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The Tillamook Headlight.

Fred C. Baker, Publisher. Land Office Changes Base.

A young lawyer living in Northern California has determined that he would test the significance of the questions asked by Federal Land officials...

This young man addressed the Department by letter, clearly setting forth his purposes and query, and received the following reply, signed by an acting Commissioner:

Washington, D. C.—Mr. Charles W. Strother, Lawyer, Yreka—Dear Sir: Referring to your letter of the 29th ult. relative to the suspension of your timber and stone entry, you are advised that if you made a satisfactory showing that your entry was made for your own use and benefit and there is nothing more to impede your good faith that the mere fact that you made the entry for investment with intent to sell the land at some future indefinite time, and in this manner realize a profit on the money invested, this office holds that such an entry is not made in violation of law and should be passed to patent.

There is no manner of doubt as to the meaning conveyed in this latter communication. It fairly voices the policy of the Land Office, there is every reason to believe that the inquisition as to family history, future intentions and integrity of character will be eliminated in the near future, or continuing will in effect be merely one of those pleasant fictions which officialdom every now and then delights to indulge in.

Why Farmers Should Make a Study of Soil.

If the greatest study of mankind is man, the next greatest study is the soil, for upon the soil depends the preservation of man. It is true that American agriculture is the fundamental support of the American nation, it is equally true that soil fertility is the absolute support of American agriculture.

If he who makes two blades of grass grow where but one grew before is a public benefactor, then he who reduces the fertility of the soil so that but one ear of corn grows where two have been growing before is a public curse. The fertility of Illinois soils out and need not be reduced below its original productive capacity.

The only system of maintaining soil fertility which I can advocate and which can ever safely be adopted as a permanent system must be a system which can be applied to all of the soils of the state—not to a few farms only or for a few years only, but to all of the soils of Illinois and for all times—yes, even more than that—it should be a system which can be applied to the soils of adjoining states—to Indiana and Ohio, to Wisconsin and Iowa—in short, to the soils of America.

How shall the fertility of the soil be maintained? We hear two very common answers to this question. The grain farmer says we must grow clover. The live stock farmer says he must put the manure back on the land. But neither of these answers really answers the question.

Clover alone will not maintain the fertility of the soil. If all the crops which are grown on the farm are fed on the farm and the manure all returned to the land it will greatly aid in maintaining the fertility of the soil. The only way by which the live stock farmer can maintain the fertility of his soil by the use of manure is to feed not only his own, but his neighbor's crops also, and then put all the manure upon his own land.

This answers the question for a few farmers who are also extensive cattle feeders, but it does not answer the question for Illinois; it does not answer the question for America—we cannot all feed our own crops and our neighbors' crops also.

How then shall we maintain the fertility of Illinois soil? There is but one answer to this question, and this answer would have saved the fertility of all the soils which have been ruined in the past. It would have saved the soils of Palestine, a land which once flowed with milk and honey, but is now a barren waste. It would have saved the soil of Greece and Italy, of northern Europe and of eastern United States, and is the only answer which will save the soils of Illinois—and this is the answer:

Preserve good physical conditions and then put back upon the land all of the fertility which is taken off—not some of it, not most of it, but all of it, and not only that which is removed by cropping but also that removed by the blowing, washing or leaching of the soil.

The whole subject of plant food is a simple one. About 95 per cent of most agricultural plants consist of three elements, carbon, hydrogen and oxygen, which are obtained from air and water. Only seven essential elements are furnished by the soil and four of these, calcium, magnesium, iron and sulphur, are used by plants in such small amounts and are contained in all ordinary soils in such large amounts that they are practically never exhausted from the soil.

The productive capacity of practically all soils in good physical conditions is measured by the available support of the three elements, nitrogen, phosphorus and potassium. These are the elements which are present in nearly all soils in comparatively small amounts and yet are absolutely required by all agricultural plants and in very considerable quantities.

How shall the fertility of the soil be maintained? By maintaining the supply of nitrogen, phosphorus and potassium and preserving good physical conditions. How shall the productive capacity of a soil be increased? By increasing the supply of that element which is most deficient in the soil.

The live stock farmer understands the value of a balanced ration in stock feeding. Let us also bear in mind that plants are living things and that balanced rations are of even greater importance to them than to animals. Timothy, hay and corn and clover meal have some place in animal feeding, but they do not make the best possible balanced ration for young cattle or milch cows, nor could you make a balanced ration by adding to them excelsior straw and sawdust meal. Likewise a plant which is starving for phosphorus is not benefited by plowing under a crop of green rye or even by feeding it more nitrogen or potassium, indeed, such treatment would tend to still further unbalance the soil and might even produce an injurious effect upon the plant, as appears to have been the case to a slight extent in some experiments.

I offer the following simple rules for improving soils and feeding plants:

- 1. If the soil is aired, or sour, apply lime to it to make it sweet. 2. If the soil is poor in nitrogen only grow clover or some other legume which has the power to secure nitrogen from the air. 3. If the soil is poor in phosphorus only apply bone meal or some other form of phosphorus. 4. If the soil is poor in potassium only apply potassium chloride, or some other form of potassium. 5. Always save and use all the barnyard manure you have and also all you can economically obtain from others and make liberal use of green manures when necessary to maintain the supply of organic matter in the soil.

C. C. HOPKINS, Chief of Agronomy and Chemistry, University of Illinois.

Asia Taking Breadstuffs.

There is a growing demand for our breadstuffs in the Asiatic market, giving promise of a very extensive trade in this line in the near future. According to the latest statistics the exports of breadstuffs to those markets during the eight months ending with August aggregated in value over \$11,000,000, against about \$4,000,000 for the corresponding period of last year. Two-thirds of this export was in the form of flour, showing that the people of Asia are rapidly acquiring a taste for wheat bread. When the vastness of the population in those countries is considered, cannot be regarded as extravagant to assume that not many years hence the demand from that source for our breadstuffs will take all the surplus.

As shown by the statistics, our flour exports to countries bordering on the Pacific have gained upward of \$5,000,000 for a period of eight months in the short space of two years. They are rather more than three times as great as they were two years ago. The significance of this, observes the Seattle Post-Intelligencer, as affecting the entire wheat-growing industry of the United States, should not be overlooked. "Contrary to the predictions of many," says that paper, "the market for American breadstuffs is expanding enormously in Asia and Oceania. It is already so large that it consumes a very large share of the surplus product of the Pacific coast states. It will very soon consume the entire surplus product of these states, for the amount of the new area which can be put into wheat in the future is not very large. The time is now when the wheat produced on the Pacific coast will be marketed in Europe and the withdrawal of this amount of wheat from the European market, must of necessity result in a higher price for wheat in Europe, to the profit of American farmers." With a rapidly growing Asiatic market for our breadstuffs the outlook for American wheat producers is certainly most promising.

Bits of News and Comment.

The west is not worrying over stock market conditions half as much as the east. The crop of western suckers gathered in by the get-rich quick watered stock concerns was considerably below the average.

The Lake Street Elevated Railroad Company of Chicago, capitalized at \$10,000,000, was placed in the hands of a receiver. Thus it will be seen that the big "wind and water" stock companies are busting up one after another.

Nature seems to have intended that the densest agricultural population in the world should live in the United States. No country of equal size is intersected by so many brooks, creeks and small and great rivers whose waters are available for irrigation. We may be sure that when the time comes for the American people to take advantage of these immense natural resources they will not be slow to do so.

J. Johnson has just arrived from the mining camp at Koyukuk, 100 miles north of the Arctic Circle and 300 miles north of Dawson. Johnson several nights slept in a tent with the thermometer registering 75 degrees below zero. As far as the camp is concerned, he said it is a bust-up community. Twenty-five men stayed through last season. Few of them made a little money out of one claim, that was all. It took Johnson seven hard weeks of traveling to get home.

To receive 160 lashes, as well as 23 months imprisonment, was the sentence that Police Magistrate Russell handed to a licentious prisoner named Peebles, guilty of the crime of criminally assaulting the girls at Vancouver, B. C. It was perhaps the heaviest sentence of its kind ever given in Canada. The lashes are to be delivered 20 at a time. The first score have already been laid upon the bare back of Peebles, and about the time the wounds are neatly healed there will be another 20 due, and so on, till a few days before he comes out of jail the last 20 will be laid on.

In popular esteem farm life has progressed with leaps and bounds. The farmer is literally in the saddle in popular esteem. His occupation is considered to be desirable. It is now the aspiration of the city man of business to own a farm and to indulge life upon it to the extent

that his business or professional engagements in the city permit. It is understood that the luxury of life in the country is productive of health of mind, health of body, and consequent vigor and long life. The fact is likewise that these country folk are the source of wealth as well as health and vigor. The farm is the place of opportunity for young men.

The Quaker sect appear to be having a rough time of it lately, or it may be that the people are beginning to find out how they have been humbugged with jaw bone orations and "hot air." The city council of Vancouver, Wash., revoked the Quaker's, to be more correct, the lair doctors license.

The practice of renting a farm year by year does more to impoverish it than any other thing. With the one year rental system it becomes practically impossible to continue a rotation of crops and generally the growing of legumes is neglected. This sort of treatment cannot help but run down a farm and use up the best soil in the country. Because of these conditions the careful owners will insist on longer leases and the tenant, if of the right kind, will readily agree to such a plan. Three years is a short enough period of rental, while five years is a still better one. Simple cropping should also not be allowed, but the keeping and feeding of stock encouraged.

Members of the gambling fraternity in the state of Washington are preparing to wage a fierce campaign for the repeal by the next legislature of the law making gambling a felony. Efforts will be made, it is said, to secure results in primaries and conventions, and legislative candidates who will pledge themselves in advance to vote for the repeal of the law will not find themselves lacking the sinews of war wherewith to wage their campaign. While rarely all the dealers and gambling house employes have left the state for virgin fields, where there is no felony law, the boss gamblers, as a rule, have remained in the state, and haven't abandoned hope that the bill which put them out of business may be wiped off the statute books.

It is announced that Horticultural Commissioner Cooper has strong hopes that the day of the codlin moth in California will soon come to an end. An enemy for the codlin moth in Southern Europe. The discoverer is George Cooper, of Los Angeles. In Southern Europe, it is stated, there is no need to spray for protection against the codlin moth. Its insect enemy keeps it down so that at least 90 per cent of the apples are not disturbed. Commissioner Cooper has opened correspondence with the government of West Australia, which may share the expense with California of bringing the remedy from abroad. Quarantine Officer Crow has sent to Cuba a colony of insects to destroy the parasite that is preying upon the pine apple industry in Cuba. A similar service has been performed for Tahiti to save the trees of various kinds from destruction by the cotton cushion scale.

Never in the history of the shipping business on the Pacific Coast has there been such a general demoralization in ocean freight rates as is now in evidence. A British tramp steamer was offering to load for the Orient at \$3.25 per ton, a rate equivalent to about \$2.90 on the short-ton basis, which is used by the regular Oriental steamship lines. A French bark was chartered Wednesday to load wheat at Tacoma for Europe at 15 shillings per ton, and at every port on the Pacific Coast vessels are offering for wheat, lumber, flour or any kind of cargo at the lowest rates on record. What these rates mean to the shippers can, in a measure, be understood, when it is stated that a vessel which came out from Europe to San Francisco on a moderate freight rate in the hopes of finding profitable return business, lost \$10,000 on the round trip voyage and an outward freight from this Coast of 16¢. Some of the loss was, of course, due to a delay in port awaiting a rise in freights which never materialized, but most of it was due to the fact that the actual working expenses of the ship, insurance, depreciation, etc., exceed the freight money by the amount named.

The extensive and apparently increasing vogue of embezzlement growing out of gambling is certain to arouse the attention of the most effective reform agencies, which are not in politics, but in social and business life. Large employers are likely to take some such action toward gambling as they are generally taking toward the use of liquors. In Chicago, for example, the big wholesale grocery house of Franklin MacVeigh & Co. has posted placards warning employes that visiting gambling houses, either through curiosity or to take part in the games or betting, will be regarded as sufficient cause for immediate dismissal. The warning is prefaced by the significant statement that "respectable and moral associations outside of business hours are expected of every employe." Contrary to the natural impression that might result from the posting of these notices, the firm, it is stated, has not suffered from speculation of employes through their addiction to gambling. It has been deemed wise, however, in view of the usual prevalence of the gambling fever and the startling tendency of young men to succumb to it to warn employes of the certain consequences of the gambling or betting habit. There is no interference here with "personal liberty." The employe who doesn't like the rule can go elsewhere. No man that gambles is a safe person to handle other people's money. No man that puts himself habitually under the influence of liquor is a safe guide in matters requiring clear head and sound judgment.—Oregonian.

Saves Two From Death. "Our little daughter had an almost fatal attack of whooping cough and bronchitis," writes Mrs. W. K. Haviland, of Armonk, N. Y., "but when all other remedies failed, we saved her life with Dr. King's New Discovery. Our niece, who had Consumption in an advanced stage, also used this wonderful medicine and to say she is perfectly well." Desperate throat and lung diseases yield to Dr. King's New Discovery as to any other medicine on earth. Infalible for Coughs and Colds. 50c. and \$1.00 bottles guaranteed by Chas. I. Clough, druggist. Trial bottles free.

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