Plowing Contests and Lawn Making.

GUY ELLIOTT MITCHELL.

One looking at the accompanying pictures would not think that these were pictures of a "College Field Day," but such is the case.

Last year the School of Agriculture of the University of Minnesota varied a little from the usual field day program, and added two new features to the regular field day sports.

The first was a hitching up contest in which both girls and boys took part; the other new feature was a plowing contest in which only boys participated. Plowing is not altogether a bad sport either, no matter in what light you look upon it. This was illustrated by the participants who proved to the spectators that in order to be a good plowman, one must be somewhat of a civil engineer, as well as an excellent horseman.

Plowing as commonly done is often considered as drudgery, and so it is for the thoughtless, careless plowman, who has no other object in view than that of making the field look black. But there is no other farm operation which requires more knowledge to understand or more skill to do well, than does the simple art of plowing. The contestants had in mind making a straight furrow of even depth and width, turning it squarely over so as to cover all stubble and weeds. Each one took pains to start in squarely and evenly and to drive straight out at the ends so as not to leave the least curve. There was no time to dream or gaze about to see what some one else was doing. All the plowman's skill and ability were taxed to the utmost. He must set his plow perfectly in the first place. Next, he must be kind to and gain the confidence of his team, for no man can do good plowing without the confidence and co-operation of his team.

A half day was set aside for the contest, and all three classes, that is, the Freshmen, Junior and Senior classes, competed for the prizes. These were, a sulky plow for first prize, a hand plow for second prize and ten dollars in cash for the third prize. These prizes were furnished by one of the leading plow concerns of the United States gratuitously.

In scoring, expert plowmen who have been with the University Farm for years, acted as judges. A standard of excellence was established. Twelve points were given on the "dead furrow;" fifteen points on straightness of furrows; eight points on in's and out's at ends; fifteen points on depth and width of furrows; ten points on evenness of top of land; thirty points on the covering of weeds, and ten points on the finish. Time was not taken into consideration in scoring.

Each contestant was given a strong farm team and a plow. He had to adjust the plow, clevice and whiffle tree to suit the condition of the land. He was allowed to mark out his land in any manner he saw fit. The "land" was to be twenty feet wide and three hundred feet long.

Henry Johnson, of New Richmond, Minn., a member of the Freshman Class, took first prize. His score was 96 per cent. perfect.

O. K. Lathrop, of the Senior Class, took second prize, with a score of 81 per cent., and

W. I. Peterson, of the Junior Class, third prize, with a score of 80 per cent.

The rest of the contestants of course got no prize, but they got something much more valuable. They found that they could plow, and plow right. This conviction will remain with them always, and they will be better farmers and better citizens for having entered the plowing contest.

To many of the onlookers the contest was a revelation. Farmers and farmers' sons, who have plowed for days and months, never before saw such plowing, and many went home determined to plow as they saw it done.

It has been decided to make this a permanent feature of the annual field day.

THE WINNER OF SECOND PRIZE AND HIS TEAM.

THE FIELD OF BATTLE

The greensward is the canvas upon which all architectural and landscape effects are produced. A lawn may vary in extent from a few square feet at the side steps leading to the brownstone front of the city dwelling to the broad acres of extensive parks. It matters little whether the extent of a lawn be great or small, its inherent qualities are the same, and its intrinsic worth is determined by its character and the manner in which it is kept. Green grass is not only of great economic value, but it is also of great æsthetic value. The herbage of the field is the primary dependence of all animal life, and it is the green color, the sweet fragrance, and the soothing effect of nature which come from well-kept greenswards that make them so congenial to man. Grass is nature's balm and healing for all erosive scars. Nature abhors rough edges and broken places, and immediately proceeds to cover such ugly spots with green grass. Man likes to get his feet upon the soil, but better still upon the soft, yielding greensward. Rich rugs and carpets do not give the elastic spring that the well-made and well-kept greensward yields. So says L. C. Corbett, one of the horticulturists of the Department of Agriculture, in "Farmers' Bulletin No. 284" just about to be printed by Uncle Sam. Since this pamphlet is free as well as interesting and instructive, why not send for a copy to your member of Congress or your Senator. If his supply runs out, Secretary Wilson will send you a copy.

In general, Mr. Corbett says, further, a lawn should be beautiful and it should be useful. Its beauty depends upon the contour of the land, the color or the texture of the grass, and the uniformity of the turf. The use of the lawn is to provide a suitable setting for architectural adornment and landscape planting.

A BIT OF LAWN AT THE LEWIS AND CLARK EXPOSITION.

The Soil.

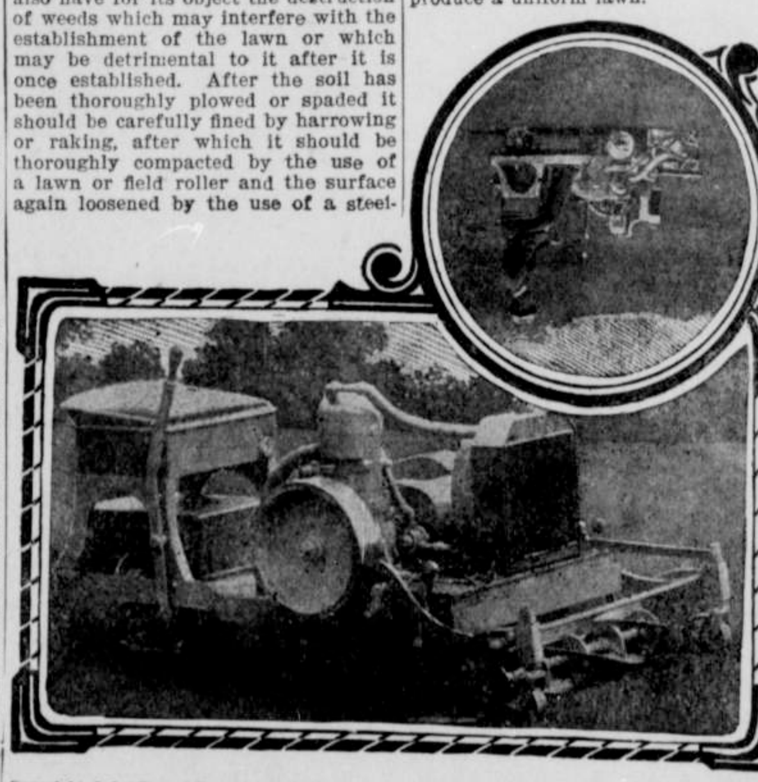
The ideal soil for a lawn is available in but few cases where it is desirable to establish a greensward. Ordinarily the lawn in which a man is most interested is that immediately surrounding his abiding place. The soil of this immediate locality is, in general, greatly modified because of building operations or necessary grading. The soil with which one has to deal, therefore, is seldom a normal soil of the locality. In general, it is a portion of the surface soil mixed with more or less of the subsoil which has come from excavation, in making the foundations of a house.

The ideal soil for grasses best suited for lawn making is one which is moderately moist and contains a considerable percentage of clay—a soil which is somewhat retentive of moisture, but never becomes excessively wet, and is inclined to be heavy and compact rather than light, loose, and sandy. A strong clay loam or a sandy loam, underlaid by a clay subsoil, is undoubtedly the nearest approach to an ideal soil for a lawn; it, therefore, should be the aim in establishing a lawn to approach as near as is possible to one or the other of these types of soil. In many localities it will, however, be very difficult to produce by any artificial means at one's command a soil which will approach in texture either of the types recommended. Our efforts, nevertheless, should be directed to attaining as closely as possible these ideals.

Preparations for the Lawn.

Since the lawn is intended to be a permanent feature of the decoration of a place, its endurance or span of life is of utmost importance. In general, grass seeds are small and the surface seed bed for the reception of these seeds need not be more than 1 inch in depth; but since the grasses, as they become established, send out long, lateral feeding roots, it is necessary that the area containing the available food for these plants should be amplified. This object can only be attained by deep cultivation and thorough preparation of at least 8 to 10 inches of the surface soil. The soil to this depth should be made rich and should be put into an ideal condition for the development of plant roots.

The mechanical operations of preparing the soil can be carried on by the use of the modern plow if the area is large enough, or by spading if the area is small. The seed bed should be thoroughly and frequently stirred, so as to grind the soil particles together as much as possible for the purpose of reducing them to a uniformly fine condition and to liberate plant food. Cultivation should also have for its object the destruction of weeds which may interfere with the establishment of the lawn or which may be detrimental to it after it is once established. After the soil has been thoroughly plowed or spaded it should be carefully fined by harrowing or raking, after which it should be thoroughly compacted by the use of a lawn or field roller and the surface again loosened by the use of a steel-toothed rake or a fine harrow.



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ON LARGE ESTATES THE AUTOMOBILE LAWNMOWER IS A PICTURESQUE ADJUNCT.

After the seed bed has been thoroughly and carefully prepared and the grass seed scattered in appropriate quantities, according to the kind used, the surface should be given a careful raking or rolling if the area is dry. If showers have been frequent, raking after the seed has been sown will suffice until after the grass has reached a height sufficent to be clipped by a lawn mower. Prior to clipping the grass with a lawn mower, if the ground was not rolled after seeding, a heavy lawn roller should be passed over the surface in order to make it as smooth as possible. After the grass has an opportunity to become erect it should then be clipped with a mower.

What Fertilizers?

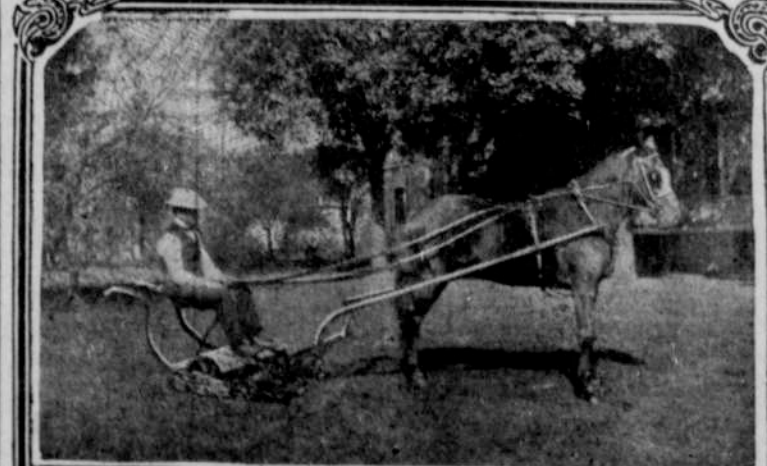
Since the lawn is a permanent feature, it is hardly possible to make the soil for the reception of the lawn too rich. Stable manure which has been thoroughly composted and rotted and which is as free as possible from detrimental weed seeds is undoubtedly the best material to use in producing the desired fertility of the soil. Forty to sixty loads of well-decomposed stable manure are not too much to use upon an acre of land designed for the greensward. Where such stable manure is not available the next best plan to follow is that of plowing under green crops, such as clovers, cowpeas, soy beans, and similar plants. The land should then receive an application of about 1,000 pounds of lime to the acre, and at the time of preparing the seed bed 500 to 1,000 pounds of fine-ground bone, together with 300 to 500 pounds of a high-grade fertilizer upon each acre. The fertilizer may contain 3 per cent nitrogen, 6 to 8 per cent phosphoric acid, and about 8 per cent potash.

After the lawn has been established and it has gone into "winter quarters," it is well to give the young grass a mulch of well-decomposed stable manure, which shall not be heavy enough to disfigure or mar the lawn, but should be so fine and well decomposed that it will be carried beneath the surface of the grass by the rains and snows of the winter, leaving very little rough or unsightly matter to be raked off in the spring. If this is not desirable, after the greensward has passed through the first winter it should be treated to a top-dressing of fine-ground bone at the rate of 1,000 pounds to the acre.

The Kind of Grass.

Kentucky blue grass is undoubtedly the great lawn maker for all that section of the Atlantic coast region north of Washington, D. C., and for the Allegheny region as far south as northern Georgia. Blue grass thrives best in a comparatively retentive, strong soil where there is an abundance but not an excessive amount of moisture. Upon soils of a lighter character in this region, in localities where precipitation is greater, such grasses as redtop, Rhode Island bent grass, creeping bent grass, and white clover are more to be relied upon for lawn making than blue grass. Redtop, Rhode Island bent grass, and creeping bent grass all have the same ability to make a compact and deep sward, as in the case of blue grass. In fact, under certain conditions redtop and the bent grasses are able to make a softer, although not a more permanent, turf than does the blue grass. Upon the light soils found in the States south of the latitude of Washington, D. C., white clover forms an important feature in lawn mixtures.

In general, because of the varied conditions of shade and moisture existing upon a lawn as the result of trees, shrubs, and architectural objects, mixtures are more desirable than pure grasses. The different degrees of shade and moisture maintained in the soil which result from the presence of trees, shrubs, and buildings afford a variety of conditions under which a single species would not produce a uniform lawn.



A LARGE LAWN IS EASILY CLIPPED BY HORSEPOWER.

Harvesting by Gas Light.

An interesting trial made in England on a farm near Biggleswade, shows that fields can be so illuminated by acetylene gas that harvesting may be easily carried on at night. In this test two mowers, each cutting a six-foot swath, were employed and a field of 15 acres was mowed in three hours and 35 minutes. A gasoline traction engine furnished the power.

Romulus Was Perplexed.

Old Romulus took sick one day, and in a little while it looked as if his end was near. The minister was sent for, and came promptly—a stout man, done up in one of those religious waistcoats without any buttons down the front or any opening at the neck.

The minister said to Uncle Romulus:

"'Is your mind at ease, brother?'"

"'Yes sah,' answered the old man.

"'Are you sure there's nothing troubling you?' the minister went on. 'If there is, speak up. Don't be afraid. I am here to help and comfort you.'

"'Dey is one fing, jes one, sah,' said Romulus, 'Dat 'plexes me.'

"'What is it my brother?' the minister murmured.

"'Ah kaint o' de life o' me make out, sah,' said the old man, 'how yo' gits yo'sef inter dat dere vest.'"

There are four prosperous American Mormon settlements in the Mexican state of Chihuahua.

Mysteries of the Ages.

During that wonderful and mysterious period, popularly spoken of as "before the ice age," in other terms, the pre-glacial period, nature expressed herself with a lavish abandon of which we can form but a faint idea. The primeval rivers were mighty torrents, instruments of stupendous metamorphic energy. In their work of erosion and dissolving, vast quantities of gold were freed from confining embedment and deposited along their channels. Through untold ages, perhaps, this work of uncovering and depositing—Nature's prehistoric gold mining and storing—continued, or until that particular formative cycle was completed. Then the earth passed into the travail throes of more energetic formation, as expressed in volcanic and glacial action. Fierce volcanoes sent forth their molten streams, filling up ravines and gorges, creating new elevations and depressions, and burying deep under layers of volcanic debris, the old river beds, the evicted waters of which laboriously wrought out new channels for themselves. Following this storm time came a season of comparative quiet in which the newly located streams were permitted to take up again with diminished force the old work of tearing down, dissolving and dropping the freed gold along their channels. In some instances old beds were crossed and broken into by the new streams and additional deposits mingled with their uncovered treasures. At last came the long winter of glacial action, from which the earth emerged transformed, with little of the primeval surface left save the giant redwood forest region. Such, briefly summarized, is the geologic record, as read by modern scientists, of the changes that immediately preceded our own period. Possibly, certain giant trees of the California redwood parks which have swayed in the Pacific Ocean winds for thousands of years—at least their own ancestors—might have observed from their undisturbed abode the stupendous changes in progress at their very doorway. Had they the gift of speech they could reveal, as no other living thing could do, the state secrets of Nature, including that of the buried rivers.

While no reliable method can at present be given for the detection of the presence of added vegetable colors in general it is necessary that special tests must be made for special vegetable colors. The bulletin gives quite a number of simple methods for detection of artificial coloring matter which may be had on application at the Department of Agriculture.

Sheep act as beasts of burden in many of the ranges of the Himalaya Mountains. Each animal is capable of carrying from seventeen to twenty-five pounds, and lives entirely on wayside herbage.

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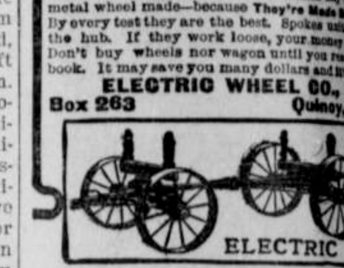

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