## Improving Rural Homes.

House builders and home builders are two very different things. Some houses we get inside of and call them homes. That we first sit down and study what we wish and need and like, and then build to those needs, is the common-sense plan. Then no two houses can be alike, but each one will be specially suited to the folk inside and the landscape outside. There are two things to consider in building: (1) Ourselves and what we personally need; what our individuality is and what a home can do for us; (2) what the building site is capable of—all it can afford or furnish to feed our souls and make our lives pleasant. All this we are entitled to get out of house building.

I remember reading somewhere, "It is a solemn thing to build even the outside of a house." And the reason was because you revealed yourself in doing so. A house says always that's the sort of man Mr. Smith is. And reserved, even shy, as some people are, they placard themselves up like circus bills on a barnside for all the world to read. But there is something more done by a house; it creates public sentiment and public character. So it comes about that most people can really do no more good than in building a truly beautiful house—a house that expresses a beautiful lot of ideas, worked into unity in a beautiful life. For instance, you know houses that express welcome and hospitality, and others that are forbidding. You can think of a house that is modest and smiling; and you can think of another that is absurdly bold and conceited. Then at least one half of the modern houses are efforts at mere imitation. They are a jumble of a lot of things, pretty enough in their places, but when out of place they are no more admirable than a lace collar on a dog. House building must become a much more serious matter than it is in the making of a home.

I will compress a handful of hints in brief space. A home ought to be placed on a rise of ground, even if this carry it back further from the street than you would choose otherwise to place it. You should be so situated that every stream runs away from you rather than to you. There is no position for a rural or suburban house worse than where it will catch the street dust. Material for a house, I believe, should be that which is most characteristic of the place where it is built. There is no reason for a building of wood where stone superabounds. Brick is ideal material in some sections. An old inscription on a brick pyramid reads, "Do not undervalue me by comparing me with pyramids of stone. I am better than they, as Jove exceeds the other deities." A broad house is generally advisable; and seldom a tall one—that is, in the country. Our only reason for a high house is to get away from the soil with sleeping rooms. But the air five feet from the ground ought to be as good as that at twenty-five. If we have thorough drainage it will be. Height will be secured by building on a rise. Breadth saves time and strength in climbing. It gives quick access to the whole house. It keeps us near the flowers and grass. It suggests hospitality.

Houses should never be considered apart from their surroundings. Americans do not appreciate blossoming trees in making up home life. It is possible, besides a shrubbery, to arrange our tree-planting so as to have a succession of bloom around our houses for several months. The earliest quite interesting trees are the English elm and the red flowering maple. The former is covered with what looks like a profuse crop of hops. The red maple is a glorious tree in bloom. The shades vary; but some are intense scarlet, others nearly a pure white. The Kentucky coffee tree is extremely interesting for affording a very spicy flower, not very conspicuous and not lasting. The basswood about the first of July is a glory for its beauty and perfume, but it is also a superb bee-feeder. Magnolia Acuminata and the American tulip-tree are entirely hardy and healthy, and very showy.

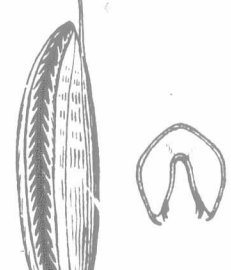
Lowell and Morse in their accounts of Korea and Japan emphasize the love of those people for the plum and cherry. Cherries we can have in bloom for three weeks, beginning with Early Richmond and ending with Montmorency. Mr. Lowell tells us it is not easy to convey to the Western mind an idea of the mingled love and adoration that the Eastern nations lavish on these flowers. Sonnets innumerable are written in their praise. Indeed, the whole life of these interesting nations is bound up with their blossoming trees. Are we not so far neglecting one side of culture; and the value of trees from an esthetic point of view? "The laziest of mortals are stirred to enthusiasm and travel many miles to get a sight of the cherry trees before the morning's mist has left them." It will pay us well to cultivate blossoming trees for the blossom's sake, not considering the future fruit. Our apple trees I find are actually scorned by landscapists; but for flowers and homefulness they lead all trees. I have been able to select two deep-red flowering in such profusion that they ought to be everywhere.

Hedges and wind-breaks are to my notion next after trees to be considered. We need these for two reasons besides their beauty. The first is because a house to be homeful should be cozy and protected and, to some extent, secluded;" and the second is because we can and ought to largely control the variabilities of climate. It is possible to make a difference of two degrees by having evergreen wind-breaks on the north and west. But, better still, we can prevent the extreme effects of frost by breaking the drying winds that sweep over us. This will be felt not only by the trees and general vegetation, but by animal life, and ourselves included. Set it down as a matter of human health to break the harsh winds and prevent them from searching us through and through. I know of places where a delicate person can live with comfort on one side of a street, but on the other cannot endure the climate. The only reason is that on one side the trees have been cut away, and no wind-breaks planted; while the other is hedged in and bowered in with groves. The value of our evergreens is not understood. As formally sheared ornaments, standing before a house, their utility is equal to their beauty; they are monstrous; but allowed to grow with native grace and freedom, where they will take the teeth of the wind, they are our natural protectors.

The chief trouble with flowers about a farmhouse is that, as generally grown, they take too much time in weeding, and in lifting or covering in the fall, and planting out in the spring. It is a mistake for a farmhouse to try such lawns as are seen in cities. Grading, and leveling, and sodding, and a constant run of lawn mowers, is not only expensive, but out of place. Instead, let me suggest to our rural homes to plant a shrubbery. Shrubs, as a rule, cost very little labor; and they do not die out and need replacing. There is no weeding; and they give a profusion of flowers the season through. Yet, as a rule, our country folk work patiently at very poor lawns and very troublesome flower beds; and have very few shrubs. Select a slope from the house most pleasant for walks and seats—not necessarily in front. It will not be too large for a moderate homestead or a farm of twenty acres, if you set off half an acre for this purpose. Do not grade it any further than to remove unnatural knobs and ridges. Clean it of weeds, and leave the natural slopes. If convenient, have a drive or a walk around it. Select shrubs for a succession of bloom—from the Forsythia of April to the witch-hazel of November.—*E. P. Powell, N. Y. Independent.*

## Chess and Fall Wheat.

SIR,—A great deal of the fall wheat in Ontario has been destroyed during last autumn by the Hessian fly, and as the grass known as chess, which is wrongly supposed by some farmers to be a degenerated form of fall wheat, is not attacked by this insect, there will probably be a good deal of this grass noticed in fall-wheat fields this spring. Chess is just now spearing and will be easily recognized in the fields. There has been a considerable correspondence in agricultural papers on this question of the supposed identity of chess and fall wheat. May I suggest to those who wish to convince themselves whether or not the chess plants now to be found in fields grew from a grain of wheat or from a seed of chess, that they dig up very carefully some of these plants and wash out the roots, when they will find attached to the root the old seed, which is quite different from a grain of wheat. As a rule, it will be found enclosed in its double husk, while, of course, the grains of wheat would be naked. A seed of chess is about half the size of a grain of wheat. The groove down the face is deeper and wider open, and the inner husk is fringed on both sides with stiff bristles. There is much less substance in a seed of chess, and a cross section of the seed gives an outline almost like a horse shoe, the whole seed being shaped like a little boat.



Chess Seed.—Side view and cross section.

JAMES FLETCHER.

Central Experimental Farm.

[NOTE.—After the above letter was received from Dr. Fletcher, he sent along a chess plant well out in head, the roots of which had been washed free of earth, so that the husk of the parent chess seed could be clearly seen attached to the roots. It was attached some three-quarters of an inch beneath the crown, among the fibers, and was easily determined to be chess. This should settle the question as to origin of chess, at least for those who dispute that the chess plant can be produced from chess seed.—ED. F. A.]

## Practice plus Theory = Success!

The agricultural college of to-day is the embodiment of technical education along agricultural lines. At one institution we find sheep-shearing competitions and plowing matches going on among the students. At another, live-stock judging contests for medals and the honor of being picked to represent the college at the International Live Stock Show, or to act as judge at the local fairs. At another, hard work is being done in the dairy making butter for a national contest. At still another the students are studying and judging cereals, roots and corn. One institution gives a training in farm butchering; another in the construction and handling of farm machines, from the windmill to the gasoline engine. Spraying of trees or making solutions to knock out smut or other fungi keeps the college man well employed. The work in the blacksmith and carpenter shop has made him expert enough to save many a journey to town. He now builds his own gates or henhouses. The faker has a sorry time with the college man. Lightning rods, aquatic separators, patent churns, etc., don't go with the agricultural student. His knowledge of political economy is ample enough to enable him to prick the bubbles of the demagogue. So that altogether from the strictly dollars-and-cents point of view a college education in agriculture *pays*.

"Now is the summer of our discontent," because we have been warned out by the pathmaster, and neighbor Jones will persist in talking politics and scandal instead of grading up the road. Statute labor is a relic of the old feudal system, when the grand lords held bees to cut their wood, steal their neighbors' cattle or their wives, and otherwise hold high-jinks. Roadwork of the enduring kind is best done by contract and under the supervision of a competent civil engineer. If so performed, we shall cease to see efforts made to get water to run up hill, or the low places made still lower, which, under the old statute-labor system, was often the case.

# DAIRY.

## Cream Starters.

The following extracts are from an address by G. L. McKay, Professor of Dairying at the Iowa Agricultural College, a former Canadian buttermaker, who has gained the distinction of being looked upon as an authority upon modern creamery practice:

What is termed a natural starter is easily obtained during the summer months. Take a number of samples of your best milk in sterilized pint jars and keep them at a temperature of about 70° until they sour. When you find a sample that has coagulated solid without any pinholes and has a sharp but pleasant acid taste, you may know that you have the right fermentation present to give the best kind of a flavor. Then pasteurize some of your best milk and inoculate with this good starter. In pasteurizing, the milk should be heated to 180° and kept at that temperature for 20 minutes. If it possesses a little cooked taste it will do no particular harm. We find that about 3% starter is sufficient to propagate the new starter with, so that it will be ready in 24 hours. A good temperature to ripen a starter to is 75° Fahrenheit, and during the summer 65°. A few degrees either way will not make much difference. A starter is usually at its best for using when it contains about 45° to 50° by the Mann's test or .8 or .9 of 1% by the Farrington test. Where the milk is received every other day it is advisable to use a smaller per cent. of starter in propagating the new starter, and ripen at a low temperature, preferably 65°.

After spending a month, during our short dairy course, in our starter-room where we carried forward daily about 20 starters, I found that when a starter goes beyond 50 it assumes a stringent or bitter taste, and new starters propagated from this would always have the same taste. I cannot emphasize too strongly the importance of cleanliness in everything pertaining to a starter. I strongly discourage the use of cloths or papers for covering the starter cans.

The Cooley cream cans without the glass have been giving us the best results as starter cans, as they have a sloping cover which permits a passage of air and at the same time prevents dust from falling into the cans. These cans can be placed in a tank of hot water, and the milk pasteurized with very little trouble. They are easily handled and the temperature can be controlled without difficulty.

The per cent. of starter used in the cream depends on the season of the year. This may range from 10% to 30%. In June when the atmosphere is pure and the climate usually moist, and nature has done everything to make the air lovely and sweet, very little starter will be required, if any, if patrons observe moderate care in cleanliness. But during the extreme hot weather, and again in the winter months, starters should be freely used. I would not hesitate to use 40% of a good starter if necessary these months.

Do not understand me to recommend using a 40-per-cent. starter at all times. I would use as high as 40 per cent. only if the milk is tainted. In that case you can use a heavy starter with good results.

During the short winter course which has just closed, a little discussion arose as to the effect of a starter on milk two days old when brought to the creamery. I had our men turn in the cream screws and skim a 62% cream. We took 100 pounds of cream and placed it in a small vat. To this we added 50 pounds of nice morning's milk, which seemed free from taint, and 33 pounds of good starter, thus giving us about a 25% mixture, including cream, milk and starter. The ripening was carried to about 40°. The butter scored 44 out of a possible 45 on flavor; some eight days later gave it a score of 42½ on flavor. This was a practical demonstration for our students of the theories given in the class-room.

Now, if these conditions can be brought about at Ames, in the dairy school, is it not possible to obtain the same results in most any creamery in the land by observing the same rules?

The importance of starters and cream-ripening is attracting the attention of the leading dairymen of the land more than they ever did before. The great Hazelwood Company has engaged two of the best men we had during the past year, to prepare starters and attend to cream-ripening, paying them $1,200 per year each, and we have just furnished them the third man at a little less salary. The dairy schools have not overstocked the market with first-class men. Prospects were never brighter than now for up-to-date, wide-awake, intelligent buttermakers.