

FUTURE OF KELP INDUSTRY VIEWED

Southern California Plants Only Ones on Pacific Now in Operation.

GEOLOGICAL SURVEY MADE

Product, Which Nominally Sells for \$12 a Ton Now Selling for \$45 or More, and Beds Are Found All Along Western Coast.

OREGONIAN NEWS BUREAU, Wash- ington, Oct. 21.—Although potash, which normally sells for \$12 a ton, is now selling for \$45 or more, and although vast kelp beds are found all along the Pacific Coast from Southern California to Alaska, and although this kelp is rich in potash, plants for the recovery of potash from kelp are being operated only in Southern California.

There has been some controversy in print as to whether potash extracted from kelp can compete permanently with other domestic potash and with imported potash when the latter becomes normal. It is estimated that there are 160 square miles of commercially valuable beds of kelp on the coast of Alaska, five square miles on the coast of Puget Sound and 225 square miles on the coast of Southern California. These beds are said to produce an annual growth of 10,000,000 short tons of fresh kelp, equivalent to 2,225,000 short tons of potassium chloride, or 1,431,446 tons of potash.

Some writers contend that this estimate is too large. It is said that about one-tenth of the kelp estimated available is being harvested in the parts of the field now being cut. The difference between the estimated resources and the harvest is said to be due to original overestimation of the weight of the harvestable portion. This may be partly due to the death of the plants from injury during cutting and to loss and difficulties in harvesting. But even if the estimate is correct, the growing on the Pacific Coast is assumed to be as great as estimated. It should be noted that much of it is not readily available to the kelp harvester. It can be handled, and that the kelp naturally grows in rocky and exposed portions which are not readily accessible to machine cutters. Many of the fields are probably not within practical reach of ports. The actual operations are said to yield less than 2 per cent of potash in the wet kelp harvested, and this fact should be considered in any estimates of its quantity as well as in harvesting and working it.

A recent report contains the following statement: "Notwithstanding this comparatively rapid development in the kelp industry, the problem of extracting potash from kelp commercially has not been completely solved. It is essential that methods be devised for producing the numerous by-products which can be obtained from the kelp. The plants now in operation, for the most part, are engaged in the extraction of potash only. Owing to the present abnormal prices for this material, they are devoting relatively little attention to the elaboration of processes for the recovery of by-products. If this situation continues, they probably will not be able to produce potash at a profit when conditions become normal. In the circumstances, it seems desirable for the Department of Agriculture to demonstrate the commercial feasibility of producing potash and by-products from kelp with a view to putting the industry on a sound economic basis.

"Air-dried kelp is seen to be worth about \$12 a short ton at the point of manufacture. As about 6.2 tons of fresh Macrocystis will yield one ton of dried kelp, it seems that dried kelp can be used as a fertilizer at 6.2 tons of wet kelp can be harvested, dried, ground and packed for \$12 with reasonable profit. The price of potash is now \$45 or more a unit, so that the margin for profit is very great, the price per ton being temporarily increased from \$12 to \$45 or more. It is thought that it is worth seeing why the industry may flourish under present conditions and to realize the difficulties it may meet when the market becomes nearly normal. Somewhat the same mode of computation may be applied to the manufacture of the products of high grade, but the calculation then becomes much more complicated.

"The project for the recovery of potash from kelp, as from other sources, deserves every legitimate encouragement possible from National,

SAVE YOUR HAIR AND BEAUTIFY IT WITH "DANDERINE"

Spend a Few Cents! Dandruff Disappears and Hair Stops Coming Out.

Try This! Hair Gets Beautiful, Wavy and Thick in Few Moments.

If you care for healthy hair, that glitters with beauty and is abundant, your life has an incomparable softness and is fluffy and lustrous, try Danderine. Just one application doubles the beauty of your hair, besides it immediately dissolves every particle of dandruff; you cannot have nice, heavy, healthy hair if you have dandruff. This destructive scurf robs the hair of its luster, its strength and its very life, and if not overcome it produces a feverishness and itching of the scalp; the hair roots loosen and die, then the hair falls out fast.

If your hair has been neglected and is thin, faded, dry, scraggy or too oily, just a small bottle of Danderine will do for a few cents; apply a little as directed, and ten minutes after you will say this was the best investment you ever made.



Roseburg High School

state and local governments. Although not established primarily for public or patriotic ends, these projects nevertheless aim to supply a commodity that is much needed in manufacturing industries, and in agriculture, and, most importantly, that the country might urgently need in time of emergency.

SOIL VIRGIN; CROPS FINE

Food Demands and Good Farming Make Grain Advisable.

WASHINGTON, Oct. 12.—Because the grain crops are well adapted to virgin land, irrigation farmers who expect to bring many new acres "under the ditch" in the near future have a unique opportunity. With food crops in strong demand the opportunity goes hand in hand with good farming. And in order that farmers contemplating grain growing under irrigation may have all the advantages of present knowledge on this subject, a specialist in the United States Department of Agriculture has collected and made available this information in Farmers' Bulletin 864, "Irrigation of Grain," just published.

As a rule, grains such as wheat, oats or barley, are, for several reasons, the first crops grown on land being brought under irrigation, says the specialist. They are food crops and therefore in demand; they require less outlay in preparing the land for irrigation and in seed and bring quicker returns than most other crops; they do well on new soil and help to put the soil in condition for other crops, and in most sections their need for irrigation corresponds to the period of greatest water supply. Most of the streams of arid regions are torrential, having a flood period in the Spring and early Summer and low water in the late Summer. The grains make their growth during this flood period and are ready for harvest when the streams subside.

Grain is essentially a crop for the farmer with a very limited capital or for the farmer on new land, according to the bulletin mentioned. It is not advisable, however, to grow many crops of grain in succession on new land, as the yields fall off rapidly. The land should be seeded to alfalfa and grain used only in rotation after the first year or two. It is not a crop for revenue upon small farms nor where intensive farming is practiced.

Methods of irrigating grain crops are restricted somewhat because of the fact that such crops cover the entire surface of the soil on which they are grown. The flooding method, sometimes objected to because of the loss by evaporation, is more suited to grain crops because they seldom are irrigated before the grain is high enough to protect the soil from sun and wind.

The border and basin methods of irrigation are also well adapted to grain crops and are described in detail in the bulletin mentioned. The proper time to irrigate, the quantity of water required and the cost of growing grain under irrigation also are discussed.

PREMIER'S AUTOGRAPH SOLD

"This Is an Age of Heroes," Says David Lloyd George.

LONDON, Sept. 30.—An autographic message from Prime Minister David Lloyd George, which was sold at a Welsh fair at Holyhead this week for \$500, said: "This is an age of heroes. There never have been so many in any generation of the world's history, and it is therefore, that we should commemorate the fact with the special pride of our time. Moreover, no part of the British Empire has made a readier or sturdier contribution than the rugged corner assigned by Providence for Welshmen to dwell in."

Drainage is beneficial to land infested with certain kinds of wireworms.



Prof. Aubrey Smith, Director of Roseburg High School



H. Omer Bennett, Principal

ROSEBURG, Or., Oct. 20.—(Special)—Roseburg is justly proud of its new and modern high school building, which has received its finishing touches. The building, constructed entirely of brick, is strictly modern in every particular. On the first floor is the gymnasium, 45 by 80 feet, with a gallery seating capacity of 400 persons, not to mention 12 other large separate rooms to be used for various purposes. The second story of the structure contains the auditorium, 84 by 70 feet, and will seat 1500 persons. The superintendent's and principal's offices are on this floor, and it also contains eight apartments devoted to classrooms and other branches of high school work. The recitation-room is the important opening on the third floor, which is large and roomy, well lighted and most convenient for the students. Four classrooms are also on this floor, with six other separate high school departments. There is no more modern high school building in the state, from all standpoints, than the one just completed, and it is with a degree of much pride to citizens of this school district that this fine building is now ready for occupancy.

WOMEN GET READY

Californians Organize Actual Army of Conservation.

Division in Europe, finds his men lacking in comfort or necessities he will know that Captain Mabel Tillingford, of the same company, regiment, brigade and division in California is responsible for it. Headquarters for the organization of the great woman's army of conservation in California have been established in San Francisco and a director of organization has been appointed and given full authority of the Federal Food Commission to carry through the immense work of creating this regular army of conservation.

SERVICE PERIOD OF WAR

Two General Staff Headquarters to Be Established, That at San Francisco and at Los Angeles.

Every officer of this army of conservation will be provided with insignia of office, whether sergeant, captain or Major as is worn by the corresponding officer in the Regular Army of the Nation, and have similar duties and authority. The entire organization will be created in exact accordance with that of the National Army, and for parade occasions will have a neat, inexpensive uniform. Promotion will be entirely for service and in accordance with regular army discipline and regulations. The first step in this remarkable enlistment of the women of California into an actual army of service for the period of the war will be the enrolling of volunteer enlistment officers.

FEDERAL BUILDING AT VANCOUVER TO BE READY FOR OCCUPANCY IN NOVEMBER.

POSTOFFICE ERECTED AT COST OF \$125,000.

VANCOUVER, Wash., Oct. 20.—(Special)—The Vancouver postoffice at Thirteenth and Daniels streets, is nearing completion and it is expected that it will be ready for occupancy next month. The building, of yellow brick, consists of basement, main floor and second story. Its cost is around \$125,000. The site for the building cost \$14,500, and was bought when W. W. McCredie was Representative from Vancouver has two 30-foot streets and one of these was chosen for the new postoffice. People living here now do not know why the building was located there, and many are not satisfied with having it so far from the business section. At the time bids for the site were advertised for, the city was booming, and the price of real estate was high and this was the only site that could be bought with the money available. It was accepted and plans for the building were drawn by the Government and in due time the building was started. F. W. Pease is the Government Inspector here.

Two Headquarters Fixed.

Two general staff headquarters will be established, that at San Francisco and one at Los Angeles, having jurisdiction respectively over the army organizations of the northern and southern halves of the state.

Each woman volunteering as an enlistment officer immediately will write a brief letter to the director of the organization, giving her name and address and stating that she volunteers to enlist a squad of eight or more privates and if she secures the enlistment of a "squad" of eight women as privates she will then receive her formal commission as a sergeant in command of that squad. If she secures the enlistment of 24 privates she will be commissioned as a Lieutenant of platoon with three sergeants under her. An enlistment of 66 privates will make her a captain of a company with four lieutenants, and 12 sergeants under her authority. It is planned that back of every man behind a gun in the trenches there will be a woman at the fireside, and that the honor and credit of winning the war will be divided equally between the great National

Army of the sons, husbands, brothers and cousins marching to do battle for democracy with guns and cannon, and the equally great National Army of Conservation at the firesides guarding, conserving and forwarding the base supplies.

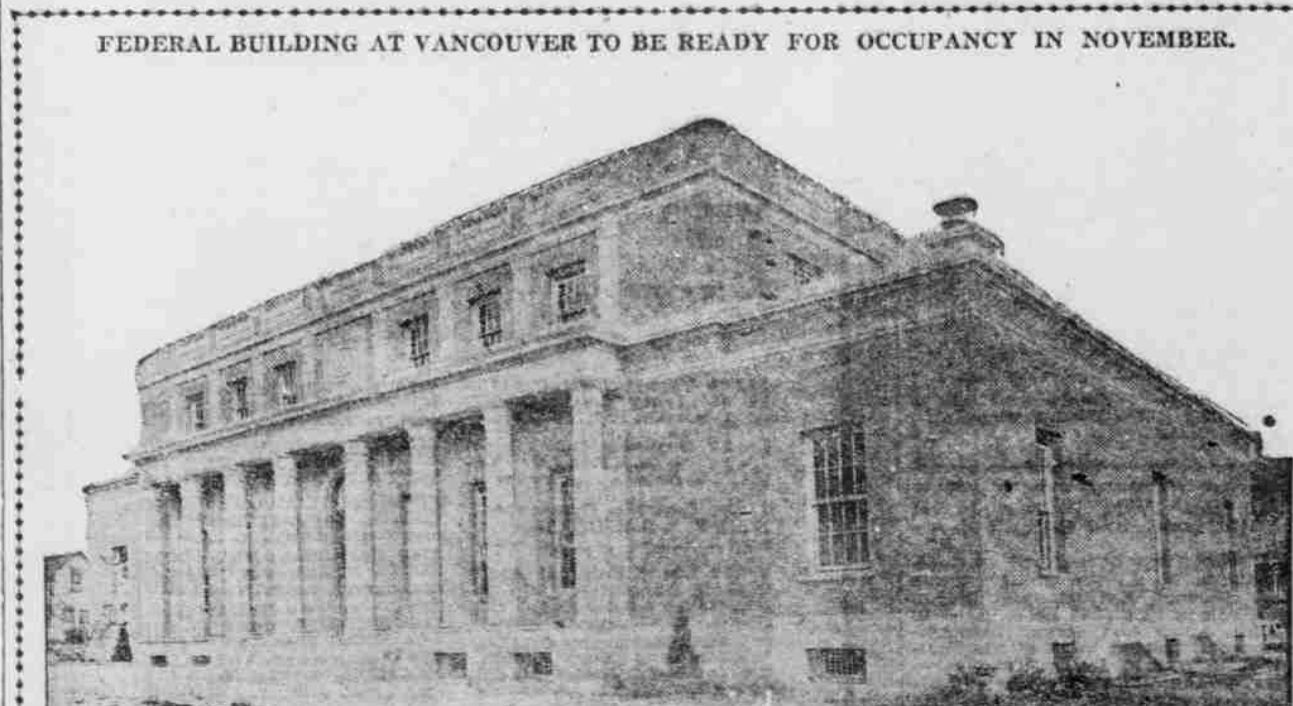
Other Work Not Affected.

This in no wise will interfere with their other duties, organizations, clubs and so on, but like the enlistment of men from every walk in life, demanding of them that the business of the Nation and its National safety shall take precedence over every other interest in one great war organization, even to the extent of the sacrifice of their lives if necessary, it is now proposed to marshal the women of California in an equally efficient and vital army.

This army of conservation will have its signal corps, its cavalry, its medical corps, its quartermaster's staff, its officers, its staffs and every feature of the Regular Army. Stenographers, telegraph and telephone operators and those engaged in the signal corps. Women owning automobiles will be enlisted in the cavalry. Newspaper editors, writers, reporters, etc. in the artillery, since this will be also a great campaign of education in conservation, through the press, of the great mass of the people. The first step already is being taken, and the work of organization will move forward with swiftness, since orders from Herbert C. Hoover are that the organization of the entire state be completed by the 21st of this month. Officers will rank according to their priority of commission, thus the captain in a regiment who first received her commission will be the ranking captain and will first receive advancement to the rank of Major. The sergeant of a company who was first commissioned will be the ranking sergeant of the company and first to be advanced to a lieutenant.

Hawaii Registration Cheap.

HONOLULU, T. H., Oct. 15.—Registration in Hawaii for the selective draft held in July cost the United States Government \$600, or 2 cents a registrant. The registration figures showed an enrollment of 20,000. While the actual cost of the registration work was less than this, all but the \$500 was borne either by the territorial or local county governments.



POSTOFFICE ERECTED AT COST OF \$125,000. VANCOUVER, Wash., Oct. 20.—(Special)—The Vancouver postoffice at Thirteenth and Daniels streets, is nearing completion and it is expected that it will be ready for occupancy next month. The building, of yellow brick, consists of basement, main floor and second story. Its cost is around \$125,000. The site for the building cost \$14,500, and was bought when W. W. McCredie was Representative from Vancouver has two 30-foot streets and one of these was chosen for the new postoffice. People living here now do not know why the building was located there, and many are not satisfied with having it so far from the business section. At the time bids for the site were advertised for, the city was booming, and the price of real estate was high and this was the only site that could be bought with the money available. It was accepted and plans for the building were drawn by the Government and in due time the building was started. F. W. Pease is the Government Inspector here.

Overland
Model 90
Light Four
Only One Week and Three Days Before the Price Goes Up

A Service Car
THE service it gives in return for a modest outlay commends the Overland Light Four to the veteran car owner. Its ever-readiness, its fast get-away, its stamina for the long haul and sustained speed, would be remarkable in a much higher priced car. It is big enough and comfortable enough for your longest drives. 106-inch wheelbase and cantilever springs take care of that. But it is small enough to be handled with less effort than any other car that will serve you so well and in such comfort.

\$770

Overland Light Four
Motor—32 h. p. at 2000 r. p. m.
Wheelbase—106 inches
Rear Springs—Cantilever
Tires—31 x 4 inches
Starting—Lighting—Auto-Lite
Fuel Feed—Vacuum System

Price f. o. b. Toledo
Subject to change without notice.

Overland Pacific, Inc.
Broadway 3535 Broadway and Davis St.

Women! Keep It On Dresser! Never Let Corns Ache Twice

Instantly! Few drops stop corn-soreness, then corns and calluses shrivel, loosen and lift out with fingers—No pain!

The world owes thanks to the genius in Cincinnati who discovered frezone. Tiny bottles of the magic fluid can now be had at any drug store for a few cents. You simply apply a few drops of this frezone upon a tender, aching corn or a hardened callus. Instantly the soreness disappears and shortly you will find the corn or callus so loose and shriveled that you lift it off with the fingers. Not a bit of pain or soreness is felt when applying frezone or afterwards. It doesn't even irritate the skin or flesh. For a few cents one can now get rid of every hard corn, soft corn, or corn between the toes, as well as painful calluses on bottom of feet without any pain. Ladies! Keep it on the dresser.

Stomach Upset? Stop Indigestion, Gases, Sourness—Pape's Diapepsin

Instant Relief! Neutralize stomach acidity and stop dyspepsia, pain, heartburn, belching. Try it!

Wonder what upset your stomach— which portion of the food did the damage—do you? Well, don't bother. If your stomach is in a revolt, if sick, if you feel bloated, if you just ate has fermented and turned sour; head dizzy and aches; belch gases and acids and eructate undigested food; breath foul; tongue coated—just take a little Pape's Diapepsin to help neutralize acidity and in five minutes you wonder what became of the indigestion and distress. This, all but the \$500 was borne either by the territorial or local county governments.

Millions of men and women today know that it is needless to have dyspepsia. A little Diapepsin occasionally keeps the stomach sweetened and they eat their favorite foods without fear. If your stomach doesn't take care of your liberal limit without rebellion; if your food is a damage instead of a help, remember the quickest, surest, most harmless relief is Pape's Diapepsin, which costs only 50 cents for a large case at drug stores. It's truly wonderful—it stops fermentation and acidity and sets things straight, so simply and easily that it is really astonishing—Adv.