

## CULTIVATING THE CROP.

Why We Cultivate and Why We Should Continue to Cultivate.

If we restrict the term cultivation to tillage after the crops are planted and designate the tillage before planting the seed as preparation, then most Southern farmers cultivate to kill weeds. Even some scientists, accepting the apparent results of limited experiments, have suggested that to kill the weeds is the chief purpose of cultivation.

But tillage before and after the crop is planted cannot be separated, in so far as effects on the soil and crops are concerned. This is true, even if the sole purpose of tillage were to kill weeds, for on the thoroughness of the preparation largely depends the ease with which weeds and grass can be killed after the crops are up. Anyone knows that it is much easier to "keep out of the grass" if the land is thoroughly pulverized before the crop comes up, and how much easier it is to kill young grass and weeds in a soil made mellow by thorough preparation and the addition of large quantities of decaying vegetable matter.

If the preparation is thorough and moisture conditions right it may well be admitted that the chief object of cultivation is to kill weeds; but under usual conditions cultivation serves other purposes of scarcely less importance.

The purposes of cultivation, therefore, may be stated as including the following:

1. To kill weeds.
2. To aerate and improve the mechanical or physical condition of the soil.
3. To save moisture, or prevent as far as possible too great loss of water by evaporation.

It is not easy to overestimate the importance of killing weeds in all crops. They do damage by consuming plant foods and water which may be needed by the crops; but they may also crowd and shade the crops and leave seeds or other means of perpetuating themselves, which make future cultivation more difficult and expensive. Here in the South we have given altogether too little attention to the importance of preventing weeds from making seeds to be scattered broadcast and torment us in future years. This is especially true as to our corn fields when cultivation is stopped early and the growth of corn is light. Even this one purpose of preventing the production of grass and other weed seeds might well be considered as justifying later cultivation of corn than is generally practiced. Where only two-horse cultivators are used in the cultivation of corn there is some excuse for not cultivating after the corn is waist high, but in the South where one-horse implements are largely used there is no good reason for laying by corn so early, especially since late and light or shallow cultivation is usually profitable as a means of saving moisture.

If the land has been broken deeply, is well filled with humus and thoroughly pulverized before planting, cultivation after the crop is planted is chiefly to kill weeds and save moisture; but in most cases the cultivation after the crop is up is also useful in pulverizing the soil, thereby aiding in setting free plant foods by promoting chemical changes. Early in the season when the soil temperature is apt to be too low and when excessive moisture excludes the air from the soil, cultivation may be of great service in helping to correct these unfavorable conditions to plant growth. In such cases deep cultivation may be of great benefit, even though considerable injury is done to the roots of the growing crops.

This does not mean that breaking the roots of the plants is not an injury; but it means that under certain conditions it may be the lesser evil. Any breaking of the roots of the plants is probably an evil, but it may easily be less injurious to the crops than to prolong the injurious effects of grass and other weeds, or less injurious than to allow a soil which has been over-wet and become so compact as to exclude the air, to remain in such condition. On a soil well drained, containing sufficient humus, and properly prepared by deep breaking and thorough pulverization, deep cultivation after the roots have filled the soil is rarely necessary; but the fining of the soil and aid which cultivation offers to the introduction of sufficient air are important purposes served by cultivation on most Southern soils. In fact, it is doubtful if there is any more important effects resulting from cultivation than those which aid in the setting free of plant foods, or promoting chemical and biologic (bacterial) changes.

Next to the killing of weeds the most important service of cultivation, as viewed by the majority of good farmers, is the conserving or saving of moisture for the use of the growing crop. East of Texas, Southern crops often suffer more from too much moisture than from a lack of

## DISCUSS PEACE AT HAGUE.

Conference Includes Delegates From Belligerents.

The Hague, April 11.—For three days there has been a private discussion of peace here by a conference, consisting of about thirty delegates from the United States, Holland, Germany, Austria-Hungary, Sweden, Norway, England, Belgium and Switzerland. The conference came to an end today with the drafting of a programme for action in the various countries. A short record of the conference's work was issued as follows:

"The object of the meeting was not to suggest steps to bring the war to an end, but to consider by what principles the future peace of the world would best be guaranteed. After a full discussion a minimum programme was unanimously adopted.

"The action to be initiated in the different countries ultimately will be supplemented by an international propaganda. A central committee for a durable peace has been created as a link between the national organizations. The committee of the Dutch anti-war council supplemented by members from other countries will serve as the executive."

Mrs. Fanny F. Andrews, of Boston, was the American delegate.

moisture, and this is especially true of cotton. On the other hand, there is scarcely a season when corn and many other crops do not suffer at some time during their growth because of a lack of moisture.

The crops require large quantities of water to produce maximum or largest yields, and it is important that this supply of water be fairly constant during the growing season. Excessive variations are always hurtful, too much or too little water being equally against large yields. A soil that is too compact or one that is lumpy or one that is too loose may lose water so rapidly either by evaporation or by leaching that the crops may suffer. These conditions are best prevented before planting the crop, but a soil that is not cultivated sufficiently often or that is cultivated too deeply during the growth of the crop may suffer unnecessary loss of moisture during seasons of scant rainfall. If the surface of the soil is left uneven or in ridges; if the soil is cultivated too deeply so that the deep soil becomes too loose and too much air enters; or if the top soil or the surface becomes hard or crusted, the loss of moisture is greatest. For these reasons shallow cultivation is generally believed best to prevent undue evaporation, of loss of moisture from the soil into the air. But under good soil conditions; that is, in good, deep soil, finely pulverized but not too loose, rather deeper cultivation than is generally supposed, best prevents loss of moisture by evaporation. King found that cultivation three inches deep best prevented loss of moisture in this way, but on most soils cultivating a crop three inches deep would result in too great root injury, because many soils are broken only a little deeper than this. It, therefore, again becomes a choice of the lesser of two evils, and probably the cultivation which best saves moisture without too great root injury is from one and one-half to two inches deep.

Why does this shallow cultivation and maintaining a level surface prevent loss of moisture by evaporation? There are two reasons why high beds or ridges dry out more than when the land is level. The ridges expose a larger surface or a larger amount of soil to the air and sun and the thin or narrow ridges also dry out more completely because the earth is thrown up. Shallow cultivation conserves moisture better because the water cannot pass through a loose covering of earth. It is necessary for the soil where the roots are located to have a certain degree of compactness in order for water to come up from below to feed the plants during dry weather. This water is brought up by the heat of the sun as oil is raised in the lampwick.

If the soil be moderately compact and yet finely pulverized this water rises from the subsoil to the surface. If the surface has a hard or compact crust it finds the best conditions for escape into the air, but if there is a loose mulch of dry earth on top the water cannot so easily pass through it because of the spaces between the soil particles, and is held in the soil beneath for the use of the plant roots. If this earth mulch, or dust mulch, as it is sometimes called, is maintained about two inches thick by frequent shallow cultivation little injury is done to the roots in dry weather and a large quantity of water is saved for the plants.

The prejudice against late cultivation is due to deep cultivation at that time. The maturing crops need large quantities of water and it is plain that if cultivation at that time saves moisture it is as beneficial as at any other time, provided the roots are not seriously injured.—Progressive Farmer.

Read Bamberg Herald \$1.50 year.

## CAROLINIAN IN ITALIAN NAVY.

Grandson of Charlestonian Who Married Into Italian Nobility.

Should Italy join the allies in the war of the nations, as it seems likely she will, South Carolinians will have a special interest in at least one of her naval officers, Lieut. Bentivoglio Middleton.

Lieut. Middleton's father, of the same name, was born and reared in Italy, his father being a Middleton of South Carolina and his mother a daughter of the noble house of Bentivoglio, sister of the Cardinal of Bentivoglio. The Middleton who first went to Italy was a brother to Oliver, Henry A. and Williams Middleton, of Charleston.

When Lieut. Middleton's father, as a young man, learned of the breaking out of the War Between the Sections, he came to America and fought throughout the war in the Confederate States army. After peace was restored he returned to Italy and was for some years an officer of the Noble Guard at the Vatican.

## The Submarine Schley.

When the submarine boat of the future makes a dive to come up no more except by the aid of the grappling hooks, she will carry a crew of not 12 or 20 men, but 30 or 50, and perhaps more, for fifty will compose the maximum crew of the Schley, the pioneer of the new type of submarine now being built for the United States navy. It is possible that the successors to the Schley type will carry even a greater number of men, and that the submarine will eventually reach the proportions of a battleship under water. The Schley, in fact, will be equipped to make the round trip to Europe. The Schley will be a combination battleship and submarine, fitted for deadly work both above and under water. In length she will not be very far short of a city block, and will make 7,000 miles at 12 knots without putting in to port for a new supply of fuel. The arrangement of her torpedo tubes, 10 in number, is such that they may be operated at any angle, and it will not be necessary to maneuver the vessel into position. The Schley seems to be the forerunner of newer and more dreadful things.—Charlotte Observer.

## TEN WEEKS IN BED—EMILY NENT PHYSICIANS FAILED WONDERFUL RECOVERY

I wish to inform you of the great benefit I have derived from the use of Swamp-Root. I had been a sufferer for more than twenty years from kidney and liver trouble and was almost constantly treated by the most eminent physicians who could only give me temporary relief. I had been in bed ten weeks when I began the use of Swamp-Root. Inside of twenty-four hours I could see that I had been greatly benefited. I continued to use Swamp-Root until I had used several bottles when I really felt that my old trouble was completely cured and I am positive that any person suffering with kidney or liver trouble can be cured by the use of this preparation.

I am now in the best of health, better than I have been for ten years or more. I do not know how to express myself as strongly as I desire, in favor of Dr. Kilmer's Swamp-Root, as I am sure that it saved my life and that my good health is due entirely to this great remedy. I heartily recommend it to every sufferer and am confident they can be benefited as I have been. It is a pleasure for me, gentlemen, to hand you this recommendation.

MRS. H. J. PRICE.  
1406 Center St. Portsmouth, Ohio.  
Personally appeared before me this 13th of September, 1909, Mrs. H. J. Price, who subscribed the above statement and made oath that the same is true in substance and in fact.  
R. A. CALVERT,  
Notary Public.

Letter to  
Dr. Kilmer & Co.,  
Binghamton, N. Y.

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## CITATION NOTICE.

The State of South Carolina—County of Bamberg—By Geo. P. Harmon, Esq., Judge of Probate.  
Whereas, Mrs. G. W. M. Kearse hath made suit to me to grant her letters of administration of the estate of and effects of Mrs. Jane M. Rizer, deceased.

These are therefore to cite and admonish all and singular the kindred and creditors of the said Mrs. Jane M. Rizer, deceased, that they be and appear before me in the Court of Probate, to be held at Bamberg, on Monday, April 19th, next, after publication thereof, at 11 o'clock in the forenoon, to show cause, if any they have, why the said administration should not be granted.

Given under my hand and seal this 3rd day of April, A. D., 1915.  
GEO. P. HARMON,  
Judge of Probate.

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After the war horses and mules will be high. Prepare now by raising your own draught horses. See the Thoroughbred, Registered, Percheron Stallion,

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J. F. Carter B. D. Carter

## CARTER &amp; CARTER

Attorneys-at-Law

GENERAL PRACTICE

BAMBERG, S. C.

## CITATION NOTICE.

The State of South Carolina—County of Bamberg—By Geo. P. Harmon, Esq., Judge of Probate.  
Whereas, J. Wesley Crum, Jr., hath made suit to me to grant him letters of administration of the estate of and effects of Douglass Richardson, deceased.

These are therefore to cite and admonish all and singular the kindred and creditors of the said Douglass Richardson, deceased, that they be and appear before me in the Court of Probate, to be held at Bamberg, on Saturday, April 10th, next, after publication thereof, at 11 o'clock in the forenoon, to show cause, if any they have, why the said administration should not be granted.

Given under my hand and seal this 17th day of March, A. D., 1915.  
GEO. P. HARMON,  
Judge of Probate.

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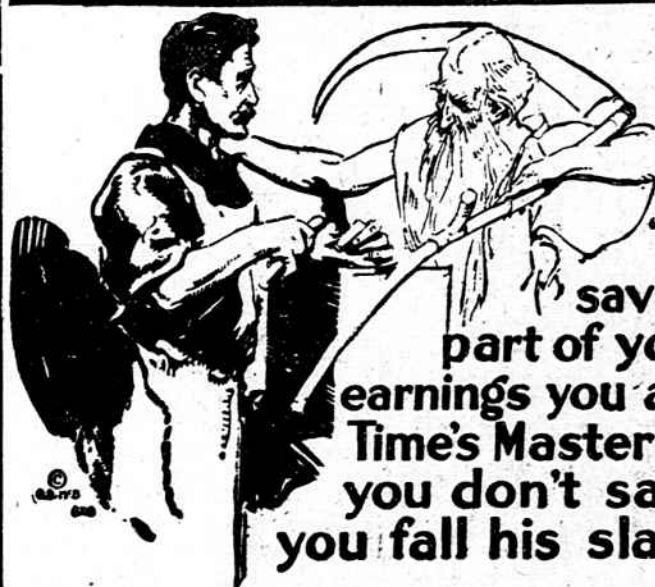
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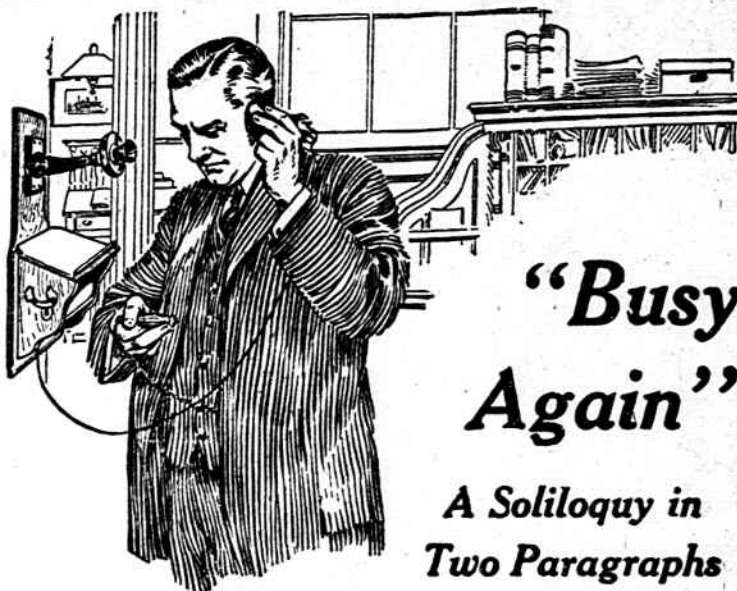
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