GROW SUGAR BEETS

Amount of Water Required to Raise a Maximum Crop.

Depends Entirely Upon the Climatic Conditions, the Time of Planting the Land, and Crop Previously Grown on Soil.

For several years we have been trying to determine the minimum amount of water that would be required to grow a maximum crop of beets. From a thereotical point of view this work appears to be very imline for some time, and also studying the results obtained by the various experiment stations that have carried on similar work, we find that aside from a scientific standpoint the work is of no particular value, says Prof. F. Knorr in Ranch and Range.

The amount of water that a field recondition; the time of plowing the land, and the crop previously grown on that soil.

Even if we should be able to say just how much water is required for a certain yield of beets a farmer cannot measure out the water and then apply this amount to his acreage. All that we can do at the best is to use our own judgment and apply water accordingly

Irrigation water may be applied Farmers that have followed row irrigation are as persistent in their arguments that this is the best method of applying the water as are have conducted on a rather heavy soil have shown no difference so far as same amount of land where we irrigate by the row system.

This past year we came across a concerned. We handled a piece of rather sandy soil, the beets were furrowed and the water run along each row in one case and every other row upon another part of the field. After two days of a rather high wind we found that the beets were badly cut down by the blowing sand. The beets recovered very quickly, we cultivated the field and at once flooded a portion of it in order to wet down the surface. Another wind-storm that came up soon after this irrigation again damaged that portion of the field that was row irrigated but did not affect the flooded part of the field. The water had settled the sand and held it and in this manner saved the plants from being cut.

So, after all the work that has been done to determine just how much water to apply we only know the lack of it drys them out.

All indications are that the beet price than in the past years. This is wheat of good quality the flour is of due to the cold, wet spring that pre- excellent strength, and many of the vailed in Germany throughout the beet seed growing sections. Reports are coming from Germany that fully for one cent less than the Bluestem 80 per cent, of the beets planted for seed have rotted in the ground.

From the fertilizer experiments conducted at Fort Collins several starchy. Perfect kernels are hard, years ago, we find that by the use of horny and flinty. When they become 100 pounds of sulphate of potash and 199 pounds of nitrate of soda the net increased profit per acre was \$19.43, or in other words, the cost of the fertilizer was \$9.12, the total income from the fertilized beets was \$89.45, those without fertilizer \$60.90.

There are upon the markets great number of so-called "complete" fertilizers. We would not advise the use of these to the farmer, but prefer the purchasing of those elements that he desires and mixing them in such proportions as are required by the soil.

So far all of the fertilizer experiments that we have conducted have shown that the present time our soil appears to contain sufficient phosphate and therefore does not require the application of this element; if one wishes to apply phosphate, it is best and more cheaply used as "raw phosphate."

In Europe no beets are grown without the use of commercial fertilizer. The growers there find it profitable to use the various elements that the beets require. If these farmers can grow beets at a profit by using fertilizer there is no reason why we should not be able to do so.

The Soil Mulch.

The soil mulch is for three purposes-to more readily admit the rain when it comes, to admit of a free circulation of the air into the soil and to prevent the loss of moisture by evaporation.

Sometimes the cultivation is not deep enough or sufficiently frequent and a crust forms at the top of the firm soil underneath the mulch. This crust shuts out the air to a degree and it matters little then how perfect may be the supply of moisture at the roots, for the growth will certainly be checked.

Nitrification.

pearance of the plant.

INFECTION IN WELL WATER.

One of the Principal Causes of Human Ailments, Many Causes of Which Overlooked.

In many places out in the semi-arid country water is found only at considerable depths and in these sections people are accustomed to sink deep wells for domestic use, because nature compels them to do so, but in other places it is possible to obtain water in shallow wells. Most persons fail to realize that shallow wells are almost invariably supplied by seepage water from surface washings and no matter how carefully the well may be constructed, its waters are likely to be come polluted with the first heavy portant, but after working along this rainfall. It is a well known fact that impure water is one of the principal causes of human ailments, but many of the causes of water contamination are generally overlooked.

Shallow wells not only receive the sewage from the surface but science has proved that many kinds of plant life will extend their roots 50 feet quires to produce a maximum crop deep to reach water. Since no kind depends entirely upon the climatic of land plants will live if their roots are immersed in water for even comparatively short time, after every heavy rain a shallow well is not only filled with surface leachings, but there is usually a considerable amount of decaying vegetable matter directly in the well. In cities where there is an epidemic the health department immediately investigates the water supply and almost invariably finds the trouble in that direction. The average farmer and resident of rural districts either by flooding or by ditching the on the other hand manifest surprising negligence in this respect.

The usual well is one only deep

enough to furnish a water supply and no thought is given to its source. It those that flood the beets and think is not considered that a sub-stratum they are right. Experiments that we might carry the filth, teeming with germs, of an outbuilding ten rods away directly into the well and the yield is concerned, but we have found drinking of such water is one of the that it requires less water for the principal causes of disease in rural places. Nature has provided an abundant supply of pure, wholesome water, filtered and free from germs, down new feature so far as this irrigation is deep in every part of the world. These great beds can be made readily accessible by tapping them with bore-holes and casing to bed rock to exclude possible pollution from surface leach-When one considers the improvement which has been made in well drilling machinery during the last half century, it is inexcusable for any man to longer shirk his duty to his family and himself by not obtaining the pure water supply that nature so wisely provides.

TURKEY RED IS BEST WHEAT.

Outyields Other Kinds and Seldom Tests Below No. 1-Flour of Excellent Strength.

It is the opinion of experienced wheat growers that the Turkey Red outyields the Jones Fife variety from that to get the best results we must, four to eight bushels to the acre. It as in all other operations, use our is very heavy and seldom tests below best judgment, bearing in mind that No. 1. In milling qualities it stands too much water drowns the plants and next to the Bluestem variety. The bran is thin, and some millers say it produces more flour per bushel than seed next year will be much higher in the Bluestem wheat. When made from mills are now grinding it for the bakers trade. The Turkey Red sold variety during the season of 1906.

> There is quite a tendency in this wheat for the kernels to become yellow they contain less protein and more starch. The cause of this retrogression is not well understood and presents an interesting subject for investigation. For seed it is probably safest to plant wheat containing as few yellow, starchy kernels as possible.

WINTER FORAGE FOR STOCK.

Abundance of Feed Guarantees Best of Results in Production of Cream and Butter.

An abundance of feed, and as cheaply grown feed as possible, is the one thing to which the farmer-stock man should bend every energy.

With the exception of perhaps a few very dry spots, there is not a farm in our territory that cannot be made to provide an abundance of forage for dairy cows, particularly winter forage. Nor is this all. The more forage there is provided and consumed, the greater will the producing capacity of the land so devoted be. It is the one kind of farming that builds up itself and the farm at the same time. Fodder corn and silage, oat hay and millet. rape, mangels, turnips and, where possible, clover and alfalfa, should be grown on the strongest land and fed out on the same; and more forage crops grown where the resulting enrichment goes, until every cow, calf, sheep, hen, horse and hog shall not know what short feed or pasture means the year round. Then the butter and cream will come the year round instead of for a few weeks only; the egg basket will be a constant surprise, and the pigs, caives. iambs and colts will weigh as they never weighed before,

Care of Garden.

The garden will do well manured with barnyard manure applied in the fall and disked into the soil if not That nitrification is a necessity in plowed under deep. Both barnvard the sofi during the crop growing sea- and green manure work well on land son is unquestionably true. If the for any crop and produce astonishing process of nitrification is going on results in the growth of garden truck sufficiently to meet the requirements Green manure will tend to make of the crop this is always evidenced beavy soil light and easier handled by the dark green and healthy ap and will make sandy soil heavier and not so apt to blow with strong winds



HUMORIST IN OLD LAFAYETTE

Amusing Letter Written by Prisoner, Giving Peculiar Condition of Affairs in Fortress.

Fort Lafayette, situated on the little island just off Fort Hamilton in the Narrows and now used as a powder station, was a prison during the civil war. In it were confined many persons arrested for treason by the United States marshal in this city.

Here is what one prisoner wrote in 1863 in a letter that a Brooklyn man. then a boy, picked up in a bottle which was washed ashore on the Dyker meadows just after the war and which he has in an old scrap book:

April 4, 1863.

Hotel de La Fayette. In consequence of many prisoners being exchanged from Fort Lafayette and not mentioned in the papers. and for the benefit of the World, Herald. Sun or any other public and dally journal I send this small notice in this frail but buoyant vessel. I beg to state that we are all right here. Nothing to do and plenty of time to do it in. Beautiful view down here, I don't think, especially at night between the door cracks and window bars. There are some curiosities down here for Barnum. Outside sentinel-"Halt! Who comes bere?" Prisoner-"A friend. Can I have a bucket of water?" Sergeant-"Yes."

Fine living. Bread and pork for breakfast, pork and bread for dinner; what's left for supper. Coffee boiled in hogsheads full every year. Hogsheads never empty. Consequence, plenty of water. No trouble to read your letters. They are all read for you. Also your money and watches are well cared for. See another pris-"How are you?" Sentinel-'Stop that noise." Exit prisoner.

Card playing is understood down here-high, low, jack, whist and loo. Smoking? I don't think. Tobacco is a sight good for sore eyes. We see a piece every new prisoner. Wonder Burke doesn't send these good looking soldiers up to town to parade on the fourth of July. They are all kinds and shapes

They keep a goat down here to eat what the rebels leave. The poor creature has to be helped up. Two cats are in the same fix. There is also an attentive dector down here. One medicine only. If it don't cure you're sorry, for then you have to die. That's all I know about it. Guess that's also a military necessity.

We expect Honest Abe down here in '65, soon after the next election. Hope he'll bring his rail splitting machine. Might be amusing. There is a good deal of fun down here. Very busy for us. Pretty busy for the soldiers. Our clothes are all torn. will mend them as soon as I find thread and needles. Looked for some



Reading Your Letters.

ever since I've been here. You can find some real bloods down here. It you've got money you can get a few extras. Them that ain't got any stick to the old thing.

If any good intentioned person or persons should pick this up please hand to where directed in care of any person but those connected with this prison and if a tobacconist he will oblige by sending a small piece to S. S. Ft. Lafayette. Taps. Out gc lights. Good-by.

The letter was written in pencil and in haste, judging from its tone. Perhaps the writer of it is alive to-day and will recognize it.

Chances for Soldier's Promotion.

Although the enlisted man in the American army has always been bet ter treated in every way than any other soldier in the world, his compensation is very small compared with the wages paid in civil life and the attractiveness of the service was appreciably enhanced by the increase for which the recent amendment of the law has provided. Even more important than this consideration in popularizing the service, however, is the fact that it has been made easier than formerly for the private to rise from the ranks and to become a commissioned officer. This has long been possible, as was shown in the brilliant career of the late Gen. Lawton, but for nerly the obstacles to be overcome were so serious that it could only be accomplished by a mr.n of exceptional abilities and attaiaments.



Graham Crackers at their Best

There are no better Grahams than "Sunshines" —none half so good.

Sunshine Grahams are made of the best whole wheat graham flour, at the "Sunshine" bakeriesthe finest in the world.

The ovens are of white tile and are on the top floor—sunshine and pure air all around them.

Sunshine Grahams

Each package is protected by the triple seal. So you can be sure they are clean-pure and wholesome.

The "Sunshine Seal" on the end is proof of the genuine. Be sure it's there.

You miss the best in Grahams-'til you try "Sunshines.'

At your grocer's in 10c sealed packages.



LOOSE-WILES BISCUIT CO.

LUCKY MAN.



She-Two men whom I refused to marry, sir, have become millionaires! He-Is that the reason why?

Valuable Knowledge Spreading. Every day sees hundreds of new reruits in the war against tuberculosis, and every day brings new methods for

the fighting of the plague. The National association predicts that if the present degree of interest is maintained, within five years everybody in the United States will have been informed on the way to prevent and infectious nature of the disease. Two things in particular are needed, and for these the National association is working in every way. They are, a more complete registration of tuberculosis cases, and the further isolation of dangerous advanced cases of

consumption. A Sunday Sermon.

One must accept life as it is. It gives us great happiness if we are wise enough to see it, and it balances the scales by sending great sorrows, too.

But that is life. If you would make the world brighter try to forget your burts, dry your eyes and turn to help those who need the pressure of a friendly hand, the

encouragement of a smiling look. Sorrows and troubles of all kinds should teach one a great lesson-the lesson of universal kindness.-New York Times.

ON FOOD The Right Foundation of Health.

Proper food is the foundation of health. People can eat improper food for a time until there is a sudden collapse of the digestive organs, then all kinds of trouble follows.

The proper way out of the difficulty is to shift to the pure, scientific food, Grape-Nuts, for it rebuilds from the foundation up. A New Hampshire woman says:

"Last summer I was suddenly taken with indigestion and severe stomach trouble and could not eat food without great pain, my stomach was so sore I could hardly move about. This kept up until I was so miserable life was not worth living.

"Then a friend finally, after much argument, induced me to quit my former diet and try Grape-Nuts. "Although I had but little faith I

commenced to use it, and great was my surprise to find that I could eat it without the usual pain and distress in my stomach.

"So I kept on using Grape-Nuts and soon a marked improvement was shown, for my stomach was performing its regular work in a normal way without pain or distress.

"Very soon the yellow coating disappeared from my tongue, the dull, heavy feeling in my head disappeared, and my mind felt light and clear; the languid, tired feeling left, and altogether I felt as if I had been rebuilt. Strength and weight came back rapidly and I went back to my work with renewed ambition.

"To-day I am a new woman in mind as well as body, and I owe it all to this natural food, Grape-Nuts." "There's a Reason."

Look in pkgs, for the famous little book, "The Road to Wellville."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of haman interest.

Like an Earthquake.

Former High Sheriff Chesterfield C. Middlebrooks, whose bungalow at Highland lake stands partly over the lake on stone and cement foundations, was awakened at four o'clock the other morning by loud noises which he says shook his bungalow like an earth tremor.

He says that after the household had been shaken out of a sound sleep. he, not waiting to dress, went outside to ascertain the cause of the noise. He found, he says, that a monster frog had its bed directly under the bungalow. The frog weighed fully six pounds, he says, and every time it croaked the bungalow cracked and shook.

Mr. Middlebrooks bought an anchor, strong rope and enough red flannel to bait 190 hooks, and will try to save his property by capturing the bull-frog.-Winsted (Conn.) dispatch to New York World.

A Trying Time. Judge - Why did you strike this

man? Prisoner - What would you do, judge, if you kept a grocery store cure tuberculosis, and concerning the and a man came in and asked if he could take a moving picture of your cheese?--Harper's Weekly.

> Examine carefully every bottle CASTORIA a safe and sure remedy for infants and children, and see that it Bears the Signature of Chot Williams.
> In Use For Over 30 Years.

The Kind You Have Always Bought. Reprehensible to Allow It. Husband (reading from his paper) -Here, they say, is a comet coming towards the earth, traveling at the

rate of a million miles a minute. Wife (awaking from a deze)-Why don't they enforce the speed laws

PERRY DAVIS' PAINKILLER is the pest, safest and surest remedy for cramps, colic and diarrhen. As a liminent, for wounds and appains it is unequalled. In , the and the

hetter?

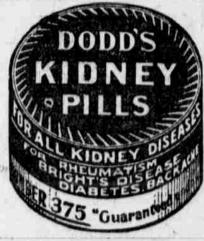
Occasionally women try to reform a man by roasting him.

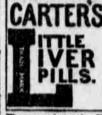
Mrs. Winslow's Southing Syrup.
For children teething, softens the guras, reduces in-dammation, allays pain, cures wind colle. 20c a bottle. A malicious truth may do more

Lewis' Single Binder straight 5c-Many smokers prefer them to 10c cigars.

harm than an innocent lie.

An easy beginning doesn't always justify the finish.





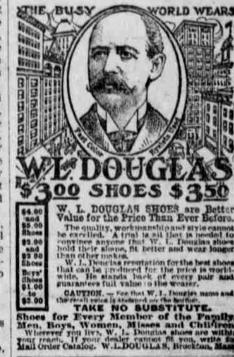
Positively cured by these Little Pills. They also relieve Distreasfrom Dyspepsia, in-digestion and Too Hearty Rating. A perfect rem-

sea, Drowsiness, Bad ed Tongue, Pain in the Side, TORPID LIVER. They regulate the Bowels. Purely Vegetable.

SMALL PILL. SMALL DOSE. SMALL PRICE.



Genuine Must Bear Fac-Simile Signature W. N. U., OMAHA, NO. 33-1909.





DR. E. R. TARRY 126 Bee Building, Omaha, Nebrask

constipation and during this time I had to take an injection of warm water once every 24 hours before I could have an action on my bowels. Happily I tried Cascarets, and today I am a well man. During the nine years before I uses Cascarets I suffered untold misery with internapiles. Thanks to you. I am free from all that this morning. You can use this in behalf of suffering humanity. B. F. Finber, Roznoke, Ill.

Pleasant, Palatable, Potent, Taste Good. De Good. Never Sicken, Weaken or Gripe. 16c, 25c, 50c. Never sold in bulk. The gen-uine tablet stamped CCC. Guaranteed to cure or your money back.

NONE BETTER The next bill of shingles you buy look to see what mark is on them, particularly what the name of the manufacturer is. If you see DAY LUMBER COMPANY and this mark you can be sure of the



REFUSE SUBSTITUTES. DEFIANCE STARCH CALCION CONTROLLED