zinny '14.

BIRTHS.

The Review extends its congratulations to Prof. J. E. and Mrs. Howitt on the arrival of a son. The same is also extended to Mr. J. E. Hand who has now the honor of being called "Daddy" by a bouncing boy.

ATHLETICS

OPELL

BASEBALL.

The inter-year series ended with the Faculty champions. The standing shows a close race between the Faculty, Third and Second years. Early in the season Third year allowed the Fourth year to nose out a 15-14 victory. Later, however, they beat a weakened Faculty team 17-14, but they lost to the Sophs 23-19 and thus were eliminated from the race. The Sophs, flushed by three straight victories, crossed bats with the Faculty but were humbled by a 19-11 defeat. Incidentally the game tied the two teams and they met again on March 19. The Faculty, with Dr. Creelman on first and the veteran Prof. Squirrelre dishing them up from the pitcher's box, presented a formidable aggregation and put the game on ice when Higgins, the Soph twirler blew. The score was 9-5. The game bristled with fast fielding but the feature was a triple play by the Second year. With Dr. Creelman on second and Prof. Squirrelre on first, Stanley lined a ball to Atkins, who touched first and threw to Ziegler at second in time to trap both runners.

Team.	Won.	Lost.	Per Cent.
Faculty.....	4	1	.800

Second.....	3	2	.600
Third.....	2	2	.500
Fourth.....	1	3	.250
First.....	1	3	.250

Runs Scored:—

	By.	Against.
Faculty.....	105	54
Second.....	58	64
Third.....	68	54
Fourth.....	42	75
First.....	35	61

The series showed some good material. Kingsmill, fresh from the minors, surprised everyone by batting an .833 clip. Prof. Squirrelre and H. M. King played extra good ball and it was largely due to their work that the Faculty landed the pennant. As a team, the Second year displayed the snappiest fielding but they were rather weak hitters. Porter, Fry and Pawley were the best of the Freshmen while Art White and "Tubby" Marritt, as battery, starred for the Seniors. Bill Michael was the pick of the Juniors.

Next fall, if circumstances permit, it is the intention to play an outdoor series before the opening of the football season. It would be advisable for the different years to organize teams as early as possible after the opening of College.

College Life

THE SPRING ELECTIONS.

The March elections at the College this year created no such serious havoc as would a Provincial or a Dominion election just at this time. The offices were all filled by acclamation saving three which were contested without so much as an election cigar passed about. The spring term always sees a new graduating class pass out of the college leaving vacancies in the ranks of the different society offices. Yearly, the Freshmen become Sophomores, the Sophomores become Juniors and the Juniors become Seniors. The classes are gradually moving up from high to higher. It seems this same action goes on within the societies themselves. Those offices formerly filled by Seniors are again filled by the Juniors stepping up one higher and so on down the line.

The list of officers for the term beginning next September, however, has the addition of a few new men and even with the falling off of students it is possible that the Review, the Literary Society and the Athletic Society will receive the required impetus to tide them over until the student body again reaches to its normal numbers.

The new officers elected are as follows:

To The Review Staff:

- Associate Editor—J. B. Munro, accl.
 Agriculture Editor—A. B. Macdonald, accl.
 Experimental Editor—F. L. Ferguson, accl.
 Poultry Editor—G. R. Wilson, accl.
 Horticulture Editor—C. F. Patterson, accl.
 Athletics Editor—A. H. Musgrave, accl.
 Query Editor—D. A. Kimball, accl.
 Alumni Editor—A. M. Stewart, accl.
 College Life Editor—A. B. Jackson, accl.
 Locals Editor—J. H. Nixon, contested.
 Artist Editor—G. H. Scott, accl.
 Union Literary Society.
 Hon. President—G. H. Unwin, B.S.A., accl.
 President—B. W. Maxwell, accl.
 Treas.—J. W. Wadsworth, contested.
 Secretary—W. F. Hopper, contested.
 Athletic Association.
 Basketball Manager—A. W. Baker, B.S.A., accl.
 Baseball Manager—C. W. Stanley, B.S.A., accl.
 Hockey Manager—W. L. Iveson, B.S.A., accl.
 Aquatic Manager—G. H. Unwin, B.S.A., accl.





LIFE AT MAC DURING EASTER WEEK.

It was with great reluctance that the Mac girls left their play of the spring vacation to return to the work of another term. That feeling of reluctance, however, was not unmingled with pleasurable anticipation of happy greetings and reunion at the Hall, and the evening of April 3, found most of the old girls back in their places with firm resolutions to work harder than ever. To prevent any feeling of homesickness the new girls busily engaged themselves in unpacking their trunks.

Lectures were resumed the following day and on Thursday the Juniors faced their much-dreaded Chemistry exam. Good Friday afforded the necessary period of relaxation after this test, and the day was spent quietly by those who remained at the Hall. Some of those who rallied quickly sought diversion in the matinee, while others forgot their troubles in the enjoyment of a taffy-pull in the laundry. Through the influence of Dr. Ross, superintendent pro tem. the president was prevailed upon to allow a social evening, which proved very "homey" and enjoyable. As a special Easter privilege the girls were permitted to attend church services Sunday evening as well as in the morning.

Acting as a check on too great freedom, was the ever-present thought of the exams in English for the Normal and associates. Now that it is really over they will again breathe freely until the next attack in June.

On Friday evening, by way of celebrating the termination of the exams and as a farewell event, the Freshmen concluded their year by giving an informal dance which as usual was a great success.

AUTOBIOGRAPHY OF A MAC GIRL.

September:

School time comes,
Start out right;
Homework done
Every night.

October:

Every class
Make a hit;
Scholarship
In my mit.

November:

Field day comes,
Football too;
Homework now
Can't get its due.

December:

Term exams,
Results just fair;
Taunts at home
Hard to bear.

January:

Resolutions
At New Year;
Cannot make me
Persevere.

February:

Snow shoe tramp
By new moon;
Miss study hour,
Catch up soon.

March:

Hockey, lit.,
Rink, sleigh ride,
Homework takes
Toboggan slide.

April:

Tests at Easter
Catch me foul;
Teachers set up
Fearful growl.

May:

Exams come,
Not my fort;
Wish I'd never
Been a sport.

June:

Class lists out;
I'm a muck;
Printer's error?
No such luck.

MACDONALD LOCALS

Junior Normal—Mabel how is it
you are able to take "poultry" this
term?

Mabel G.—O! I have my skating
off.

AT BROOKLYN MISSION.

Teacher—Now the lesson speaks of
a giant. Have any of you ever seen
a giant?

Pupil—O! yes, there is one up at the
College. He came last fall.



THE MORNING AFTER.

G—nn.—Did you dance with Miss
"B." at the Hall last night?

G—w—d.—Yes, was she telling you
about it?

G—nn.—No, but I saw her going into
the chiropradists this morning.

HUMAN NATURE.

Student, (enquiring for one of the
O.A.C. patients at the hospital.)—
How is Mr. A.— getting along?

Nurse—Well he has been enjoying
very poor health but today he com-
plains of feeling improved.

Little bits of plaster,
Little blocks of stone,
Make a handsome building,
When the Ivy's grown.

OVERHEARD IN THE ORCHARD.

Amateur, (practicing pruning on a
pear tree in College orchard.)—Well,
one sure thing is the boys won't get
many apples off this tree next fall.

It is reported that the Hort. Dept.
contemplate conducting experiments
in crossing the strawberry plant with
milkweed. The product of this cross
should be a ready made dish of straw-
berries and cream.

St—r.—We had an awful quarrel
in the room today. I actually called
F—t a liar and he called me one.

St—t.—Perhaps both were not far
wrong.

Saved His Money.—“Two penn’orth o’ bicarbonate of soda for indigestion at this time of night!” cried the chemist who had been aroused at two a.m., “when a glass of hot water would do just as well.”

“Weel, weel,” returned Sandy, hastily, “I thank you for the advice. I’ll no bother ye after all. Gude night!”

A stranger, intending to visit the prison farm got on a college car by mistake the other day. As the car neared the college he imagined the large edifices before him were part of the prison buildings. Looking at Mac Hall, he enquired of a passenger what the building was for, whereupon the party replied that it was full of girls. The stranger looked blank and amazed and then exclaimed: “Girls? Why, what did they do?”

A GOOD STORY THEY ALL TELL.

It happened in Glacier National Park. The packer’s name was Goldie. His skill with horse and pack was extraordinary and no less so his dexterity in holding tourists spellbound with tales of the extremely wild west.

Presently it fell to his lot to take a party of school teachers over Gunsight Pass. Now Gunsight looks enough like the real thing to make the unsophisticated gasp a little, although it is safe as a boulevard for even more than fairly poor riders.

Any mountain trail looks ticklish in spots and one of the school teachers began to question Goldie about accidents. The inimitable Goldie rolled a fresh cigarette reflectively.

“Yes’m,” he said, “there’s some danger now and then, and sometimes things happen. I was goin’ over with my wife when just as we got to that big rock there”—pointing ahead to a

turn in the trail—“her horse slipped and both of ’em went over the side.”

At this point the school teacher gasped and swallowed audibly. “Did she—was she—” she stammered.

Goldie went on with unruffled face. “I left my horse and climbed down around to the ledge where they landed. The horse was dead. (A pause by Goldie and a breathless question by the tourist.) “And your wife—was she?”

“No-o,” drawled Goldie, “but her leg was broken and I had to shoot her.”

(Note—It does not destroy the interest of this yarn to know that it is one of the stock stories told by western guides to tourists all the way from the Grand Canyon to Yellowhead Pass.)—Guelph Mercury.

A PROMISING RECRUIT.

The officer of the day, during his tour of duty paused to question a sentry who was a new recruit.

“If you should see an armed party approaching, what would you do?” asked the officer.

“Turn out the guard, sir.”

“Very well. Suppose you saw a battleship coming across the parade-ground, what would you do?”

“Report to the hospital for examination,” was the prompt reply.—Harper’s Magazine.

THE KAISER’S DECEIT.

Old Lady: This be a terrible war, doctor.

Doctor: It’s, indeed.

Old Lady: It’s a pity some one don’t catch that there old Kruger!

Doctor: Ah! You mean the Kaiser.

Old Lady: Aw—changed his name has he, deceitful old varmint.—Tit-Bits.

"How Do You Do?"

"How can you, friend?" the Swedish say:

The Dutch, "How do you fare?"

"How do you have yourself to-day?"
Has quite a Polish air.

In Italy, "How do you stand?"

Will greet you every hour;

In Turkey when one takes your hand,

"Be under God's great power!"

"How do you carry you?" is heard

When Frenchmen so inquire;

While Egypt's friendly greeting word

Is, "How do you perspire?"

"Thin may thy shadow never grow,"

Is Persian's wish to you;

His Arab cousin, bowing low,

Says, "Praise God! How are you?"

But oddest of them all is when

Two Chinese meet, for 'tis thrice

They shake their own two hands, and
then

Ask, "Have you eaten rice?"

—Standard.

THE CANDID PROFESSOR SPEAKS.

Gentlemen, this course in English History which I am going to give you will bore me as much as it will bore you. I wrote these notes over ten years ago, so that if any of you have notes taken by former students, you can read even the jokes and jeux d'esprit before you come into class. I don't expect to know any of you personally. My secretary corrects the final examination papers. Nevertheless, I shall be willing to recommend you as preparatory school teachers at the close of the year. I do this to accommodate a bureau of employment conducted by the college. The recommendations are read by those in authority, and I want them to sound well, so that I will hold my job. I shall now begin to read the

notes, and I feel sure that you will absently-mindedly take down erroneous notes in your usual illegible handwriting.—Life.

Archbishop Ryan, a popular Catholic dignitary in America, was visiting a small parish in a mining district one day for the purpose of administering confirmation, and asked one nervous little girl what matrimony was.

"It is a terrible state of torment which those who enter are compelled to undergo for a time to prepare them for a brighter and better world," she said.

"No, No!" remonstrated her priest, "that isn't matrimony, that's the definition of purgatory!"

"Leave her alone," said the archbishop; "maybe she is right. What do you and I know about it?"

CHINESE LOGIC.

In the neighborhood of Shanghai an English sailor on his way to the foreigner's burial ground to lay a wreath on the grave of a former comrade, met an intelligent-looking native carrying a pot of rice. "Hello, John!" he hailed, "where are you going with that 'ere?"

"I take put on glave—glave of my flen," said the Chinaman.

"Ho! ho!" laughed the sailor, "and when do you expect your friend to come up and eat it?"

"Al time samee your flen come up and smellee your flowers," replied John.

An Error.—An exchange prints the following: "A Westerner has hanged himself by his suspenders. The verdict of the coroner's jury ran: "Deceased came to his death by coming home full and mistaking himself for his pants."