

Agricultural Department

CONSERVE THE MOISTURE

There is no knowing what a season will be, wet or dry. It is always changing. We know the future only by what the past has been. The chances are that in the localities where there has been two or three seasons of excessive moisture that it will get back to normal, or even the opposite extreme. Except on farms where the soil is very retentive and not properly drained, it is always safe to save moisture for fear that it will be short next summer.

When the snow melts and spring rains seem to soak the ground many feet deep it is almost impossible to get some farmers to see that there ever will be a time, in July or August, when the crops will wither and the ground crack open. The way to check out moisture from the bank next summer is to check it getting out when spring comes. Plow early and keep the fields worked mellow and moisture cannot evaporate as fast as when left unplowed.

It has been estimated that an oat crop uses 522 tons or 4.76 inches of water to produce one ton of dry matter, corn uses 309 tons or 2.64 inches, potatoes uses 422 tons or 3.73 inches and red clover 452 tons or 4 inches of water to produce one ton of dry mat-

ter. That is to say that so much fall plowed land held nearly 2.5 per cent more water than unplowed land adjacent, the test being taken in the spring. Neither field had received any cultivation up to May 14. This means that about six pounds of water per square foot had silently and unnoticeably left the unplowed field. In this case 13.5 tons of water per acre were lost. If the fall plowed field had been disced early in the spring and cultivation continued until May 14, the difference would have been a great deal more than thirteen tons of water per acre between the fall plowed and the unplowed fields.

When early spring plowing is compared with late plowing, a similar difference is seen in the water content of the soil.

WORMS IN PIGS

According to Dr. Peters of the Nebraska experiment station, there is nothing else better for worms in the lungs of hogs than creosote. It cleans out the intestinal tract. It can be administered in the following manner with the best success.

Coal creosote one ounce; water 99 ounces. One pint of water weighs 16 ounces. One ounce of the mixture is the dose for a full-grown animal and is best administered with the morning feed.

If it is necessary to drench the animal, use a drenching tube made by taking an ordinary tin funnel and a rubber tube three feet long, 1/8 to 1/2 inch in diameter.

Insert the lower end of the funnel in this rubber tube, place the rubber tube into the animal's mouth, and allow it to bite on it, and pour the drench into the funnel.

It is better to place a piece of metal on the end of the rubber piece so that the animal may bite on it continually, without stopping the flow by pinching the rubber tube.

ALCOHOL MOTORS

Alcohol is increasing in popularity as a motive power in Europe, particularly in Germany, where it is being widely used on the farm. It is convenient, safe and clean. It is reported that raw alcohol can be produced in Germany from potatoes for 13 cents a gallon by processes so simple that the farmer can do it himself. Alcohol motors have been perfected and machinery for distilling improved, and the German government has encouraged the industry by removing the taxes from such alcohol as is used for technical purposes.

THE GARDENER'S FRIEND


The common gray toad lives entirely on animals and insects that are harmful to vegetation—as worms, insect larvae and mice. Its tongue is well adapted to the work in hand, and when, on the first warm evenings of spring you hear, mingled with the rustling of dry leaves and grass, the low musical trills of the male toad, you may know that all the adult toads are on their way to the nearest pond to lay their eggs.

Should you go to the pond the next morning, you would see numbers of them paddling about in the water, many of the males trilling at the top of their voices. The mass of eggs laid by a toad is remarkable. One author states that a toad can lay a mass of eggs eight or ten times as large as its whole body. This is explained by the swelling of the jelly, to which the eggs are attached, when it comes in contact with the water. First the eggs elongate, then the tiny flat tadpoles hatch and feed on the jelly-like matter surrounding them; hind legs appear, fore legs come, the tail is absorbed, and the little toads emerge from the water—all within



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little more than a month from the time the eggs are laid. In Europe toads are advertised for sale and gardeners buy them in large numbers. Boys catch them in nets, which is easily done in the evening twilight. When placed in a garden they seldom leave, but soon find a burrow under a board or stone, or at the root of a tree or shrub, and make themselves at home.

A BIG INDUSTRY

It is no insult to be called a chicken crank or poultryman. Those who have allied themselves with the little hen have joined forces with an industry that makes gold mining sink into insignificance.

The poultry and hen business in the United States amounts to \$280,000,000 a year while the hog can only root up the sum of \$186,529,035. Yet the hog is known as the mortgage lifter of the country—and he is that. It is not to belittle the hog but to help you appreciate the hen that we make this comparison. But the poultry business is nothing in comparison with what it can easily be made in the next ten years if the experiment stations and farmers' institutes would show the hen up at her true value. Nearly all stations are reporting on hogs, cattle and sheep, and only two or three actually trying to find out what can be done with the hen. Every farmers' institute program discusses hogs, cows, corn and crops, while few ever give one hour to the discussion of the poultry interests. For the amount of care and food given what on the farm makes such a showing in profits as the insignificant, much-neglected hen? Give her better attention for she merits it.

NITRO-CULTURES

Of materials called nitro-cultures, the American farmers are being led to expect entirely too much. The facts in the case are that nature provides for the roots of legumes like

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