

# Water and Soil Fertility

By C. H. SPURWAY, Assistant Department of Soils, Michigan Agricultural College

## WHAT SHE WANTED

This Woman Had to Insist Strongly, but It Paid

Chicago, Ill.—"I suffered from a feeble weakness and stomach trouble, and I went to the store to get a bottle of Pinkham's Vegetable Compound, but the clerk did not want to let me have it—'No, it's not for you,' he said. I knew all about it, and I insisted and finally got it. I had it and I am so glad I did, for it has cured me."

"I know of so many cases where women have been cured by Lydia E. Pinkham's Vegetable Compound that I can say to every suffering woman if that medicine does not help her, there is nothing that will."—Mrs. JANEZEI, 205 Arch St., Chicago, Ill.

This is the age of substitution, and women who want a cure should insist upon Lydia E. Pinkham's Vegetable Compound just as the women did, and not accept something else on which the druggist can make a little more profit. Women who are passing through this critical period or who are suffering from any of those distressing ills peculiar to their sex should not lose sight of the fact that for thirty years Lydia E. Pinkham's Vegetable Compound, which is made from roots and herbs, has been the standard remedy for females. In almost every community you will find women who have been restored to health by Lydia E. Pinkham's Vegetable Compound.

### POSITIVE PROOF.



"How do I know that you really love me? What assurance have I that you were willing to make sacrifices and endure hardships for my sake?" "What more can you ask, the tourist, I for six months retained from being violent hands on your little brother?"

Unfortunate man. A tourist in the mountains of Tennessee once had dinner with a querulous old mountaineer who yawned about hard times for 15 minutes at a stretch. "Why, man, you are the tourist, you ought to be able to make lots of money shipping green corn to the northern market. 'Yes, sorter,' was the sullen reply. "You have the land, I suppose, and can get the seed." "Yes, I guess so." "Then why don't you go into the speculation?" "No, 'em stranger," andly replied the cracker; "the old woman is too lazy to do the plowin' and plantin'."

Cause of the Excitement. The sons of the rich were all enthusiastically following some one down the street. "What's up?" somebody asked. A rather more accommodating young nabob than the others turned around. "Do you see that tall fellow up front?" he asked. "Yes." "Well," he said, "he's discovered a new way to spend money."

Not All Smoked. L. White Busbey, secretary to former Speaker Cannon, was explaining that the speaker did not smoke so much as people thought he did. "My understanding," suggested one of the party, "is that he gets away with about 20 cigars a day." "Oh, well," said Busbey, "but he eats half of 'em."—Sunday Magazine.

Easy Breakfast! A bowl of crisp Post Toasties and cream—the thing's done! Appetizing Nourishing Convenient Ready to serve right out of the package. "The Memory Lingers"

POSTUM CEREAL CO., Ltd. Battle Creek, Mich.

### Showing Comparative Water Holding Capacity of Sandy Loam and Muck Soil. (After King.)

The fertility of any soil depends in a large measure upon the amount of water which that soil will hold under field conditions, and which will flow away through the drainage system. Our ordinary field crops require enormous amounts of water in order to give a good growth and profitable returns. If the crop does not obtain water when it needs it, then there will be a cessation of growth which will result in low yields.

The illustration shows approximately the amount of water which each of three ordinary kinds of soil will hold under field conditions. Each group of two jars shows 12 inches of soil and the amount of water held by that kind of soil. Group No. 1 contains a sandy loam soil, and the amount of water held by this soil under field conditions is shown in the spaces between the jars. This means that the soil over a sandy loam field to the depth of 12 inches will hold in the spaces between the jars an amount of water which would cover the field to the depth of three inches. Group No. 2 contains a clay loam soil and the amount of water held in this case is three and one-half inches. A muck soil is shown in the third group and the water held by a foot of this soil is six inches.

The important thing for the farmer

## GREEN MANURING

The business of the soil is to produce crops. In order to accomplish this business most successfully, it is necessary that the soil possess certain qualities:

A proper temperature. Proper ventilation. The ability to gather and hold for the use of the crop goodly quantities of capillary water. In order that any soil shall possess these qualities, it must be first of all properly drained. It must also be in the best possible condition of tilth, or, in other words, it must have a proper condition of mellowness. This tilth will depend upon three things, namely:

The proper selection and use of tools. The practice of a rational system of rotation in which a legume, preferably clover, shall occur in the soil at least one year in the rotation. The return to the soil of the largest possible amount of organic matter.

What's up? somebody asked. A rather more accommodating young nabob than the others turned around. "Do you see that tall fellow up front?" he asked. "Yes." "Well," he said, "he's discovered a new way to spend money."

Not All Smoked. L. White Busbey, secretary to former Speaker Cannon, was explaining that the speaker did not smoke so much as people thought he did. "My understanding," suggested one of the party, "is that he gets away with about 20 cigars a day." "Oh, well," said Busbey, "but he eats half of 'em."—Sunday Magazine.

Easy Breakfast! A bowl of crisp Post Toasties and cream—the thing's done! Appetizing Nourishing Convenient Ready to serve right out of the package. "The Memory Lingers"

# WILLY BENNET'S ARE DERIVED FROM MUCH ABUSED FOREST

From Every Point of View It is One of the Most Helpful Friends of Man—Its Influence Upon Streams Alone Makes Farming Possible in Many Regions—Other Advantages.

The object of forestry is to discover and apply the principles according to which forests are best managed. It is distinct from arboriculture, which deals with trees for the individual use of a forest. The forest is the most highly organized portion of the vegetable world. It takes its importance from the fact that it is a whole which helps to form it as a whole. Although it is composed of trees, the forest is far more than a collection of trees standing in one place. It is a population of animals and plants peculiar to itself, a forest of its own making, and a climate different in many ways from that of the open country. Its influence upon the streams alone makes farming possible in many regions, and everywhere it tends to prevent floods and droughts.

The forest is far more than a collection of trees standing in one place. It is a population of animals and plants peculiar to itself, a forest of its own making, and a climate different in many ways from that of the open country. Its influence upon the streams alone makes farming possible in many regions, and everywhere it tends to prevent floods and droughts.

The forest is far more than a collection of trees standing in one place. It is a population of animals and plants peculiar to itself, a forest of its own making, and a climate different in many ways from that of the open country. Its influence upon the streams alone makes farming possible in many regions, and everywhere it tends to prevent floods and droughts.

## TO FERTILIZE YOUNG PLANTS

Liquid Manure, Usually Wasted, Contains All Elements of Commercial Fertilizer.

By W. MILTON KELLY. We frequently read or hear of the relative merits of liquid and solid manures discussed. Some make the assertion that liquid manure is the best and base their claims upon the fact that it promotes more rapid growth to plants when young than the solid manure.

On the other hand it is claimed by a number of excellent authorities that solid manure is the best on account of its lasting benefits. It contains humus, or partially decomposed vegetable matter, to the soil, which increases its capacity for retaining moisture and also improves the texture.

## ARTIFICIAL MOTHER FOR PIGS

The illustration shows an artificial sow as arranged by an Englishman. The pigs belong to Mr. Bert. Crook, Broughton Road, Melksham, by whom the feeding apparatus was designed and made. The mother sow died the day after giving birth, and the pigs

discouraged ones. Many a boy with an active brain and a healthy ambition leaves the farm because he cannot see any scope for his activities. He must have occupation for his brain as well as his muscle and if he had been taught the science of farming he might have found plenty of both to keep him from becoming lonesome and might have remained on the farm.

## TEACH SCIENCE TO FARM BOYS

One Excellent Method of Curbing Discontentment Among Young Men With Active Brains.

The skyscraper newspaper editor recently asserted that "all the science there is to be learned in the city" is acquired by the young man as he grows up with the farm and assimilates it with the practice of agriculture.

## W. L. DOUGLAS

"\$2.50, \$3.00, \$3.50 & \$4.00 SHOES Women wear W.L. Douglas stylish, perfect fitting, easy walking boots, because they give long wear, same as W.L. Douglas Men's shoes."

NOTE—Henkel's Velvet Pastry Flour makes wonderfully nice cakes.

# BUY SHEEP AND LAMBS NOW

But Don't Be a Sheep. A COMMON EXPERIENCE.

Don't Follow the Crowd. In chasing the market for profit, the farmer who blindly follows the crowd are generally the ones who get left. The successful man buys when he has the least competition, at the lowest prices and with the greatest margin for profit, which usually brings his selling time during a period of comparative scarcity at market, and he therefore obtains higher prices and most always makes a good profit in his dealings.

Here's a Chance for Gain. The present low market value of feeding sheep and lambs, being less than the cost of production, offers such an opportunity to those who are prepared to properly care for them.

Well-bred, thin but thrifty lambs of the growing kind can be secured on the Chicago market for \$5.25 to \$5.50 per 100 pounds; wethers of similar description, \$3.40 to \$3.75; yearling ewes, \$4.00 to \$4.50; and yearling breeding ewes, \$4.00 to \$4.50; and good feeding ewes at \$2.50 to \$2.85. These prices are about \$1.75 lower than a year ago, and are the lowest since 1914. Feeder sheep prices are unusually low.

Now is the Time to Buy. In view of the fact that prices of feeder sheep and lambs are now below the cost of production, and that present prices of lamb and mutton are a little higher than the average, it must be sooner or later because of the increased consumption invited thereby, the conclusion is inevitable that when they come to buy feeder sheep and lambs for all those who are ready to prepare them for market during the early part of next year.

Manicule Anxiety. Teddy's mother had been taken suddenly ill one morning while he was at school. On his return, he was admitted to his mother's room for a few minutes, and found his Aunt Alicia sitting by the bed.

Make the Liver Do its Duty. Nine times in ten when the liver is right the stomach and bowels are right. CARTER'S LITTLE LIVER PILLS.

Small Pill, Small Dose, Small Price. Genuine must bear Signature.

Tommy Murphy. The great horseman who is wanting most of the racing fast drivers to get farm horse "TOMMY MURPHY" is the best money for all records of the "TOMMY MURPHY" DISTRICT.

Needed at Home. Brown—That is the worst behaved kid I ever saw. Do you know his parents?

Stop the Pain. The hurt of a burn or cut stops when Cole's Carbolivase is applied. It heals quickly and does not leave a scar.

Suspicious Smoothness. "Your mother's coat is running very smoothly now."

Base Ball Players Young Man can become a professional ball player; demand exceeds supply. Write today for age and experience. National Pastime Club, Dearborn, Mich.

Garey Act. Pettris Eye Salve. DEFIANCE STARCH.

## W. L. DOUGLAS

"\$2.50, \$3.00, \$3.50 & \$4.00 SHOES Women wear W.L. Douglas stylish, perfect fitting, easy walking boots, because they give long wear, same as W.L. Douglas Men's shoes."

NOTE—Henkel's Velvet Pastry Flour makes wonderfully nice cakes.



## Cement Talk No. 7

Newspapers print nearly every day the story of some fire disaster involving the complete destruction of great property values and sometimes the loss of human lives. The annual fire losses of the United States are measured by the millions; in fact, it is stated that two hundred and fifty million dollars worth of property was wiped out by fire in the United States last year. While it is true that the precautions to prevent fire and fire fighting systems are often inadequate, the main trouble lies in flimsy and unsafe building construction. Experience has proved that fireproof construction is both practicable and economical. In some instances fireproof building is compelled by law. Reinforced concrete has come to the front as the most important agent in building against fire. The use of cement in building is becoming more and more common, due to its fireproofing, durability and economy. When building anything from the back porch steps to an office building, concrete construction may be safely guaranteed. The use of Universal Portland Cement in the concrete will insure cement of the best quality possible to manufacture. Universal is handled everywhere by the best dealers.

UNIVERSAL PORTLAND CEMENT CO. CHICAGO, ILLINOIS

ANNUAL OUTPUT 10,000,000 BARRELS

## Make the Liver Do its Duty

Nine times in ten when the liver is right the stomach and bowels are right. CARTER'S LITTLE LIVER PILLS.

Small Pill, Small Dose, Small Price. Genuine must bear Signature.

Tommy Murphy. The great horseman who is wanting most of the racing fast drivers to get farm horse "TOMMY MURPHY" is the best money for all records of the "TOMMY MURPHY" DISTRICT.

Needed at Home. Brown—That is the worst behaved kid I ever saw. Do you know his parents?

Stop the Pain. The hurt of a burn or cut stops when Cole's Carbolivase is applied. It heals quickly and does not leave a scar.

Suspicious Smoothness. "Your mother's coat is running very smoothly now."

Base Ball Players Young Man can become a professional ball player; demand exceeds supply. Write today for age and experience. National Pastime Club, Dearborn, Mich.

Garey Act. Pettris Eye Salve. DEFIANCE STARCH.

## W. L. DOUGLAS

"\$2.50, \$3.00, \$3.50 & \$4.00 SHOES Women wear W.L. Douglas stylish, perfect fitting, easy walking boots, because they give long wear, same as W.L. Douglas Men's shoes."

NOTE—Henkel's Velvet Pastry Flour makes wonderfully nice cakes.