The Man Who Has Given Much Time to the Irrigation Question-

ARTIFICIAL WATER IS NECESSARY.

Mr. Fort Thinks Sixty Per Cent of Nebraska Lands Can Be Irrigated if All Means Possible Are Utilized.

Most Valuable Information Given

The question of irrigation in Nebraska at the present time has become one of the leading topics of discussion among our people. Our state must remain almost solely an agricultural region. This will always be the source from which the support of the people will be obtained. In the arid portions of the world irrigation is an imperative necessity, for a failure of the water in the brooks or rivers means to the inhabitants of that section death by starvation or forced migration. Where intelligent care is exercised in retaining the sources from which the water supply is derived and maintaining the conditions favorable to perpetuating the same, the conditions of the people are generally in advance of that of their neighbors in the humid or semi-arid por, tions of the earth. Historical records show us that civilization, although sometimes crude and barbaric, first saw light in that portion of the earth where irrigation was practiced. Our state would have control of the question of irrigation. We are prevented by constitutional limitation to a certain number of state officers, and it will therefore be imposs

ible to create the office of state engineer similar to the one now in existence in Wyoming, California, Colorado and other states of western America. Our coming legislature should also make a liberal appropriation for the two State Irrigation Experiment Stations of Ogalal-la and Culbertson, Nebraska, and, if it was deemed practical by the legislature, should move the Ogalalla station to some point where water for irrigation purposes will always be available. These experiment stations should be instructed to issue quarterly pamphlets on the most practical method of securing, handling and applying water for irrigation purposes. The question of for-estry and the promotion of the growth of timber in Nebraska, that the influence effected by such bodies of timber may create a beneficial result, is one that is clearly allied to the question of irrigation. We do not believe that our state can do too much on practical and well established lines in promoting the cause of forestry. The question of the amount of land that can be irrigated in Nebraska, is a question difficult to answer, but were I to make comparison of the amount of land now irrigated in Colorado, that twenty-five same quantity of land in its relation of Nebraska water supply, allowing for Nebraska's excess of rainfall over that of Colorado, it would be safe to assert that fully sixty per cent of the surface of our state could be irrigated, but this allows for all methods of irrigation, the canal, the pumping system of various kinds, sub-irrigation, and all the dfferent means end ways by which water can be secured, handled and applied to cultivated lands This also would include the application of water to lands that will be cultivated in that good time coming when Nebraska's population will be more than treble that of the present. Of the amount that can be easily and cheaply irrigated within the next twenty years, it can be safely estimated as ten million acres, a little over one-fifth the area of the state. Of that amount fully five million acres will be irrigated within the next ten years. This means to our state a sure annual yield of a heavy crop year after year, regardless of drouths or rainfall. Granting that the lands of our state are generally capable of being irrigated, the question arises, "What are our available water supplies?" When we take into consideration that the Sappa, Beaver, Frenchman and Republican rivers all head in other states, that the North and South Platte rivers, Lodge Pole creek and Niobrara river, all have their rise in, and drain a territory outside of our own state. We will see by the estimates that have been made of the drainage area of North and South Platte rivers draining about forty-five million acres of territory in Wyoming and Colorado. We now add to this the drainage area of the smaller rivers and creeks that have their rise in Kansas, Colorado and Wyoming, show-

of a territory much greater in extent than the forty-nine millions, five hundred thousand acres of her surface. We now also allow that with our great humidity in the great majority of years that only a small amount of water will be required to insure a crop. Again al lowing that our annual rainfall being far greater and heavier than that received by the totally arid lands, we have here some strongly advantageous conditions in our favor. In discussing the question of irrigation we must allow for the rainfall that takes place east or west of certain lines. The late U.S. report on the climate of Nebraska and its rainfall place all that portion of our state lying west of the 97 meridan in the arid and semiarid portion of America.

ing that Nebraska receives the drainage

There is and has been a great deal of discussion in regard to the underflow of water. We will advance the proposition that there is no underflow, not as the term is generally understood and accepted. The underflow, beneath the surface of Nebraska lands is the sheet water of the earth working its way to the lower levels at the rate of from two to three miles per year. The underflow is the natural drainage of the lands of our state. The question of artesian wells in one that in connection with artesian wells has been generally discussed. There is some hope for northeast Nebraska securing some good flowing wells, but how many and of what character it is impos-

In lifting the water the question of fric-

tion or suction cuts quite an important figure for irrigation purposes. Drive points are not to be recommended. All the power should be applied to the lift possible, and as little as possible to overcome friction. Where water is not lifted over twenty-five feet, the cost will not be very great in proportion to the benefits derived. Ten or twenty acres can be easily irrigated by a pumping appliance. But the cost must be steadily increased in proportion to the depth of the well, or banks of creeks or streams. A power that will when attached to a pump readily lift sufficient water to irrigate five acres, when lifting from a depth of 46 to 55 feet, the same power would only lift enough to irrigate from two to three acres, pumping from a depth of 100 feet and only to one and a half acres 200 feet.

If the farmer will start in a small way and commence irrigating from five to ten acres, he will gradually learn how to apply water, but if he knows nothing about irrigating and owns an eighty or one hundred and sixty acre water right that he is anxious to use on his land, he will show wisdom if he secures the services of a competent engineer, who will run out the lines of his laterals and show him where the water can be conveyed from his fields. Having seen that his laterals have been properly constructed, he will send to Colorado or Utah and secure the services of a practical irrigator to edu-cate him in the art of applying water to the crops. If this is not done a great many failures will ensue, and many farmers will assert that irrigation is not

practical and is a failure. Irrigation as a means of securing every year a sufficient food supply from the soil of Nebraska, by her farmers has now become imperative. But this does not require the irrigation of 160 or 320 acres of land by the farmer. For with three, five or even ten acres of land irrigated and well and intensively cultivated. a sufficient food supply can be ob-tained to prevent suffering or total loss, and it is safe to say that the few acres well tilled and cultivated will be the successful irrigated farm.

We cannot afford to risk the repetition of such years as 1893 and 1894, nor the be greatly benefited by the creation of year 1890. Everyfarmer must be taught an irrigation commission that would that he should irrigate an orchard and from one to ten acres, or be ready to irrigate that amount of land should dry and drouthy years ensue. Our rainfall is not increasing. This we know to a certainty, as we have the records of both our state and the national weather observations to corroborate this assertion. In connection with the question how to prevent losses by drouth we have heard advanced the question of subsoiling. This will do an immense amount of good and will tend to make the land a natural reservoir, instead of the water falling on our plowed soils, then sinking down to the depth of six inches and then the surplus that cannot find a lodging place. running off into streams and back to the Gulf from whence it came. It will soak down and be held in reserve for future use at a depth of 12 to 24 inches, beneath

the surface. It is a question as to whether irrigation canals in Nebraska will ever become a profitable source of income for the capitalistor investor. With our fair to heavy rainfalls, with our semi-humid climate, we believe that there is more risk attached to this form of investment than will justify us in recommending capitalists to build or construct canals in the semi-arld portions of the state. Wherever practical, the canals should be constructed, owned and managed by the farmers themselves. This places land and water under direct control of the farmers, making land and water inseparable. It is a question how far the cause possible to irrigate, and compare the sociation believes in the farmers mutual plan of canal construction.

The president of this association commenced the work of agitation on this question in July, 1893, at North Platte, and has steadily continued at work writing articles on this subject, lecturing, organizing irrigating associations, promoting canal companies, working for legislation and attending conventions for nearly a year and a half. He has organized over seventy-five local associations and traveled in working for this object thirty thousand miles. He has done this without pay or compensation of any kind whatever, having been compelled to be his own secretary and treasurer as well as banker for the state asso-

W. F. Wright, State Lecturer. BETHANY, Neb., Dec. 26, 1894.

EDITOR WEALTH MAKERS:

Please notice in your paper this week that at the state meeting of the Alliance I was elected as state lecturer and delegate to the meeting of the Supreme Council of the N. F. I. U. to be held at Raleigh, North Carolina. As the state lecturer of the Alliance I desire correspoadence with localities for the purpose of reorganizing the work in the state. I will make arrangements for active work as fast as desired. Co-operative work in connection with the check system of exchange will be explained where there is reasonable prospects of putting the same in operation. The check system, if properly pushed, will reorganize nearly every Alliance in the state.

Address me box 15, Bethany, Neb. W. F. WRIGHT, State organizer and lecturer.

A Blacksmith Suicides. Joseph Valek, a Bohemian blackmith residing at Valentine, and an old time resident of the town, committed suicide at about 11 o'clock Saturday forenoon, blowing his brains out with a horse pistol. He did the deed in a small bedroom in the rear of his blacksmith shop, and when found was sitting on the floor in an upright position, his back leaning against the side of the bed. The weapon lay across his lap. His wife and children, who were at the house, which is about fifty feet from the shop heard the shot and were the first to see the body. Mrs. Valek was entirely prostrated. Hanging to the lapel of Valek s coat was a lengthy letter, written in Bohemian and addressed to his family. He gave a list of the debts he owed about town, and made known his wishes as to the disposition of his property. He advised his son Edward, who has been associated with him in the blacksmithing, to give it up and learn some other Valek was about 60 years of age and leaves a wife and seven children, three of whom are living at home. His life was insured for \$1,000 in the C. S. P. S., a Bohemian benevolent organization.

NEURALGIA cured by Dr. Miles' PAIN

57th EPISSEL UV SAMYEWL TO

sevrul sentyeris ago mister satun tuk a noshen thet heed lik tew get kuntrol uv the watters uv the oshen; fer heed veri ofen notised when among the hawnts uv men thet awl ther rivvers run thair, but nevver bak agen. an morover awl ther laws veri kurriosli pertekted whut the kolled the rites uv property, whil man he went neglekted. an sew he arguewd with hisself an formd a grat big trust tu munopulize the watters; but that tim he got bust. fer he hadent kalkulated with the lord uv awl kreeashun hoo pervides fresh air an watter bi a plan uv kondensashun. so he swor a sweet revenge on the soles uv awl mankind an put hes branes tu werkin fer a hellish skeem tu find. he invented traps an pitfawls an awi sorts uv meennus trid but he mite ez wel hev shot hisself, fer the lord wuz on ther side. but as he persiveerd he kame tu this kunklushun thet the onli wa tew ficks them wuz threw greed an self deluzyun. sew he set hisself tu werkin an ther heds an branes astuffin with the noshen tha mite get sumthin awl fer nuthin. an then he set them skramblin fer a thing whuts kolld inkrees, an munopuliz in evrything frum kash tu bones an grees. tha ript an tore an snorted lik kattul owt uv breth then let ther biznuss go tu pot until tha sturved tu deth. ets a sollumkulli stori, this histery uv munni, tho sum foks down en washintun appear tu think et funni. uv korse awl thet wuz long ago but how the gods must laff when tha think uv such kweer kritters. so duz sam fonagraf hoos alwais preechin gospul er raisin hi grad mewls en tryin fer tu kristyunize thos kussed gold base few!s.

Protecting the Cows.

The American Cultivator says that there is no excuse for any man failing to protect his cows from the severe weather; because there is no spot on earth where a milch cow can subsist but which furnishes material for protecting from snow and winds. A cow does not require a hard-coal fire and a feather bed for comfort. She enjoys a brown-stone front to be sure; but she enjoys a sod stable, a dug-out on a hillside or stall in a straw stack, quite as well, if it is kept clean and

dry. No man who owns one cow is so poor that he cannot build a shelter of some kind and get six feet of rope or a stanchion for a tie. The trouble with a great many farmers is that they are waiting till they build that two-story barn before they begin to stable the cows. How foolish! Stable the cows and they will build the barn out of the increased profits which they yield from kind

Sell your cows if you will not procure a good thermometer, a trustworthy tester, power. There is no profit in unscientific in this progressive age.

The farmer who does one thing thoroughly well is very apt to be more than usually thorough in all his operations. On the contrary, the farmer who thoroughly slights one part of his business does not do thoroughly well any part

Millet is a luxuriant grower, and, like clover, contains a large per cent of albuminoids, which makes it especially valuable for milk. It produces three to six tons per acre, and is easily cured. Try two acres next season on good rotter turf, one bushel of seed to the acre.

The time that a heifer is allowed to go dry after her first calf is dropped affects her habit in this respect all her life. It is not necessary for a good cow properly cared for to go dry longer than from three to four weeks. The very best cows can hardly be dried off, the inbred tendency to milk production having been developed so strongly.

The dairy brings a revenue which is always cash and almost continuous. It helps maintain the fertility of the farm; its product, if good, has seldom to seek a buyer; it exhibits more vitality in times of depression than almost any other product that the farmer sells; but the average farmer studies improvement in all other lines before he takes an interest in the business of making butter.

The dairy school at Madison, Wis., had registered ninety-fivestudents on November 1 for the winter term, beginning January 1, 1895. As the capacity of the school is not more than 100, the indications are that a large number of applicants will have to be turned away. Similar reports come to us from all over the United States and Canada of the crowded condition of the dairy schools for the next term. At St. Anthony Park, Minn., they will be obliged to hold two sessions in both butter and cheese.

Cows in milk will consume nearly 50 per cent more water than the same cows when not giving milk. The New York Experiment Station, at Geneva, found as an average of several breeds that each drank 1.039 pounds of water and consumed 547 pounds more in food per month. During lactation the average per month was 1,660 pounds drank and 774.8 pounds consumed for each pound of milk produced were as follows: Ayrshires, 4.26; Guernseys, 5.07; Holsteins, 4.43; Jerseys, 5.21; Short-horns, 5; Holderness, 3.95; Devons, 4.82, making an average of 4.68 pounds. The need of an abundance of water is evident.



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chitis or Pneumonia. Check it at Once

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"Early in the Winter, I took a severe cold which developed into an obstinate, hacking cough, very painful to endure and troubling me day and night, for nine weeks, in spite of numerous remedies. Ayer's Cherry Pectoral being recommended me. I toral being recommended me, I began to take it, and inside of 24 hours, I was relieved of the tickling in my throat. Before I finished the bottle, my cough was nearly gone. I cannot speak too highly of its excellence."—
Mrs. E. Bosch, Eaton, Ohio.

Ayer's Cherry Pectoral Received Highest Awards AT THE WORLD'S FAIR poocooooooooooooo

Dues for National Alliance.

The dues of the National Alliance have heretofore been paid from the State Alliance treasury. Although the National Alliance expects each Alliance to pay its national dues separately from the state dues. Owing to the reinstatement of so many delinquent Alliances without payment of back dues there is now no money on hand in the state treasury to pay national dues, which are 10 cents a member, and must be paid immediately, or our delegate will not be allowed a seat at the National Council. Only such Alliances as forward national dues will be entitled to the national password, so orders the National Secretary.

MRS. J. T. KELLIE, Hartwell, Neb.

The Northern Alliance

MOULTON, Ia., Nov. 26, 1894. The annual meeting of the National Farmers' Alliance will be held at the Commercial Hotel in the city of Chicago, and if you are not willing to school your Illinois, Tuesday, January 15, 1895, at intelligence to the utmost within your 9 o'clock a. m., for the purpose of electing officers and the transaction of such business as may come before the convention By order of the Executive Committee.

AUGUST POST, ELWOOD FURNAS, Secretary.

Notice!

J. A. ALLIS, JAMES A. BENJAMINE and

W. D. Lowery have sent us money for their subscriptions, but neglected to give us their postoffice address, so we cannot

give them credit. Gentlemen, send us the name of your postoffice and we will receipt you for the

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The Climate is Unrivaled.

Almost perpetual sunshine, and the elevation of about 7,000 feet dispels all malaria, nor are such pests as chinch bugs, weevil, etc., found there. Flowing artesian wells are secured at a depth, on an average, of about 100 feet, and at a cost of about \$25.00 each. Such is the flow that they are being utilized for irrigating the yards, garden and vegetable crops. The pressure is sufficient to carry the water, which is pure, all through the farmers' dwellings.

Irrigation.

Already several thousand miles of large and small irrigating canals have been built and several hundred thousand acres of lands made available for farming operations. Irrigation is an insurance against failure of crops, because success is a question only of the proper application of water to them. The loss of a single corn or wheat crop in Nebraska, for instance, would more than equal the cost of irrigating canals to cover the entire state, so important is the CERTAINTY of a full crop return to any agricultural state. The San Luis Valley will grow

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