

The Sioux County Journal.

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L. J. Simmons, Editor.

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THURSDAY, MARCH 14, 1895.

SUGAR BEET CULTURE!

A Plain talk on Preparation of Land.

What I know about farming? Greely used to tell his agricultural readers, who practically knew more than the learned editor of the New York Tribune. The people who raised beets of excellent analysis in Dawes county probably need no advice, and it is only to show them how little I know that I beg leave to suggest that the first immediate thing to be done now is the plowing. This should be done DEEP, very deep, with plow and sub-soil plow especially on new and unbroken land having a hard subsoil. The tiny seed when planted is thrown into the ground, there to shift for itself and grow into the plump beet loaded with sweetness for our benefit. Its task is an immense one. It has to increase its size many thousand fold; it has to convert the carbon of the air into sugar during its growing pains, it has to pump moisture through its capillaries of infinitesimal size and endless numbers. In searching for moisture and food its rootlets have to penetrate the ground in all directions, making the labor expended in these different functions greater, expressed in horse powers, than it takes to light the city of Chadron, even after it will have trebled its population as we expect before long. Being the main beneficiaries of the growth of the beet we ought to aid it and lighten its labor to our best ability. The first step to do this is deep plowing. When the soil is loosened the labor of the tiny rootlets in penetrating the soil is lessened in proportion to the looseness of the soil. Beets have been grown whose tiny roots went down into the bosom of mother earth in search of moisture fifteen and even thirty feet; and moisture is very necessary in the early youth of the beet. Through hard ground untouched by the plow the tiny root can not penetrate; the root will be dwarfed, and if the surface soil is not well pulverized, so as to furnish ample nourishment to the beet, it will starve literally, and contain very little sugar. If the surface soil is reasonably well pulverized, the beet will turn from the hard subsoil and extend its root laterally until it may encroach upon the territory of its sister root and deprive this of its moisture, or suffer the fate from its sister beet. It is the same struggle for life, resulting in the survival of the fittest, the bigger root will assimilate most of the moisture and its little sister will wane and perish, the survivor bearing the marks of its crooked path will be crooked without the symmetry nature loves in its perfection. A symmetrical beet is a thing of beauty; a crooked one is not only no joy forever but not so desirable in the factory. A crooked or irregular shaped beet has more surface in proportion to its weight, and its surface or peel is very poor in sugar. The sugar is not manufactured at the factory, but in the beet; if the latter does not contain it the factory cannot separate it. The beet manufactures the sugar by the action of the chlorophyll cells (green coloring matter) of its leaves upon the carbonic acid of the atmosphere, condensing it as formaldehyde, which the beet stores up as sugar for its growth. The air, and with it the carbonic acid, is absorbed by the soil in proportion as the soil is pulverized. The more the soil is broken up by the plow or otherwise, the greater its absorption of air, carbonic acid and heat. In the laboratory this is shown in many ways. The self-igniting hydrogen lamp consists of a minute piece of platinum sponge, which is finely divided platinum, this, owing to its fine division, has the property of condensing and compressing within its pores so many volumes of hydrogen as to set free, due to such compression, enough heat to ignite the hydrogen gas the moment it is turned on. The platinum without this division has no such power. In common vinegar generators filled with curled beet shavings through which air passes, the oxygen of which is to unite with the alcohol vapors, the air due to the spongy conditions of the beet shavings, is condensed until the temperature rises twenty or more degrees above that of the surrounding temperature. The same condition prevails in the ground. The more broken up it is the more it will act like a sponge, and condense the air and liberate just as it occurs in the Doberreiner hydrogen lamp, or in the vinegar generator, only in a less degree. The heat liberated will protect the tiny seed from occasional frosts. The condensed air will give up freely its carbonic acid, from which the young beet will assimilate the carbon, and grow in size at first, in subsequent later. The spongy earth will absorb and hold the moisture for the use of the beets, as in a vase, and if the ground has been plowed up and loosened

to a depth of eighteen inches the beet will have a fine chance to grow to a good size, symmetrical in shape, strong enough then, if necessary, to penetrate through harder ground. The force saved in not penetrating the hard ground, or in not twisting the fibers out of shape in evading the hard ground beneath, will be utilized in growth and increase of sugar, for in the growth of plants, as in the performance of mechanical work, it is only a question of force expended, and expended properly. The steam that has driven the piston of an engine has parted with its force and cannot expend it again in heating; the steam that has heated a room through a coil has lost its pressure, and will not impart life to an engine. The same in a plant; its vitality, though great, is measured; it will keep up the circulation of its juices through its tiny cells—in the beet 1,500,000 to the cubic inch—all together making only 3 to 5 per cent of the weight of the beet; it will drive the leaves upward and the root downward; it will produce the chemical changes from air and water to sugar juice and fibre besides pectose gum and other intermediate compounds, but when its use is diverted to illegitimate purposes, when it has to be wasted in breaking through hard ground for the plant it has expended itself and is lost to the proper care of the plant and its nourishment. It is the general law of natural economy expressed in the homely saying, "you cannot eat your bread and sell it at the same time." It is the great proof that perpetual motion is impossible; that we cannot get anything for nothing, or out of nothing. For this reason we want to direct the force at our command to the best advantage, not waste it. As in animal economy the food must be finely divided by the teeth before it is proper to burden the stomach with it, so in the vegetable world the food must be offered in the finely divided state, which well plowed land offers.

Whenever the animal stomach is called upon to do the work of the teeth, dyspepsia and other ills soon tell the story of the offense against nature. When we ask the plant to pulverize the ground we misapply its force wastefully. Therefore plow deep, very deep and the work will be well repaid, no matter whether the ground be old or new. Plow deep and the vicissitudes of heat or cold or storms will not affect the beet crop. J. M. Hirsch Chicago, Ill.

Free Pills.

Send your address to H. E. Bucklen & Co., Chicago, and get a free sample box of Dr. King's New Life Pills. A trial will convince you of their merits. These pills are easy in action and are particularly effective in the cure of constipation and sick headache. For malaria and liver troubles they have been proved invaluable. They are guaranteed to be perfectly free from every deleterious substance and to be purely vegetable. They do not weaken by their action, but by giving tone to stomach and bowels greatly invigorate the system. Regular size 25c per box. Sold at Pioneer Pharmacy.

Sheriff's Foreclosure Sale. By virtue of an order of sale issued out of the District Court of Sioux County, Nebraska, upon a judgment and a decree of foreclosure therein in favor of Kate L. Goussard, plaintiff, and against Emma Goussard, defendant, I will on the first day of April, A. D. 1895, at 9 o'clock P. M. in the Township Thirty-one (31) north, Range Thirty-six (36) west of the 4th P. M. in said county, offer for sale and sell, at public sale for cash in hand, the following piece of land, to-wit: A certain piece of real estate situated in said county, to-wit: The northeast quarter of section thirty-three (33) north, Range thirty-six (36) west of the 4th P. M. in said county. Dated at Harrison, Nebraska, February 26, 1895. A. R. DAW, Sheriff.

Notice to Non-Resident Defendant. W. J. Wright & Company, Defendant, will take notice that on February 9, 1895, the Western Security Company, a corporation of Wisconsin, Connecticut, plaintiff herein, filed its petition in the District Court of Sioux County, Nebraska, against said defendant and others, the object and prayer of which are to force one certain mortgage executed by defendant, Emma Goussard and Margaret C. Hunter to the said Western Security Company, the legal owner thereof, upon the east half of section east quarter of section three, northeast quarter of northeast quarter of section five, Township thirty-two, Range thirty-five, in Sioux County, Nebraska, to secure the payment of one certain promissory note, \$600.00 due May 15, 1894, with interest thereon at seven per cent per annum from May 15, 1894, to the maturity of said note, and to compel defendant to pay the same; and that in default thereof said promissory note may be sold to satisfy the amount due thereon and costs. You are required to answer said petition on or before April 15, 1895.

Sheriff's Sale. By virtue of an order of sale directed to me from the Clerk of the District Court of Sioux County, Nebraska, on a judgment obtained in said court on the 1st day of May, 1894, in favor of H. Austin Locke as plaintiff and against Jacob Desper, Anna Desper, and William Biech as defendants for the sum of \$450.00 and interest, and costs taxed at \$1.60 and accruing costs, I have levied upon the following real estate as the property of said defendants to satisfy said order of sale, to-wit: The south-east quarter of section Twenty-one (21) in Township thirty-three North, Range thirty-six West of the 4th P. M. in Sioux County, Nebraska, and will offer the same for sale to the highest bidder for cash in hand on the 23rd day of April, 1895, at the hour of nine o'clock A. M. of said day, at the front door of the court house in Harrison, Nebraska, that being the building in which the last term of the District Court was held, at which time and place due attendance will be given by the undersigned.

Church Services Next Sunday. Preaching service, Sunday morning 10:30; Sunday School 11:30; Epworth League, 8:30. C. E. CONNELL, Pastor.

The Harrison LIVERY BARN, Feed and Sale Stable. GOOD TEAMS, GOOD BUGGIES, GOOD ACCOMMODATIONS. TERMS REASONABLE. GIVE ME A CALL. GEORGE OLINGER, PROPRIETOR.

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Patents. NOTICE TO INVENTORS. There never was a time in the history of our country when the demand for inventions and improvements in the arts and sciences generally was so great as now.

Just From the Press. A very attractive publication has just been issued by the passenger department of the Burlington Route. It bears the title "The Newer Northwest" and describes in a most interesting and readable fashion those portions of northern Wyoming and the Black Hills of South Dakota which are reached by this company's lines.

Look at This List of western cities: Chicago, St. Joseph; Omaha, Lincoln; St. Louis, Denver; Kansas City, Leadwood. It doesn't matter which you intend visiting. The Burlington Route is the best line to all as it is to any one of them.

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Sioux county is the northwest county of Nebraska. It is about thirty miles east and west by about seventy miles north and south and contains OVER 1,300,000 ACRES of land.

OVER 800,000 ACRES of land in Sioux county yet open to homestead entry. It is better land and more desirable located than that for which such rushes are made on the opening of a reservation.

There are about 2,500 people in the county and there is room for thousands more. There is no railroad in the county and for that reason its settlement has been slow for so special effort to get settlers was made, as was done in the early days of the settlement of the eastern part of the state.

Good deeded land can be purchased at reasonable rates with government land adjoining so that a person who wants more than one quarter section can obtain it for less than a little means.

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