

Agricultural Experimentation in Box Butte County

PROF. E. W. HUNT, DIRECTOR

Present Outlook for the Potato Crop

As far as general agricultural conditions go, the outlook for the crop is somewhat better than usual at this time of the year. The fields as a rule are in a better condition, are freer from weeds, with soil in a better state of cultivation. There are however some notable exceptions to this general statement. It would seem as though after the farmer had gone to the labor and expense of planting a field, he would see that his interests would be better served by carefully tending his crop than by letting the ground become hard and baked and permitting rank weeds to choke the growing crop. Such farming as this hurts not only the negligent farmer, but every other farmer as well, for it injures the reputation of the country for agricultural production, and this injures the apparent market value of the land.

Most parts of the county have now had adequate rainfall. Some of the growers of corn and potatoes have followed the rain in the fields by cultivation in order to save the moisture that had fallen. But such are in the minority. Most of the fields are hard and dry on the surface, moisture is being rapidly lost by evaporation, and the weeds are growing at the expense of the crop. Harvest time will show that this neglect has been expensive. I have heard it argued by some farmers that it injures corn to cultivate it after the ears have set, and that it will not do to touch the potatoes after they are in bloom. Of course any one can kill a crop with a cultivator if he wants to do so. It all depends on how it is done. Proper cultivation is a benefit to any crop at any time. I have known cultivation of corn, even after the silks on the ears had died to make differences in the yield of from seven to fifteen bushels to the acre. Proper cultivation will give the same results with potatoes.

I have been inexpressibly surprised at the capacity of this soil to hold moisture. I visited one field which had not had a drop of rain since early in July and expected to find it dry as a bone. On digging a hill of potatoes to examine it for disease, I found the ground in which the tubers rested so moist that it would ball in the hand. Proper treatment of such soil as this would give immunity from drought. Nature has done her part by this country, it remains only for the farmer to do his part.

As to potato diseases, the outlook is not so favorable. It is well known that we have potato disease here, and we might as well look the facts squarely in the face. These words are written exclusively for the benefit of potato growers and it is due to them to know the facts as they are. Nothing will be gained in the end by either withholding the truth, or by attempting to pervert it. Every attempt is being put forth to get the mastery of these diseases. This mastery can be gained, if at all, only with the intelligent co-operation of the growers. They cannot intelligently cooperate unless they are made acquainted with conditions exactly as they exist.

EARLY BLIGHT has already made its appearance in most fields. If the weather should continue favorable to the development of this fungus, it may materially lessen the amount of production. At Mr. Loran's farm, north of town, a thorough trial of spraying with Bordeaux mixture to control this disease is being made. Mr. Newberry kindly furnished a four row Aspirin Wall Sprayer for this purpose, and the field is being sprayed every two weeks, leaving certain rows unsprayed to show the difference. At the end of the season we shall be able to give results, and an opinion as to the effectiveness of spraying to control blight.

SCAB. This disease is a poser for every one, scientists and laymen alike. It used to be thought that this disease was caused by a fungus, and there has been a marked difference of opinion whether this fungus lived on the potato only, or in the soil. But the fact is that the real cause of this disfiguring disease has never been discovered. Scientists have assumed that it is a fungus, but if so, this fungus has never been isolated. German and French specialists who are competent and have given much time to investigation are inclined to the belief that the disease is of bacterial origin. But the bacterium has not yet been isolated and identified. Generally it is regarded as necessary to know the cause of a disease before attempting to prescribe a remedy. But scab, it was said, was the one exception to the rule. While the specific cause was not known a remedy was known that was sure to prevent at least 90 per cent of scab. And it certainly does prevent 90 per cent of it—in some soils. In Wisconsin, in New York, in Connecticut, on the writer's own farm in the glacial soils of the eastern part of the state, the treatment prescribed by the government is certainly effective. I am amazed at its comparative failure in Box Butte county. At this writing I cannot see much difference, as far as scab is concerned, between the product of treated and untreated seed. Some fields in which treated seed was planted are very scabby,

and others are comparatively clean. The same is true of fields where untreated seed was used. I do not know what to say about it. It is up to the specialists in plant diseases. I shall not be surprised ultimately to learn that it is an ulcer caused by some unknown constituent of the soil.

ORDINARY DRY ROT, OR SIDE ROT. This is the disease that till this time has done the most damage to the reputation of potatoes grown in this section of the state and to the tubers themselves. It is a disease that generally develops slowly after the tubers are stored. I know buyers in Lincoln that laid in potatoes apparently sound by the carload and during the winter lost as high as 60 per cent by this disease. The reputation of Northwestern potatoes has been seriously injured by this disease, and if we are to regain the ground we have lost we must control it, and abolish it. I am glad to say that we are now in a position almost, if not absolutely, to control it. It is a fungus disease, and the fungus has been isolated, cultures made, inoculations made with the pure cultures, and the identical disease produced by the inoculations. This establishes the identity of the spore that causes the disease. For all this careful work potato growers are indebted to Miss Pool who now has charge of the laboratory in the city hall, under the direction of Dr. Wilcox. Not all of the modes of activity of this fungus have been worked out, but enough has been proved to warrant the statement that practical, if not absolute, immunity from its ravages may be secured if potato growers will faithfully follow the following directions:—

1. Thoroughly disinfect all cellars and places of storage before storing the crop.
2. Store only unwounded, unbruised, mature tubers. Wounded, bruised tubers, and those with the baby skins on, which may easily be rubbed off, are especially liable to infection.
3. Handle the crop at harvest time in crates or sacks, and handle carefully to avoid wounding. Do not use screens, scoops or chutes, for many tubers will be injured by them.
4. Stack the crates or sacks in the cellar so that air may freely circulate between them.
5. As soon as the crop is in storage thoroughly disinfect again.
6. At intervals during the period of storage, sprinkle the cellar with water and leave a vessel of water continually standing there. It has been learned that dampness acts as a check on the disease.

STEM-END DISEASE. This is the disease that gives me the greatest apprehension because of its effect on the market reputation of the potatoes grown in northwestern Nebraska. It is not peculiar to Box Butte county. I have found it, in a greater or less degree of prevalence, in all parts of this section of the state except in the sandhills. I am told that it is not to be found there, but I have not had time to investigate the truth of the report. The danger to the market reputation of potatoes lies in the fact that it shows no outward sign of its presence until the disease has passed to its last stages. A buyer buys an apparently sound potato, which is nevertheless diseased internally. It seems to develop on storage. Those who have bought such will be careful in their future buying.

This disease is originally a disease of the potato stalk. The tubers become infected from the stem to which the disease sometimes passes from the stalk. Not all diseased stalks produce diseased tubers, because the disease does not always pass to the stem. Sometimes the vine dies before it reaches the stem. If any one will carefully split a diseased stem right down through the tuber, he will see how the disease spreads from the stem, and this is why it is called a stem-end disease, though as it progresses it may involve the whole tuber.

The cause of this disease has not yet been definitely determined. In the cultures that have been developed both bacteria and fungi appear but the specific cause has not been isolated. Careful work is progressing on all samples brought in, and it is hoped that by harvest time some definite information may be forthcoming with reference to it.

RHIZOCTONIA, OR ROSETTE, OF LITTLE POTATOES. It cannot be said that this disease is prevalent here, and still it has made its appearance in several fields here, and is more common north and east of here. But it is a disease to be dreaded and should have careful watching. In certain sections of New York, Ohio and Colorado, it has completely wiped out the potato industry. It is produced by the Rhizoctonia fungus and this fungus infects the soil, and is very difficult to eradicate. It produces a cluster of little, unmarketable potatoes just below the surface of the ground, and bears little tubers above ground where the stem branches. The peculiar flaments of this fungus have been isolated and identified at the laboratory, and now it is up to the potato growers to prevent the spread

of the disease. They should carefully inspect their fields, and carefully dig up and burn all infected plants.

I do not believe these diseases are indigenous to this soil. If they are, the end of the potato industry here is not far off. If they are not indigenous here, then they must have been brought here at some time in infected seed. The only safe method for the planter to pursue is to plant only uninfected seed in uninfected soil. To be sure that his seed is actually uninfected, none should be planted till it has been inspected by a competent expert and pronounced free from infection. Until rigid precautionary measures are universally adopted, it is idle to hope to be freed from disease.

With the Funny Men

"Is she wearing black for her last husband?" "No, for her next. She looks stunning in it."—New York Tribune.

She (to future son-in-law)—I may tell you that, though my daughter is well educated, she cannot cook. He—That doesn't matter much, so long as she does not try.—Philadelphia Inquirer.

"You look so pale and thin. What's got you?" "Work, from morning to night and only a one-hour rest." "How long have you been at it?" "I begin tomorrow."—Success.

"I'd like to get a job on a newspaper." "Had any experience as a journalist?" "None." "Then what could you do on a newspaper?" "Seems to me that I could dish you out excellent advice of some kind."—Louisville Courier-Journal.

Mrs. Naggs—John, have you read this magazine article entitled, "How To Be Happy, Though Married?" Naggs—Of course not. I know how without reading it. Mrs. Naggs—Well how? Naggs—Get a divorce.—Chicago Daily News.

The kind lady had just handed the hungry hobo a sandwich and a hunk of pie. "Poor man!" she said, sympathetically. "Are you married?" "No'm," answered the h.h. "Got dis hunted look from bein' chased from place to place by der perlice."—Chicago Daily News.

Ten Years Hence

Chug-chug!
Br-r-r! br-r-r!
Honk-honk!
Gilligilling-gilligill!

The pedestrian paused at the intersection of two busy cross streets. He looked about. An automobile was rushing at him from one direction, a motorcycle from another, an auto truck was coming from behind and a taxicab was speeding approaching.

Zip-zip! Zing-zing!
He looked up, and saw directly above him a runaway airship in rapid descent. There was one chance. He was standing upon a manhole cover. Quickly seizing it he lifted the lid and jumped into the hole just in time to be run over by a subway train.—Boston Courier.

KING EDWARD'S SUMMER DIET.

Horace Fletcher, the food scientist and dietary reformer, brings from Europe the news that King Edward of England has adopted his ideas on eating as a means of combating the summer heat.

"It is wonderful," he said, "the change which has occurred in Europe, and especially in England, in the past six or seven years regarding summer diet."

"I found that everybody is dieting today. King Edward is the strictest of them all."

"His majesty today eats only the simplest of food and just enough of that for health. He abstains largely from fatty meats and starchy foods and holds to a diet chiefly of vegetable foods, which do not heat the blood."

When asked what his meals cost in summer Mr. Fletcher consulted his expense book and stated that HIS FOOD FOR THE PAST FIVE DAYS HAD COST HIM \$3.08. It consisted of twenty-six quarts of milk, \$2.08, and twenty boxes of crackers, \$1. This expenditure, he stated, provides food for two grown persons and two meals for five hungry children. King Edward sometimes follows this diet, he says. According to Fletcher, THE IDEAL FOOD FOR THE HOT WEATHER IS MILK AND CRACKERS, and he declared further that a healthy laboring man could supply himself with plenty of good, nourishing food for 11 cents a day.

SEIZE GOVERNMENT FLOUR

Deputy Marshal Nabs 300 Sacks at Fort Des Moines.

Des Moines, Aug. 20.—Deputy United States Marshal Frank Niehal, armed with a warrant sworn out by United States Attorney Temple at the instigation of Food Inspector Artemus Brown, seized a carload of bleached flour at Fort Des Moines.

The shipment contained 30,000 pounds, the flour being contained in 300 sacks, weighing 100 pounds each. It is the output of the Updike Milling company of Omaha, of the same brand of which shipments were seized at the girl's reformatory at Mitchellville and at Muscatine. As rapidly as the Updike Milling company makes up its carload lots of this bleached product which the government is attempting to cull out of the market, the food inspector gets after the stuff and stops its delivery.

Mills all over the country which prepare their flour in the same fashion are being given the same dose. Whether bleaching flour by the drug process is a violation of the national pure food law will be tested at the next term of court here.

CHARTER CITY RAISES POINT

Davenport Seeks to Escape Operation of Moon Law.

Davenport, Ia., Aug. 21.—The point that the Moon law does not apply to special charter cities in Iowa was raised in the district court when Attorneys Fjelle & Pickle of Davenport filed a brief on behalf of Ernest Wenzel, a Davenport saloon keeper, who is being prosecuted by the Civic Federation. The attorneys call attention of the court to the fact that the Moon law is not by title or otherwise an amendment of the so called Iowa amendment law, but is a law by itself, and that no provision was made by the legislature for its application to Iowa special charter cities, Davenport, Dubuque, Glenwood, Keokuk, Muscatine and Wapello.

If the courts sustain the contest the Moon law regulating Iowa's saloons will not apply in those cities.

MANY ENORMOUS LAWSUITS

Aggregating Claims for More Than a Million Dollars.

Council Bluffs, Ia., Aug. 23.—Suits for damages aggregating nearly \$1,000,000 have been filed in the district court here for the fall term, a record that is unprecedented. The race begun weeks ago was kept up to the last moment, when two personal injury damage suits for an aggregate of \$75,000 were filed.

Mrs. Jones, whose husband was recently killed while at work for the Illinois Central railroad, began suit for \$25,000 against the railroad company. Joseph Milligan, who appears as plaintiff in a \$50,000 damage case, wants the Union Pacific Railroad company to pay him that sum. Milligan was injured by falling from a pole in the machine shops. He is an electrical worker.

FIVE HURT IN AUTO WRECK

Car Pitches Off a Bridge, Hurling Occupants Out.

Marshalltown, Ia., Aug. 23.—Five men were injured, two seriously, in an automobile accident near St. Anthony, when a car driven by Lewis La Plant pitched off a bridge. The occupants were hurled thirty feet, landing on the opposite side of a creek bank.

The seriously injured are: David Blackburn, farmer; Harry Buck, barber.

The party was on its way home from State Center, where its members had attended a funeral. The car was badly wrecked.

HYDROPHOBIA FROM SNAKE

Dog Bitten by Reptile Bites Man in Turn, Causing Rabies.

Dubuque, Ia., Aug. 20.—Ed Christ, a Waukon operator, passed through Dubuque after taking treatment at the Pasteur institute, Chicago, for hydrophobia. He was bitten by a dog two weeks ago. An examination of the dog was made and as a result it developed that the dog had been bitten by a rattlesnake and the poison communicated to Christ in this way. Chicago medical authorities declare that the case is the most remarkable on record.

TWO IOWANS ARE KILLED

Their Automobile Was Struck by a Train at Coin.

Coin, Ia., Aug. 23.—Louis Wier and Glen Hutchison, prominent farmers residing near this place, were instantly killed when an automobile in which they were riding was struck by a Wabash passenger train. The accident occurred at what is known as Dead Man's crossing, where the Wabash and Burlington roads cross each other. The automobile was thrown 200 feet.

Red Oak Chautauqua Ends.

Red Oak, Ia., Aug. 20.—The fifth annual assembly of the Red Oak Chautauqua association closed after a successful nine days' session. The hot weather of the fore part of the assembly held down the attendance, but the blily held down the attendance.

Keokuk Woman Kills Self.

Keokuk, Ia., Aug. 21.—Mrs. Anna Bresnahan Croak, aged thirty-three, committed suicide by taking morphine. She had been leading a life of dissipation. Her husband, whom she recently married, died Sunday.

Pleasantville Mills Burned.

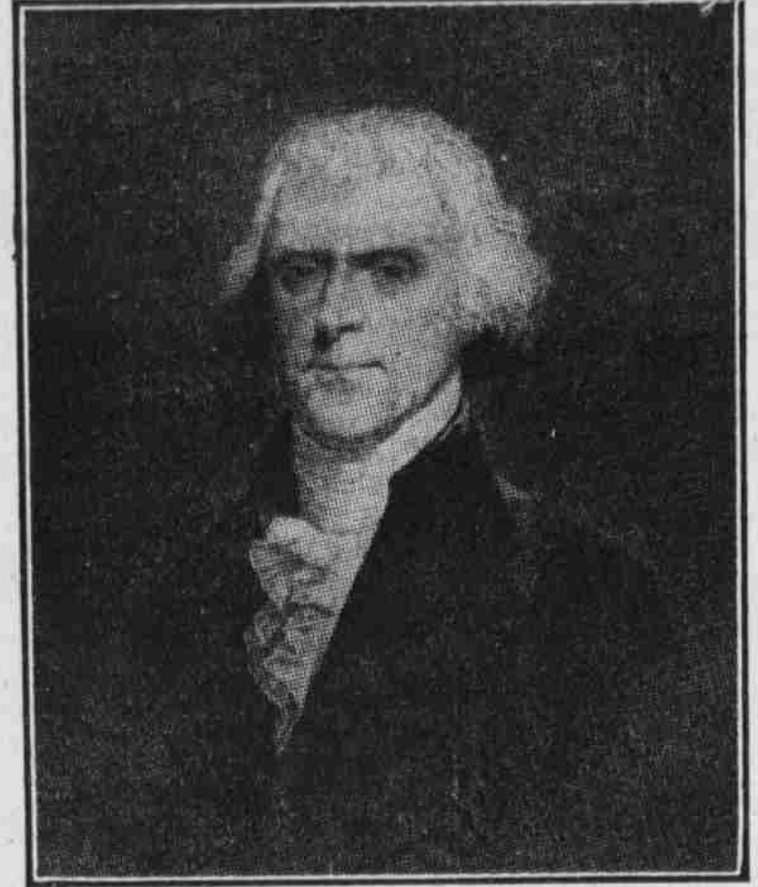
Pleasantville, Ia., Aug. 20.—The mammoth Pleasantville roller mill burned to the ground, entailing a loss of \$15,000, partially covered by insurance.

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FRED J. KERN,
Mayor of the City of Belleville, Ill.

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