

FARM NOTES.

The composition of soils, principally, is mineral and organic matters. By mineral matter is meant fragments of rocks, sand and clay, all of which have come from the breaking down of larger masses of rock.

Varying quantities of salts of potash, lime, etc., are also found in soils, in addition to the materials already mentioned, which, dissolved in water, are taken up by plants through their roots, usually as food.

While not, strictly speaking, forming a part of the soil, there are in it great numbers of very small plants, generally in the upper six or eight inches, and which are referred to as bacteria, molds and algae.

The mineral matter and organic matter in our soils are found in varying quantities. In cultivated upland soil the organic matter will run from 3 to 6 per cent. of the total dry weight of the soil.

There may be too much water in a soil, and there may not be enough—or there may be just the right amount for the best germination of seeds and the best growth of plants.

When water stands upon the surface for any considerable time at any season, or within three feet of the surface during the growing season, the land should be drained—preferably tile drained.

When soils take on the appearance and feel of dryness, although they may still contain a measurable amount of moisture, they have reached a point where they will no longer yield moisture to the growing crop.

All of the food of the plant, except carbon, is derived from the soil or through it. These foods are dissolved in the soil water, and the water with its dissolved materials is taken in through the roots of the plant, and thence conveyed to the leaves where the food materials are reconstructed and much of the water thrown off into the air.

What appear to be grains of soil in mellow loams and clays are usually not grains, but crumbs—composites consisting of tens, hundreds and even thousands of individual or simple grains, held together partly by cementing materials in the soils and partly by water contained in the composites.

The organic matter in a soil, and especially the humus, acts as a sponge would act. Its relative capacity for holding water is considerably greater than that of the mineral matter as may have been observed.

Good applications of barnyard manure increase the water-holding power of soils.

In a mellow soil each crumb becomes a reservoir filled with food-laden moisture, and through the openings or archways separating these crumb masses from each other the roots of plants may readily travel, thus finding ready access to the moisture and food stored in the crumbs.

The really productive soils are those possessing the mellowness found in our virgin soils, and they possess it because proper methods are employed in their tillage.

Nature, left to herself, provides a crop, and usually a rotation, for the soil, in which:

- 1. The soil is filled with roots—often perennial roots which, with frost action, develop the crumbed and mellow of arched structure.
2. The bulk of the growth is returned to build up and enrich the soil.

Nature, however, has need of no other tools than the roots and the frosts and the multitude of animal forms which burrow in the soil—earth worms, ants, etc.

With the proper moisture conditions these tools may be made to help develop the mellow condition sought. Every farmer should learn to recognize this proper moisture condition and to appreciate its importance.

SHEDS NEW LIGHT ON URBAN GROWTH

Writer Makes Point as to Drift From Farms.

That the urbanization of the United States has not been so rapid as a casual reading of the census figures seems to indicate, is the contention of Robert W. McCullough in the Survey. Admitting that the relative decline of the rural population was marked between 1880 and 1920, he argues that the drift from the farms to the big cities has not been what is popularly supposed.

Use by the census bureau of the term "urban" to classify villages and towns of more than 2,500 inhabitants is misleading in that "urban" is usually thought of in connection with cities, whereas when this classification is subdivided it appears that growth has been by no means equal among villages, towns and cities of different sizes.

Many places formerly classed as rural, as their population was less than 2,500, have passed into the "urban" classification merely because their population now exceeds that figure. A part of the urban growth, therefore, may be said to be in reality a mere bookkeeping transaction.

Between 1900 and 1920 about 4,620,000 people passed from the rural to the urban classification without ever leaving their homes. Instead of the large cities receiving the bigger part of increase, places having from 25,000 to 100,000 population had the greater gain.

Interesting as are these figures, they should not be taken as indicating that the cityward trend has been checked. The back-to-the-farm movement has never been really popular, and the lure of towns and cities, even if only in the 25,000 to 100,000 class, continues to be so strong as to be a problem of national importance.

It is true that mechanical devices have greatly increased the agricultural output in proportion to the number of agricultural laborers, thus liberating a certain proportion of the farm population.

Old Manuscripts Verified

The Roerich museum of New York announced that an expedition sent from the museum has verified the existence of manuscripts in the Hemis monastery of Ladak written during the life of Christ and relating his travels and preaching in India, Tibet and Central Asia.

Excuses

Representative Gilbert N. Haugen said in Washington the other day:

"The men who block the Corn Belt's demands offer us very fine explanations and excuses. Well, they remind me of an anecdote.

"A married man at a shore hotel, cried to kiss a pretty girl, but she pushed him off and said:

"How dare you try to kiss me? Only this afternoon I saw you kissing your wife. And I heard you tell her, too, that she was all the world to you."

"Yes, that's right," the man answered calmly, for he was full of explanations and excuses. There are two worlds, you know. Wife is the Old World, you are the new one."

Postwar Diplomacy

Representative Moore, who advocates revision of the passport laws, said at a dinner in Washington:

"Diplomacy seems to have gone crazy. The crazy way each nation judges its next-door neighbor reminds me of Chlorida Lyme.

"Men folks are fickle," said Chlorida Lyme. "Dey ain't no reliance ter be put on 'em."

"Cause why?" asked her girl chum.

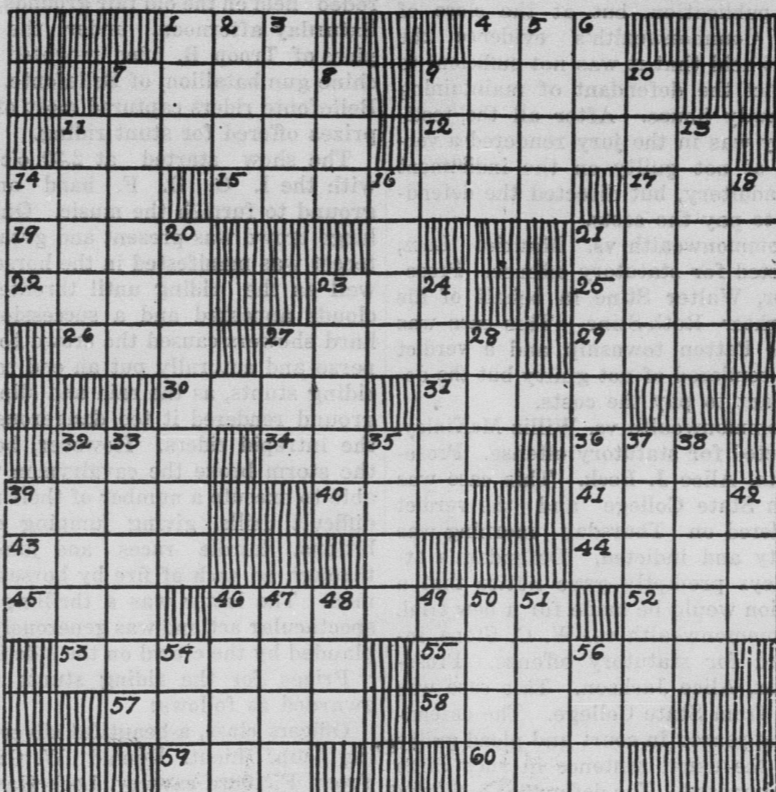
"Dat wealthy young Rastus Dough come 'round las' night tryin' ter kiss me," said Chlorida, "and so as not ter seem too brazen and awdacious-like Ah blifted him in de smeller wiv a hot flatiron, and jes' foh dat he jilted me."

Her Quaintness

"My Aunt Hetty, who has been dead these twenty years, was in some ways a remarkable woman and in other ways a thundering remarkable one," stated old Roswell P. Rasp.

HOW TO SOLVE A CROSS-WORD PUZZLE
When the correct letters are placed in the white spaces this puzzle will spell words both vertically and horizontally.

CROSS-WORD PUZZLE No. 8.



Horizontal.

- 1—An engine of war
4—A body of water
7—Leased
9—A cramp
11—Unruffled
12—A small bag
14—Instrument for rowing
15—Under
17—Hard shelled fruit
18—To run away
21—Skin disease
22—To defeat
23—A wager
25—A garden tool
26—Point of compass (abbr.)
27—An opinion
28—Poet and author (initials)
30—To lower
31—Bill of rare
32—A beverage
34—To run away
36—To tap
38—A kind of fuel
40—Was seated
41—Neat
43—Comfort
44—Pit for fodder
45—To do
46—To make tight
52—To stitch
53—A flight
55—Owned
57—A story
58—Languishes
59—Human beings
60—Guided

Vertical.

- 1—To free
2—A dweller in the desert
3—To measure
4—A speck
5—Everyone
6—To request
7—In this
8—A lair
9—A mineral spring
10—Pertaining to mind
11—A fine art gallery
13—Folds in a dress
14—Away from
16—The first garden
18—An article
20—To raise
21—Breaks out
23—Sounding vessels
24—To test
27—To fasten
28—Small mound of sand
32—To impart
33—To spring festival
35—An affirmation
37—Mounts
38—Covered with slate-stone
39—A vegetable
42—To cut down
44—A period
48—A kind of fish
49—To hit gently
50—Sinful
51—Not any
54—A vegetable secretion
56—Married

Solution will appear in next issue.

Pennsylvania Motor Federation Planning to Eliminate Skidding.

Under the old theory that "a stitch in time saves nine" the Pennsylvania Motor Federation believes the Pennsylvania highway department should act, now, to prevent cars from skidding on slippery concrete grades next winter.

"The cost of giving these grades a non-skid surface will be far less than repair bills paid by automobile owners—and if only one life is saved the return on the investment will be a handsome one," said the Motor Federation writing to the department of highways.

"No State in the union has given this matter proper consideration," continues the communication. "Pennsylvania should lead the way. During winter months the newspapers are filled with stories of disasters occurring on icy grades. It is the idea of the Motor Federation—eighty-six Pennsylvania motor clubs, that concrete grades, steep enough to be dangerous, should be given a coating of tar—a fifth of a gallon to a square yard; that the surface then be covered with small 'chips'—three-eighth inch stone. Oxidation of the tar alone will give a surface better than bare brick or concrete; chips will be added safety. Such a treatment will be effective for at least two winters. The cost will be very small, compared with the benefits. And the work should be done now—not when there is moisture on the concrete."

The Motor Federation suggests to all automobile drivers that they be particularly careful when driving in fog.

"The season of the year has come when fog is encountered almost nightly," says the federation. "Some drivers make the mistake of using only their dim lights. They cannot see any better with dimmers, and they increase the risk of head-on collisions. For their own safety, and the safety of others, they should use their headlamps. To tie white handkerchiefs over the headlamps increases the visibility somewhat; to use orange colored cloths is even better. This precaution stops all direct unreflected light, which otherwise would illuminate the particles clouding the atmosphere, and reflect back into the eyes of the driver. No device, however, is a complete success against fog. Only thoughtless or ignorant drivers attempt to drive rapidly through fog. Caution is the only real accident preventative."—Exchange.

Not True to Life.

"I knew an artist once who painted a cobweb so realistically that the maid spent several hours trying to get it down from the ceiling."

"Sorry, dear, I just don't believe it."

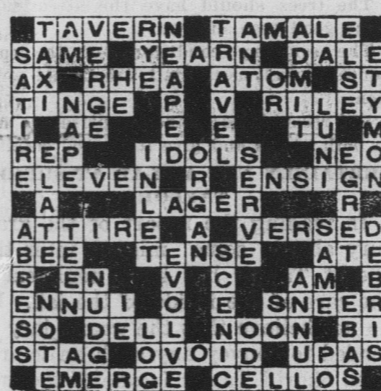
"Why not? Artists have been known to do such things."

"Yes, but not maids."—S. California Wampus.

—Native (at country summer resort): Say, Jimmy, what has become of that old rooster you used to have around here?

Jimmy: Oh, Ma served wild duck for the city boarders last week.—Vanderbilt Masquerader.

Solution to Cross-word puzzle No. 7.



Reduced Fares to State Sunday School Convention.

Sunday School leaders of Centre county will be pleased to learn that again the railroads are granting a reduced fare for the round trip to the State Sabbath School Convention at Reading on October 13, 14 and 15, and that credentials entitling delegates to this reduced fare can be secured from the county secretary, Darius Waite, of Bellefonte, Pa.

In this county there should be quite a number of Sunday School veterans who would be entitled to the Gold Medal which the State Sunday School Association presents during the convention each year to those who have been either officers or teachers or both continuously for fifty years, and information concerning these can be secured from our county president I. L. Foster, of State College.

In Centre county practically one of every four is enrolled in the Sunday Schools and in Pennsylvania almost two hundred thousand consecrated officers and teachers are engaged Sunday after Sunday in giving instruction in order that conduct and character may be rightly cultivated. For the coming year a working budget of \$74,250.25 will be asked by the State Organization in order to carry on its various departments and maintain its present splendid field staff. Of this amount Centre county last year contributed \$550.00.

The local committee at Reading have all arrangements completed for entertaining twenty five hundred delegates in homes and hotels. The main sessions will be held in the Rajah Temple, the largest auditorium in the city. While Divisional meetings will be held in five of the nearby churches. Centre county is making preparation to send a fine delegation to this large gathering, and information pertaining to the convention can be had from the county president or secretary.

By Comparison.

An American died, and met an old friend in the realms of the departed. "How are you getting in?" asked the old friend kindly. "Fine!" was the enthusiastic reply. "Say I thought lil old Noo Yahk had the universe skinned to death, but this here heaven of yours—"

"Heaven?" repeated the older hand pityingly. "Heaven! Say, get wise, bo; get wise!"

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