NOTICE OF SPECIAL TAX ELECTION.

Notice is hereby given ot the qualified electors of the County of Red Willow, in the State oi Nebraska, that upon the order of the Board of County Commissioners of the County of Red Willow in the State of Nebraska, an election will be held on the seventh day of November, A. D., 1911, between the hours of 8 o'clock a. m. and 6 o'clock p. m. of said day at the voting places in the several voting precincts of said county, where the general election for the year 1911 shall be holden, for the purpose of voting on the following proposition, which is hereby submitted to the qualified electors of said county, to-wit:

"Shall the County Board of the County of Red Willow in the State of Nebraska, levy a tax for the years 1912, 1913 and 1914, for the purpose of creating a fund, with which to purchase land, erect and furnish buildings thereon suitable for a poor farm and to put into operation and defray the actual expenses of such poor farm, said tax to be levied for the years 1912, 1913 and 1914, and at the rate of one mill on each dollar of the assessed valuation of the taxable property of said county, which tax shall be in addition to the taxes, which said County Board is authorized to levy for county purposes.

Said proposition as submitted on the ballots to be:

For a one mill tax for a poor farm ....[ ]

Against a one mill tax for a poor farm ....[ ]

Submitted and authorized by the Board of County Commissioners of the County of Red Willow, in the State of Nebraska, this 3rd day of October, A. D., 1911.

THE BOARD OF COUNTY COMMISSIONERS OF THE COUNTY OF RED WILLOW, STATE OF NEBRASKA, by F. S. LOFTON, Chairman.

Attest:
Chas. Skalla, County clerk.

ADVERTISEMENT FOR BIDS

Notice is hereby given that the county commissioners of Red Willow county, Nebraska, will receive sealed bids for grading on the through county road, according to the following specifications drawn by the county surveyor.

Contract No. 6.

Near SE corner of SW of 11, 3-28, Red Willow precinct, 300 cubic yards cut from ridge just west of Mat Colling place and used in road both east and west of cut. Cut to be 27 feet wide, 100 feet long and average 3 feet deep. Cut and road to be smooth when completed.

Contract No. 7.

600 cubic yards to be filled in canyon near southwest corner of 11, 3-28, Red Willow precinct; width of fill 20 feet on top, average depth of 3 feet; dirt to be taken from road both east and west of fill. Road and fill to be smooth when completed.

Contract No. 16.

First concrete culvert east of Stillman's canyon. Cut 180 feet long, 24 feet wide, average cut of 2½ feet. Take this earth both east and west of cut to make smooth road. Approximately 400 cubic yards.

Contract No. 17.

Make a fill across pocket of canyon just west of ridge referred to in No. 16, 130 feet long 17 feet high in center, 20 feet wide on top, slope 1½ to 1. Approximately 1600 cubic yards.

All grading, filling and cutting where road will run to be left smooth and crowned, leaving center of road six inches higher than the sides.

Each bidder is to bid on one, or all or as many of the different contracts as he desires, but to bid separately on each.

These bids will be opened by the County Board on October 24, 1911, at 2 o'clock p. m., and must be filed on or before 12 o'clock at noon, central time, of the same day.

The Board reserves the right to demand sufficient bond from any or all of the successful bidders.

The work is to begin as soon a possible after the contracts are let and is to be completed by January 1st, 1912, to the satisfaction of the County Board.

The Board reserves the right to reject any or all bids.

Dated at McCook, this 26th day of September, 1911.

CHAS. SKALLA,
County Clerl

First publication Sept. 28-4ts.

DETASSELING SEED CORN PLANTS

Experiments Show Marked Increase in Yield Over Seed That Had Been Naturally Fertilized--Method is Growing in Favor.

DURING the past thirty years there have been a number of experiments carried on to show the effects of detasseling on the yield of seed corn. The method ordinarily used is to detassel, say every alternate row in the field or small plat. This would absolutely prevent an ear of corn from receiving pollen from its own tassel. Close fertilizing seems to be quite injurious in corn. A number of experiments have been made in which certain seed ears would be fertilized with the pollen from their own tassels. Seed from these ears would be compared with seed from other ears where the pollen came from unrelated tassels. As a general thing, the yield is decreased about one-half when the pollen from its own tassel is used to fertilize its own silk.

In many plants, in-breeding seems to be beneficial, but in corn it is decidedly injurious. Now, in an ordinary corn field, it seems to be inevitable that a certain per cent of the grains on an ear should be fertilized with pollen from its own tassel. Every one of these grains, while it will grow the next year, still will not develop a strong plant. It is probable that from 10 to 15 per cent of the grains on an ear are fertilized from its own pollen and everyone of these grains will produce either a small plant with a nubbin or a barren plant. However, by detasseling every other row and saving the seed only from the detasseled rows, we are then sure that every grain has been cross fertilized.

DETASSELING EVERY OTHER ROW IN A SEED CORN FIELD.

Experiments in which seed only from detasseled plants was used in comparison with seed that had been naturally fertilized has usually shown a marked increase in yield. The increase usually amount to at least 10 per cent and in some cases two or three times this much. It is probable that this method of producing seed corn will become common among growers in time.

FAULTY ROADS DUE TO HOLES AND CULVERTS

By L. W. Chase, Department of Agricultural Engineering.

This summer has been an exceptionally good one to enjoy roads. But in how many parts of the state have the roads been such as one could enjoy them? They have not been muddy and neither have they been exceptionally rutty. There have been two reasons why the roads are not such as they should be, one is the dust and the other is the chuck holes and culverts.

When roads are hard and not muddy, as they are most often found, we are wont to call them good roads, but are they, and is there the pleasure in driving over them there should be. When we come to town and drive over the smooth macadam streets or asphalt pavements we are wont to remark about how smoothly the buggy rides, and of course place the pleasure derived from the ride to the credit of the road material. Earth roads can be made and kept so they are nearly as smooth as macadam roads during dry weather and at the same time be kept much more free from dust by the use of the common road drag. The action of the drag when used at the proper time is to plaster the surface of the road together in the same manner that bricks are made. Then when the hot rays of the sun come out the particles of soil are baked together. This process, known as puddling, makes a hard, firm road surface, and one which does not easily crumble into dust.

A nice smooth roadbed is appreciated far more by those driving in light carriages than by those driving heavy loads. In the former case, the people in the carriage are the ones who are jostled about until their sides are sore, while in the latter case the horses are the ones to be jerked about, and, of course, they can stand it.

Chuck holes and high or low culverts are one of the worst enemies there is to a pleasant ride on otherwise good roads. The horse will just get started into a nice easy trot when it jerks them up almost to a standstill, throwing the occupants of the carriage nearly off the seats, while the carriage passes through a hole in the road or over a high culvert or drops off the edge of a bridge.

It is these two features of the roads in most of our rural communities which has prevented our friends from the town driving out to enjoy the country air these hot summer days.

Possibly you do not believe this, but in a recent trip into the country over an otherwise smooth road the horses were drawn down to a walk seventeen times while the carriage passed through chuck holes or up on to culverts or down off culverts or bridges, and this trip was only a few rods over three miles long. It is not an exceptional case, but one which is far too common.

RATE OF SEEDING WINTER WHEAT

(North Platte Experiment Station.)

At the North Platte experiment station the rate of seeding winter wheat on summer fallowed land has been studied for several years. For the last crop, where all wheat was very poor, the yields were as follows:

5 pecks on 7 plats, av. yield...12.3 bu.
4 pecks on 1 plat, av. yield....14.6 bu.
3 pecks on 1 plat, av. yield....24.7 bu.
2 pecks on 1 plat, av. yield....15.4 bu.

Taking a six-year average, 1906 to 1911, the yields have been as follows:

Five pecks yielded.....41.4 bu.
Four pecks yielded.....41.2 bu.
Three pks yielded (3 yrs only).36.8 bu.
Two pecks yielded.....40.8 bu.

These yields show that where soil and climatic conditions are favorable the thinner seeding stools until it occupies the ground and produces practically as many stalks per acre as where more seed is sown. It has been thought from the experience previous to 1911 that the thinner seeding would not be adapted to soils where moisture was deficient since stooling would not take place under those conditions, but the yields of 1911 show the highest yield for the thinner seeding with a gradual reduction in amount of seed used.

SOIL MOISTURE AND MANAGEMENT

Growing Crops Use a Great Deal of Water.

SUPPLY NOT ALL AVAILABLE.

By P. B. Parker, Department of Agronomy, University of Nebraska.

Loam and silt loam soils such as are common in the corn belt region contain 12 or 14 inches of water in the upper four feet of soil when crops are growing most rapidly. One cubic foot of silt or clay loam soil containing the proper amount of moisture for good growing and tilling conditions contains about two and one-half gallons of water.

The water contained in a soil is not all available for crop growth, in other words crops will wilt when there is considerable water yet in the soil. In the month of August, 1909, when the corn was wilted badly and beginning to dry prematurely, the upper four feet of soil contained 15 or 16 per cent of water, which is equivalent to 7 or 8 inches of rainfall. The unavailable water in a cubic foot of loam soil is equal to about one gallon.

The amount of available water contained in a soil, therefore, is the difference between the total water content and the unavailable water which would amount to about 5 or 6 inches in the case of the loam and silt loam soils mentioned above. This is equivalent to about one and one-half gallons per cubic foot.

Crop Requirements for Soil Moisture.

Growing crops use a great deal of water. According to good authority from 200 to 500 pounds of water are required for every pound of dry matter produced. For instance, if the wheat crop produced two tons of wheat and straw per acre it transpires or evaporates 600 tons of water per acre during the growing season on the basis of 300 pounds of water for every pound of dry matter produced. This amount of water is equivalent to 5 or 6 inches of rainfall.

The available moisture content of loam and silt loam soil in the upper four feet under good growing conditions and the wheat crop requirements for water are therefore very similar in amounts. This does not mean, however, that the wheat crop can reach maturity and produce maximum yields without more water than that contained in the soil when the crop was sown, even if it contained enough water for best growing conditions at that time.

As stated before, the crop grows best when the soil contains the optimum content of moisture and the growth is gradually less as the water content is reduced below this point. In order that the crop may make its best growth at all stages of its growing period, it is necessary that the soil in which its roots are growing be supplied with the optimum moisture content at all times.

There are several factors which tend to maintain this state of equilibrium between the growing plant and the available moisture in the root zone. Some authorities put great stress upon the replenishing supply of moisture which moves up capillarily from below the root zone, thus enabling the plant roots to have a constant supply of water continually at their disposal, for as the soil moisture is reduced in the vicinity of the growing roots the water from below or otherwise surrounding the roots moves toward the dryer soil. From this viewpoint the depth to bottom water is quite an important consideration.

Moisture Content of Soils.

The continual movement of growing plant roots no doubt is a significant factor in considering the water supply for crop purposes, for as the roots and root hairs grow, their absorbing portions are continually reaching out into new regions where the moisture supply has not as yet been greatly reduced and by the time the wheat crop reaches full maturity the upper four feet of soil are pretty well occupied with wheat roots. When the wheat crop is nearing its full growth, but yet growing most actively, its large area of roots permeating the upper four feet of silt loam soil greatly reduce the moisture content in the root zone. The crop requirements are comparatively large at this stage. The moisture content in the upper four feet of soil about the middle of June is ordinarily very near the limit of the available supply. The farmers of Nebraska and surrounding states are fortunate in that more rain falls as a usual thing during the months of June and July than any other two months of the year. The crop yields have been greatly reduced many times by a few days of dry weather, although the growing conditions may have been almost ideal during the rest of the growing period. This critical period may occur at almost any stage.

The farmer plays a very important part in maintaining the proper balance between the crop requirements for water and the available moisture by proper management of the land. This requires close attention and proper and timely application of the principles of soil management.

Public Notice of the Intention of the Mayor and City Council of the City of McCook, Red Willow County, Nebraska, to take up and pay off the Outstanding and Unpaid valid Interest Bearing Bonds of the City in the Aggregate Amount of sixty-five Thousand Dollars, Dated June 15, 1908, designated Water Bonds, By the Issue and Sale or issue and Exchange Therefor of the Refunding Bonds of the City, in Accordance with Chapter Eigh of the Session Laws of Nebraska, 1899.

In conformity with law and a resolution of the mayor and city council of the city of McCook, Red Willow county, Nebraska, duly adopted by the mayor and city council, on the tenth day of October, A. D. 1911, public notice is hereby given that the mayor and city council of said city seek to take up and pay off the valid outstanding and unpaid interest-bearing bonds of the city in the aggregate amount of Sixty-five thousand dollars ($65,000.00), said bonds being numbers one to thirteen inclusive, bearing dat the fifteenth day of June, A. D. 1908, payable at the option of the city after five years and absolutely due and payable on the fifteenth day of June, A. D. 1928, and bearing interest at the rate of six per centum (6%) per annum, payable semi-annually on the fifteenth day of December and the fifteenth day of June in each year at the fiscal agency of the state of Nebraska in the city of New York. The said bonds so sought to be taken up and paid off were issued for the purpose of erecting, constructing and maintaining a system of waterworks for the city of McCook, and were authorized by two-thirds of the legal votes of the city of McCook cast for and against the proposition at an election held for that purpose in the city of McCook on the seventh day of April, A. D. 1908.

And public notice is hereby given that said bonds, issued and outstanding as aforesaid, are sought to be taken up and paid off by means of bonds to be issued by the city of McCook and designated refunding bonds, in the aggregate amount not to exceed Sixty-five thousand dollars ($65,000.00) to consist of Sixty-five (65) bonds in the denomination of one thousand dollars each payable in lawful money of the United States of America, and bearing interest at the rate of six per centum (6%) per annum from and after the first day of September, A. D., 1911, payable semi-annually on the first day of March and the first day of September in each year, and evidenced by coupons attached to said bonds, said bonds to be numbered in regular and consecutive order, commencing with number one, of which ten thousand dollars ($10,000.00) numbered one to ten inclusive shall be absolutely due and payable on the first day of September, A. D. 1916; twenty thousand dollars ($20,000.00), numbered eleven to thirty inclusive, shall be absolutely due and payable on the first day of September, A. D. 1921, and the balance, or thirty-five thousand dollars ($35,000.00) numbered thirty-one to sixty-five inclusive, payable in the order of their number at the pleasure of the City at any time after the first day of September, A. D. 1921, and absolutely due and payable on the first day of September, A. D. 1931; said bonds and the coupons thereto attached to be payable at the banking house of Kountze Brothers in the city of New York, U. S. A., being the designated state agency for the payment of bonds issued by Nebraska municipalities; said bonds to bear date the first day of September, A. D. 1191, executed as the law directs and as shall hereafter be prescribed by ordinance, which ordinance shall provide fo the sale or exchange of said refunding bonds for the bonds to be taken up and paid off, to-wit: said water bonds bearing date the fifteenth day of June, A. D. 1908, in the aggregate amount of sixty-five thousand dollars ($65,000.00), or such portion thereof as by lawful means may be taken up and paid off by the issue and sale or the issue and exchange therefor of the refunding bonds hereby contemplated.

And public notice is hereby given that on or before Saturday the twenty-eighth day of October, A. D. 1911, at the hour of six o'clock p. m. of said day, at the office of the City Clerk, in the city of McCook, any tax-payer of such city may file objections to such proposed action.

If no objection or objections are filed as to the amount of said bonds as stated in thisnotice, and if no objection or objections are filed against the validity of such bonds, then and thereafter the authorities of the city of McCook will issue and sell or issue and exchange, as the case may be, the bonds contemplated by this notice not to exceed the aggregate amount of sixty-five thousand dollars ($65,000.00) and not to bear a greater rate of interest than six per centum (6%) per annum, and thereby take up and pay off the outstanding water bonds described in this notice.

L. C. STOLL, City Clerk.

Dated, McCook, Nebraska, October 10, 1911.

First publication Oct. 12-5ts.

Notice of Administratrix's Sale.

In the District Court of Red Willow County, State of Nebraska.—In the matter of the application of Nina Harris Wade, Administratrix of the estate of James B. Wade, deceased, to sell real estate.

Notice is hereby given that in pursuance of an order of the Honorable R. C. Orr, Judge of the District Court of Red Willow county, Nebraska, made on the 7th day of October, 1911, for the sale of the real estate hereinafter described, situated in Red Willow county, state of Nebraska, to-wit: lot numbered six in block numbered six in the original town, now city, of McCook said real estate will be sold at public vendue to the highest bidder for eash at the front door of the court house in the city of Mc Cook, Red Willow county, Nebraska, on Wednesday, the 8th day of November, 1911, at the hour of one o'clock in the afternoon.

Dated this 7th day of October, 1911.

NINA HARRIS WADE.
Administratrix of the Estate of James B. Wade, deceased.

First publication Oct. 16-6ts.