

FREQUENCY OF CULTIVATION

In dry seasons farmers are often advised to keep the cultivators going in the cornfields in order to get over them at least once a week. Is this good advice? Is it necessary to cover the ground so often if no rain intervenes? To answer these questions it is necessary to understand why we cultivate; then our reasoning powers should be called into action to determine when and how often the corn needs to be cultivated.

In the first place we cultivate to kill weeds. In spite of all that has been said and written about soil mulches in recent years, it must be admitted that weed killing is the greatest object of cultivation for growing crops. Allow weeds to grow in a cornfield unchecked, and in the best of seasons the yield of corn will be nothing. Keep the weeds down by scraping them off at the surface of the ground, and even though not much be kept on the top of the soil, if the season is favorable a very good crop will result. Weeds are the greatest wasters of soil moisture with which we have to contend; they are veritable pumps through which the sun and wind dry out the soil at a terrific rate.

The second reason for cultivation, and one that would be put first by many men, is to conserve moisture. But do you know that a crust of dry soil, such as is formed on western plains very soon after a rain, is almost as effective against allowing deeper seated moisture to escape as a mulch? We know from observation that when soil becomes very dry water does not pass into it readily. Thus after a light shower we find the line between wet and dry earth very definite and marked. The reason for this is that the dry soil is so dry that it does not attract moisture by capillary attraction.

If after a heavy rain the surface of the soil can be dried out rapidly, the layer of dry soil will act as a check to the escape of soil moisture whether it be loose or hard. So far as holding moisture is concerned the important thing accomplished by cultivating after a rain is to hasten the drying out of a protective surface layer. But to hold moisture the hard dry layer is quite as effective as the soft dry layer. The effectiveness of a covering of the soil to prevent the escape of moisture depends more upon its dryness, and consequent lack of capillary attraction for water, than upon its looseness.

But while a layer of hard dry earth is as effective against evaporation of water from the soil as a layer of soft dry earth, yet it is not as good for the crops, for the reason that it does not permit of adequate soil ventilation. Within the soil, processes of decay are taking place that prepare plant food for the use of plants. This cannot proceed without the admission of air, and air cannot circulate freely enough through a hard crust. Therefore, we cultivate to ventilate the soil, as well as to hasten the drying out of a layer of surface soil to act as a mulch. Cultivation to ventilate the soil is probably as important, or even more so, as to check evaporation.

Now, after we have a dry layer of soil over our fields to prevent the escape of moisture, and having no surface crust to break up, does it do any good to drag any kind of an implement through this mulch to stir it up? In other words if we have as deep a mulch on our cornfields as can be placed there without injuring the corn roots, and weeds are not growing, does that field need stirring until rain comes again to destroy the mulch? Reason indicates that it does not. By re-stirring the already loose earth we cannot bring moisture from below as some suppose; neither can we make the mulch we have any more effective.

At the Nebraska Experiment Station two years ago, plots of corn were cultivated throughout the month of August, though no rain came to injure the mulch that was on the field at the first of the month. It was found that this simple re-stirring of a mulch that already existed did not increase the yield of corn a particle. Hence we may conclude that our judgment should indicate when it is necessary to cultivate. When heavy rains come and repack the surface soil, cultivation hastens the drying out of a protective surface layer of soil and aids in the ventilation of the soil. Under such circumstances we may suppose that cultivation would be profitable even long

TOE'S OLD GOLDEN COFFEE holds its friends—the surest proof of goodness. You'll like its fine aroma and color, its full body. Carefully selected coffee, blended, milled and roasted to make the finest cup quality. More cups to the pound! See that the seal is unbroken. Ask your grocer today. 30c a pound. TONE BROS., Des Moines, Ia. "There are two kinds of coffee, TONE'S and 'others'."

TO CHECK INSECT PESTS

SHOREBIRDS SHOWN TO DEFEAT MOSQUITOES

Locusts, Flies And Grasshoppers Their Diet. Plea For Protection.

New York, July 13.—That mosquitoes, flies and other insect pests are preyed upon by nearly one thousand varieties of American birds, of which the vanishing shorebirds occupy a prominent place, is shown in a special bulletin that is to-day being prepared to be sent throughout the country from the headquarters of the National Association of Audubon Societies in this city. Based upon recent investigations of the government Biological Survey, this circular of warning will present proof that for every shorebird of the thousands that are now allowed to be killed, nature's fight to keep down the spread of disease and crop plague is weakened by the loss of a very active agent. Unless the Killdeer, the Upland Plover, the Sandpiper and other shorebirds are speedily granted adequate protection, hygienic and agricultural conditions all over the continent will undoubtedly suffer, it is declared.

Nine species of the shorebirds that are found in almost every region of this country are known to consume enormous quantities of mosquitoes, for whose extinction many millions of dollars have been spent by the people of several sections. Scientific examination of the stomachs of twenty-eight of the Northern haralarope variety of these birds is reported by the government authorities to have just disclosed the fact that 53 per cent of their diet had consisted of such noxious mosquitoes as the salt marsh breed, which the authorities of this city are now attempting to suppress at great expense. These birds which do so much to check the mosquito plague and its attendant spread of disease through the continent, are shown to be among the species whose extinction is at this time threatened on account of lax laws for their proper protection.

Grasshoppers, locusts and craneflies that destroy the farmers' crops as well as horseflies and mosquitoes that plague his livestock are the natural prey of the disappearing shorebirds, according to the warnings now being sounded by the workers of the Audubon associations. The waning forces of the Killdeer and Upland Plover are also able to destroy the North American fever tick that has an injurious effect upon cattle, it is shown, while some 25 species of shorebirds eat the grasshoppers that ruin acres of corn, cotton and other crops. "Few of our native birds need protection more than these shorebirds, some species of which are found on the farmers' fields, the coast and almost every locality on this continent," said T. Gilbert Pearson, secretary of the National Association of Audubon Societies, 1974 Broadway, today. "In our constant campaign to protect the insect-eating birds that check diseases and crop plague all over the United States, we are at this time urging all Americans to help save these economically valuable shorebirds from the swift destruction that has already driven the Eskimo Curlew to extinction."

Nebraska Train To Boston

The Nebraska Publicity League having in hand the sending of a train load of Nebraska boosters to the convention of the Associated Advertising Clubs of America at Boston, August 1-4, is making whirlwind progress.

In sending in the membership of the Norfolk Commercial Club, Mr. A. W. Hawkins, secretary, writes as follows: "At a meeting of our directors the work of the Nebraska Publicity League was heartily endorsed and a motion prevailed that this club bear the expenses of a member on the special train to Boston."

The Laurel Commercial Club sends in check for \$24 to pay the membership of its members to the Nebraska Publicity League, and names S. T. Wilson on the executive board, who will also go to Boston.

M. N. Barnes, secretary of Beatrice Commercial Club, writes: "The contemplated trip from

Lincoln to Boston by special train will have a wide-spread effect and will tend to put Nebraska on the map. This is one of the greatest things the Nebraska Publicity League can do."

Kearney Commercial Club says: "The chances are that our club will be represented on the contemplated trip east."

Nelson Commercial Club says: "Our club is very favorable impressed with your proposed plan of advertising Nebraska. We want more information regarding the proposed Boston trip."

Lincoln Ad Club has selected twenty delegates, Omaha will send a large delegation, Norfolk will be represented with some live wires. Also Grand Island.

Here's the proposed route: Direct to Chicago, leaving probably from Lincoln on the afternoon of July 26. Detroit next, thence to Buffalo by boat, stopping at Cleveland enroute. From Buffalo to Niagara Falls and Rochester. Take the boat again at Charlotte for the trip down the St. Lawrence through the Thousand Islands and the rapids to Montreal. Take the train from Montreal past Lake Champlain, through Vermont and New Hampshire to Boston.

The convention of the Associated Advertising Clubs of America will be held at Boston from August 1 to 4. The entertainment there by the Pilgrim's Publicity Association will be of a most extraordinary character. Old New England proposes to put on a few stunts that will make us all sit up and take notice.

The Nebraska party will disperse at Boston so that individual members may return by whatever route they prefer. A rate of \$45 will be in effect from Lincoln to Boston and return, going as above outlined and returning via New York City or almost any other route. This rate embraces railroad fare only.

The trip there and return can be made in about two weeks. Tickets are good for sixty days and provide for stopovers at points on the return.

The Nebraska party will be entertained at Detroit, Cleveland, Buffalo, Rochester and other cities by the booster organizations there.

A meeting of the executive committee is called for July 10 at 2 p. m., Tenshaw Hotel, Omaha.

In addition to being a big advertising stunt for Nebraska this trip will provide a delightful vacation tour for its members. Anyone interested in boosting Nebraska is invited to take advantage of the opportunities provided by this trip. Full information may be had by addressing S. R. McKelvie, President, Lincoln, Neb.

The Stay-At-Home

Breathes there a man with soul so dead who never to himself hath said: "I'll go see the game to-day?" If such there be, go mark him well, and call him down, make him yell, hit him with a bale of hay. The man who doesn't take the games and little kids to see the games, is fit for stratagems and spoils. He skips the best there is in life, the solace of this world of strife, the thing that comforts man who toils. He lives no better than a cow, he robs his children and fraus of galdness which is rightly theirs; he sets a bad example too and makes his fellow men feel blue by husbanding his business cares. O, let your blooming business slide! Get on the cars and take a ride, out where the boys are playing ball! Forget a while your measly stocks, and join the rooters, throwing rocks, and shrieking of the umpires gaff! I like those large fat, bouyant men who seem to grow young again, when looking at some rattling game. When life is shorn of all it's fun, what profits boodle by the ton, what good is there in pomp or fame? —Walt Mason.

Old Soldier Tortured.

"For years I suffered unspeakable torture from indigestion, constipation and liver trouble," wrote A. K. Smith, a war veteran at Erie, Pa., "but Dr. King's New Life Pills fixed me all right. They're simply great." Try them for any stomach, liver or kidney trouble. Only 25c at A. G. Wanner.

A New York paper says that the best way to make it rain is to get far away from shelter in a new straw hat without an umbrella. But there's a better way than that. Persuade the boss to give you an afternoon off and plan to go to a ball game.

THE CAUSE OF HIGH LIVING

CATTLEMEN ARE NOT BENEFITED BY HIGH PRICED MEAT.

The Government returns show that, although there has been a marked increase in the price of farm stuff generally, this has not been true of cattle, especially the unfed cattle of the ranges, says Inis H. Weed in an article in "Success Magazine." The consumers cannot lay the high price of meat to the cowman. It's the dealers and the railroad between us and the cowman who bring up the price. Some years, even when beef had been very high in the retail market, the cattleman, after he has subordinated the carrying cost from the sale price of his animals, has been receiving a price below par. Although this rate robbery was enormously unjust, and although the capital represented in the live stock industry is equal to seventy-three percent of the par value of the stocks and bonds issued by our railroads, the transportation corporations were so gigantic, and the individual cattleman so small by comparison, even though he might be a "cattle king," that he couldn't help himself. Every year he had to hold out his hand to the bee.

The Association, however, finally got in its sting. After a five-years' fight they helped get the Interstate Commerce Act so amended in 1908 that the Interstate Commerce Commission has the power to prescribe rates. This resulted in a reduction of from \$5 to \$7 per car on cattle rates, and has saved the cattlemen millions of dollars. Even then the Santa Fe Railroad, and probably other roads operating in the same territory, were able to make, as shown in the Texas Cattle Raisers case, a modest 59.3 per cent profit.

Rates, however, are not the cowman's only trials of transportation. Perhaps he speaks for cars three months ahead, and drives his 2,000 or 3,000 cattle to the freight yards at the time agreed upon only to find an empty track. At once begins the expense of buying fodder for the herd, and the sitting around watching them eat up the profits. When the cars finally arrive, if the number is short, the animals have to be crowded in with the almost certain risk of more loss. Then perhaps the cars crawl over the country at the rate of twelve miles an hour, and this inefficiency costs the cowman still more, in fodder, and in the shrinkage

and deaths of the imprisoned creatures suffering from crowding, from long standing, and from thirst.

To prevent this needless waste, the Association is urging the interstate Commerce Commission to prescribe the speed limit when necessary, to secure reasonable service, and the proper treatment of live-stock.

Solves A Deep Mystery.

"I want to thank you from the bottom of my heart," wrote C. B. Rader, of Lewisburg, W. Va., "for the wonderful double benefit I got from Electric Bitters, in curing me of both a severe case of stomach trouble and of rheumatism, from which I had been an almost helpless sufferer for ten years. It suited my case as though made just for me. For dyspepsia, indigestion, jaundice and to rid the system of kidney poisons that cause rheumatism, Electric Bitters has no equal. Try them. Every bottle is guaranteed to satisfy. Only 50c. at A. G. Wanner."



We Now Have Two Shoe Repairers. H. M. Jenne Shoe Store

FIRE! FIRE! Your House Is On Fire.

Have you a policy of insurance in a good old line company? If not, you should have. I write Fire, Lightning and Tornado in the best of old line companies and at a rate that you cannot afford to be without it. See me at once about your insurance.

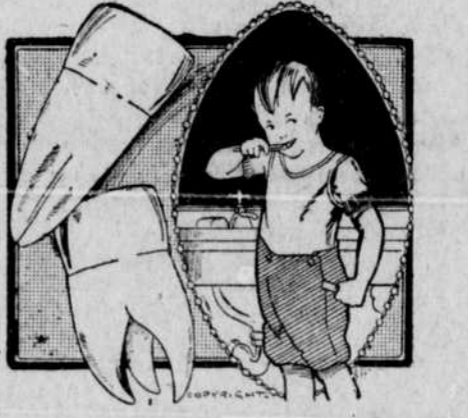
G. H. FALLSTEAD, Insurance agent. Office over Bachstein Hardware store.

"Good Boy" and it's a good example you're setting to others older than yourself.

It's a Kindly Act to Scrub Your Teeth

and we highly commend you, learn a lesson from this boy's "care" and

Look After Your Teeth as each one is as precious as a diamond. For dentistry see us and be sure. Delays are dangerous.



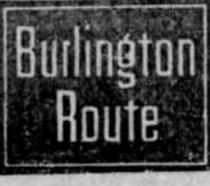
Dr. Yutzzy, Dr. C. E. Heffner, Falls City, Nebraska

Go Somewhere This Summer

TO THE EAST. Take advantage of the low excursion rates available this summer to eastern cities. There are 30-day tourist rates to New York, Atlantic City, Boston, Montreal, Portland, Buffalo and other places slightly higher 60-day tourist rates to many of these cities; there are diverse tours via Old Point Comfort, thence ocean voyage to New York and Boston; this tour recently introduced by the railroads, has become one of the most popular tours of American travel.

TO THE WEST. Daily excursion faers to COLORADO, YELLOWSTONE PARK, BIG HORN MOUNTAIN RESORTS, BLACK HILLS, PACIFIC COAST, als circuit tours that will include all of these attractive localities in one tour.

Call or write for leaflets describing any tour you expect to make.



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