Bellefonte, Pa., October 1, 1926.

FARM NOTES.

-The composition of soils, princi-pally, 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. The decomposition of leaves, stems and roots of plants, and the remains of the bodies of animals is known as organic matter. When the latter materials are so far decomposed as to lose their form, the resulting organic mass is known as "humus.

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. Many of them are highly important, because, by their action, some of the plant foods and perhaps most, if not all, of them are prepared for the use of our high plants.

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. In muck soil it will be considerably greater, some times reaching 97 to 98 per cent. Such a soil is worthless for cropping purposes. All soils contain moisture in some condition.

There may be too much water in a soil, and there may not be enoughor 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. From the leaves the remaining water with the reconstructed food moves out through the plant to the growing parts where the food is transformed into plant tissue, or is stored for future use.

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. Not only does the water help in developing this crumb-like condi-tion, but a soil in this condition will hold naturally the largest possible amount of water for the use of crops, and at the same time will retain larger amounts from loss by percolation and evaporation.

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. Hence the importance of returning to our soils, especially to our loams, clays and sandy soils as much of the roughage of the farm as possible, and hence, also, the importance of following a careful rotation which shall result in part in an abundance of root material in the sub-soil.

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 tilage. These include a proper rotation of crops, the incorporating of an abundance of organic matter in the soil, and the wise use of tools.

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

1. The soil is filled with rootsoften 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. Bees may remove the nectares, birds may remove the seeds, and grazing animals may crop off the grasses, but after all the roughage with much of the fertilizing material is returned to the soil. The wise farmer profits by the object lesson.

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. The farmer must use the plow, harrow, roller and other tools. 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 impor-tance. If the soil be too wet the use of these tools may prove injurious rather than helpful. If a cultivated soil be allowed to become over dry, the drying often produces a degree of compacting that the use of these tools cannot overcome.

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

Many places formerly classed as rural, as their population was bess 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. Mr. McCullough also shows that the bulk of the immigrants settle in urban regions. They add to the bookkeeping increase of urban population without representing a loss from the rural regions. Making deductions for this element, the urban increase rate drops from 66.4 per cent to 52.1 per cent. The corrected rate of increase for the rural population is 23.6 per cent, which is about equal to the normal increase of births over deaths.

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 Under the old theory that "a stitch in time saves nine," the Pennsylthe life of Christ and relating his vonis Motor Federation believed the life of Christ and relating his travels and preaching in India, Tibet and Central Asia. The expedition, which has been in Chinese Turkestan since 1923, was detained in that region by the Daotai of Khotan. The members were later released 'after their weapons were confiscated by the native government. It is the opinion of the museum that the manuscripts at Ladak will throw much light on the vague years of the life of Jesus before his return to Jerusalem in his twenty-ninth year. Many are skeptical as to the authenticity of any such manuscripts.-Pathfinder Magazine.

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

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."

her, too, that she was all the

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 Chlo-.ida Lyme. 'Dey ain't no reliance ter be put on 'em.'

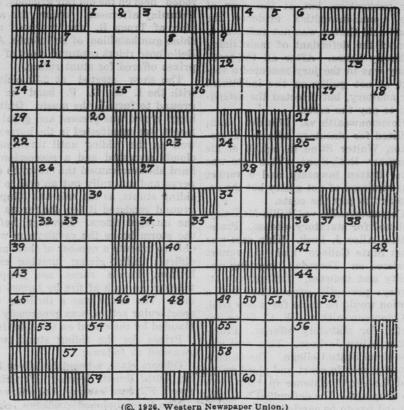
"'Cause why?' asked her girl chum. "Dat wealthy young Rastus Dough come 'round las' night tryin' ter kiss me,' said Chlorida, 'and so as not ter seem too brazen and awdacious-like Ah biffed him in de smeller wiv a hot flatiron, and jes' foh dat he jilted

Her Quaintness

"My Aunt Hetty, who has been dead chese twenty years, was in some ways a remarkable woman and in other ways a thundering remarkable one," stated old Roswell P. Rasp. "For one thing, she didn't believe that the average old woman knew more about medicine than a doctor who had made it his life's study. For another thing she didn't believe that the boys were all going to the gallows and the girls were all flittery whoppets. And, lastly, she did not think the millinery of her day was any crazier looking than that of 1872. But, as I say, she has been gone to her reward twenty years."-Kansas City Times.

HOW TO SOLVE A CROSS-WORD PUZZLE When the correct letters are placed in the white spaces this pusses will spell words both vertically and horizontally. The first letter in each word is spell words both vertically and horizontally. The first letter in each word is indicated by a number, which refers to the definition listed below the pussle. Thus No. 1 under the column headed "horizontal" defines a word which will fill the white spaces up to the first black square to the right, and a number under "vertical" defines a word which will fill the white squares to the next black one below. No letters go in the black spaces. All words used are disc tionary words, except proper names. Abbreviations, slang, initials, technical terms and obsolete forms are indicated in the definitions.

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

17-Hard shelled fruit 19—To run away 21—Skin disease 22-To defeat 23-A wager

53-A flight

59-Human beings

57-A story

27—An opinion 29—Poet and author (initials) 30-To lower \$1-Bill of tare 32-A beverage 34—To run away
36—To tap
39—A kind of fuel
40—Waa seated 41-Neat 44-Pit for fodder 46-To make tight

25—A garden tool 26—Point of compass (abbr.)

43-Comfort 45—To do 52—To stitch 55-Owned -Languishes 60-Guided

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 fastes 28-Small mound of sand 32-To impart 32—10 impart
33—A spring festival
35—An affirmation 37—Mounts
38—Covered with slate-stone
39—A vegetable 42—To cut down 46—A period 48—A kind of fish 49—To hit gently 47-A metal 50-Sinful 51-Not any 54-A vegetable secretion 56-Married

Vertical.

2-A dweller in the desert

1-To free

8-To measure

Solution will appear in next issue.

Pennsylvania Motor Federation Plan- Solution to Cross-word puzzle No. 7. ing to Eliminate Skidding.

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 concreted 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

"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 ight, 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.

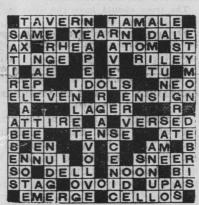
Not True to Life.

"I knew an artist once who painted a cobweb so realistically that the maid spent several hours trying to get it own 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. Californa Wampus.

sort): 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.

-Native (at country summer re-



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 in-formation concerning these can be ecured 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 city. While Divisional meetings will be held in five of the nearby churches. Centre county is making prepara-

tion to send a fine delegation to this large gathering, and information pertaining to the convention can be had from the county president or secre-

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

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

ell established corporations are not seriously affected by death, and are the proper avenues through which estates should be settled.

More and more thoughtful men are realizing this and are making wills naming a strong Bank as their Executors.

This Bank, with its large surplus and experienced officers, guarantees a proper administration of any trust fund.

The First National Bank

BELLEFONTE, PA.



hose who speculate in doubtful stocks or risky schemes, learn by sad experience the folly of such action. You know that you will receive a liberal yield consistent with absolute safety at this Bank.

3 per cent Interest Paid on Savings Accounts

MEMBER FEDERAL RESERVE SYSTEM

Lyon & Company

New Fall Ready-to-Wear

Just received a new line of Satin and Silk Crepe Dresses. All the new shades in Crackelhead Blue, Jungle Green, Chanel Red, Navy and Black -new Dolman Sleeves, new Neckline and new Skirt, at less than the cost of silks

New Fall and Winter Coats

for Stouts, Slender and Small Women-all New Colorings, with Fur Collars and Cuffs—in Sport Models and others-at very low prices.

Childrens Coats A fine line of Childrens Fur-Trimmed Coats from \$4.00 up

All the New Fall and Winter Shades in the famous Silver Star brand Silk Hosiery from 95c. up.

> A new Fall line of Tapestry, Cretonnes and Draperies.

New Curtains (Plain and Ruffled) in all the new weaves. Marquisettes and Scrims, plain and figured.

Rugs, Carpets, Linoleums

and WINDOW SHADES are here ready for the Fall House Cleaning.

Lyon & Company