

# ADVISES HOW TO GROW SPUDS

ANOTHER TALK BY W. L. POWERS.

Demonstration Farm Superintendent Points Out Best Methods of Cultivation and of Irrigation for This Crop in Central Oregon.

By W. L. POWERS.

The primary requisites for the best potato culture are: deeply pulverized, cool, medium sandy loam soil, with a good supply of organic matter holding much capillary moisture and rich in potash, deep and early planting, level culture, frequent moisture conserving tillage, and spraying where necessary to insure healthy foliage.

In most cases, a heavy yield of potatoes is mainly a question of moisture. Whether under irrigation or dry farming, early and frequent tillage should be given the potato land to release plant food, prevent loss of moisture through weeds, and maintain a dirt mulch for conserving moisture. Harrowing is cheap cultivation and the lever harrow should be used immediately after the planter to level the soil and lessen the evaporating surface area. A second harrowing should be given when the plants begin to come up and a third when the rows are well in view or after any heavy rain that causes frusting. Harrowing should be done in the warm part of the day to avoid scattering fungus disease and breaking of vines.

The one or two horse cultivator should follow after the harrowing period. In the Greely district of Colorado the two horse cultivator follows the planter ridges before the potatoes come up to give a close deep cultivation and is followed by the harrow. The cultivator should be used about every ten days or say three times before the blooming period and always after irrigation as soon as the soil is dry enough to crumble to leave the surface mulched and but slightly hilled along the rows.

**Irrigation.**  
Spring rainfall here is usually sufficient to bring the plants up and grow them till the tubers begin to form, if carefully conserved; but a moderate irrigation, say three inches, or the equivalent of three inches rainfall, on the sander soils before planting will cause better growth and protect against frost. The amount of later irrigation is a matter of experience and must be determined by the weather and actual moisture condition prevailing about the plant roots. The per cent of slope affects method and amount of irrigation. An ideal slope would be about one per cent or 50 feet per mile. Steeper slopes require more shallow furrows and a smaller stream in each furrow for a greater time. Flat land requires shorter runs and more leveling and attention in irrigating. Control these conditions by running the potato rows diagonally or on a contour, if necessary, and by varying the head in each furrow according to the slope.

In irrigating, the water should run nearly clear to avoid eroding and puddling and should be applied in a

fairly sharp, deep furrow so the potatoes will be moistened by wick action rather than by lateral percolation, which causes the dirt about the tubers to puddle and set. A larger head may be used per furrow to wet down nearly to the lower end and then the water cut down and also it will just be used up by the time it reaches the tail furrow. With constant attention there should be no runoff and leaving the water in furrows about 23 hours will give a two or three acre-inch irrigation on an average soil. Where more than two irrigations are applied it is best to irrigate every other space between rows and alternate at succeeding irrigations.

Experiments conducted for the Oregon Experiment Station by the writer, under conditions that will apply here, indicate that two light irrigations will be better than one heavy irrigation as potatoes must be kept growing at a uniform rate to avoid "second growth." Furthermore, these results indicate that five or six acre-inches should be about the most economical amount to use.

About 50 bushels more potatoes were secured by applying the five acre-inches at two irrigations instead of one, but six acre-inches made four bushels more applied in two instead of three irrigations. Three one-inch irrigations gave most and two three-inch irrigations applied when the average moisture content of the first two feet dropped to the 20 per cent moisture content point gave the heaviest yield.

Irrigations should not be given after the 15th of August if the highest quality of product is to be obtained. The writer had composite analyses and extensive cooking tests made from each of the experiment plants and found that up to five and six acre-inches there was practically no difference in composition or palatability on irrigated and non-irrigated potatoes. The heavier later irrigations increased the mois-

ture content and therefore decreased the per cent of solids and lessened the keeping quality, and nine acre-inches gave lower yield than six acre-inches. If the proper soil moisture content prevails, it matters not whether it is maintained by irrigation or rainfall.

### SUMMONS.

In Justice's Court for Bend Precinct No. 2, Crook County, Oregon.  
Mrs. Nellie Wright, Plaintiff, vs. J. E. Kelley, Defendant.

To J. E. Kelley, the above named defendant:  
In the name of the state of Oregon: You are hereby required to appear and answer the complaint filed against you in the above entitled action on or before October 1st, 1912, and if you fail to so answer the plaintiff will take judgment against you for the sum demanded in her complaint herein, to-wit for the sum of \$25.00, besides the cost and disbursements of this action.

This summons is ordered to be served upon you by the publication thereof in The Bend Bulletin, a weekly newspaper published in Crook County, Oregon, by the order of J. M. Lawrence, Justice of the Peace for Bend, Precinct No. 2, Crook County, Oregon.

Dated August 7th, 1912.  
C. S. BENSON,  
Attorney for Plaintiff.  
J. M. LAWRENCE,  
Justice of the Peace for Bend, Precinct No. 2, Crook County, Oregon.

### NOTICE OF BOND SALE.

Notice is hereby given that sealed proposals will be received at the office of the City Recorder, Bend,

Oregon, up to six (6) o'clock P. M. on Tuesday, the 24th day of September, 1912, for the purchase of Municipal Bonds of the City of Bend, Oregon. Said bonds are in the sum of \$50,000 par value, issued in denominations of \$1000, and issued for the purpose of constructing a sewer system and authorized by vote at a special election held in the City of Bend on the 20th day of July, 1912. Said bonds are dated September 1st, 1912, and bear interest at a rate not exceeding six (6) per cent per annum interest payable semi-annually. Said bonds mature September 1st, 1922. Interest and principal payable at Bend, Oregon, or the Oregon Fiscal Agency in New York City. Said bonds are issued and to be sold in accordance with the provisions of the Charter of the City of Bend.

Proposals for said bonds shall state the rate of interest on which the proposal is based.

Each proposal must be accompanied by a certified check in the sum of One Thousand (\$1000.00) Dollars, made payable to the City Treasurer of the City of Bend, as a guarantee of the good faith of the bidder.

The City reserves the right to reject any or all bids.

By order of the Common Council of the City of Bend, Oregon, dated July 20th, 1912. First publication July 24th, 1912.

G. P. PUTNAM, Mayor.  
H. C. ELLIS, Recorder.

### NOTICE FOR PUBLICATION.

Department of the Interior, U. S. Land Office at The Dalles, Oregon, July 25th, 1912.

Notice is hereby given that Frank A. Murk, of Laidlaw, Oregon, who, on June 10th, 1907, made Homestead Entry, No. 15592, Serial No. 64999, for SE 1/4 SW 1/4, Sec. 24, and NE 1/4 NW 1/4, Section 25, Township 15 South, Range 11 East, Willamette Meridian, has filed notice of intention to make five year proof, to establish claim to the land above described, before H. C. Ellis, U. S. Commissioner, at his office at Bend, Oregon, on the 12th day of September, 1912.

Claimant names as witnesses: Alfred F. Ramsey, Frank E. Dayton, Fred N. Wallace, William Brown. 21-25 C. W. MOORE, Register.

### NOTICE FOR PUBLICATION.

Department of the Interior, U. S. Land Office at The Dalles, Oregon, July 22nd, 1912.

Notice is hereby given that Jens C. Hasselberg, of Laidlaw, Oregon, who, on June 19th, 1907, made homestead entry No. 15550 Serial No. 64118, for lots 1 and 2, section 4, township 17 south, range 11 east, Willamette Meridian, has filed notice of intention to make five-year proof, to establish claim to the land above described, before H. C. Ellis, U. S. Commissioner, at his office at Bend, Oregon, on the 16th day of September, 1912.

Claimant names as witnesses: Charles H. Spaugh, Ira E. Wimer, Lincoln H. Root and R. H. Bayley, all of Laidlaw, Oregon. 21-25 C. W. MOORE, Register.

### NOTICE FOR PUBLICATION.

Department of the Interior, U. S. Land Office at The Dalles, Oregon, July 22nd, 1912.

Notice is hereby given that Edward A. Knotts of Bend, Oregon, who on October 3rd, 1910, made Desert Land Entry, No. 97509, for SE 1/4 SW 1/4, S 1/2 SE 1/4, Sec. 14, and NE 1/4 NW 1/4, NW 1/4 NE 1/4, Section 22, township 18 south, range 12 east, Willamette Meridian, has filed notice of intention to make desert proof, to establish claim to the land above described, before H. C. Ellis, U. S. Commissioner, at his office at Bend, Oregon, on the 10th day of September, 1912.

Claimant names as witnesses: Ernest Garratt, William Arnold, Charles D. Rowe and Levi D. West, all of Bend, Oregon. 21-25 C. W. MOORE, Register.

**NOTICE FOR PUBLICATION.**  
Department of the Interior, U. S. Land Office at The Dalles, Oregon, July 17th, 1912.

Notice is hereby given that George W. Triplett, of Bend, Oregon, who, on February 8th, 1909, made homestead entry No. 64488, for lots 1, 2, 3 and NE 1/4 NW 1/4, Section 21, Township 20 South, Range 11 East, Willamette Meridian, has filed notice of intention to make three year proof, to establish claim to the land above described, before H. C. Ellis, U. S. Commissioner at his office at Bend, Oregon, on the 21st day of August, 1912.

Claimant names as witnesses:

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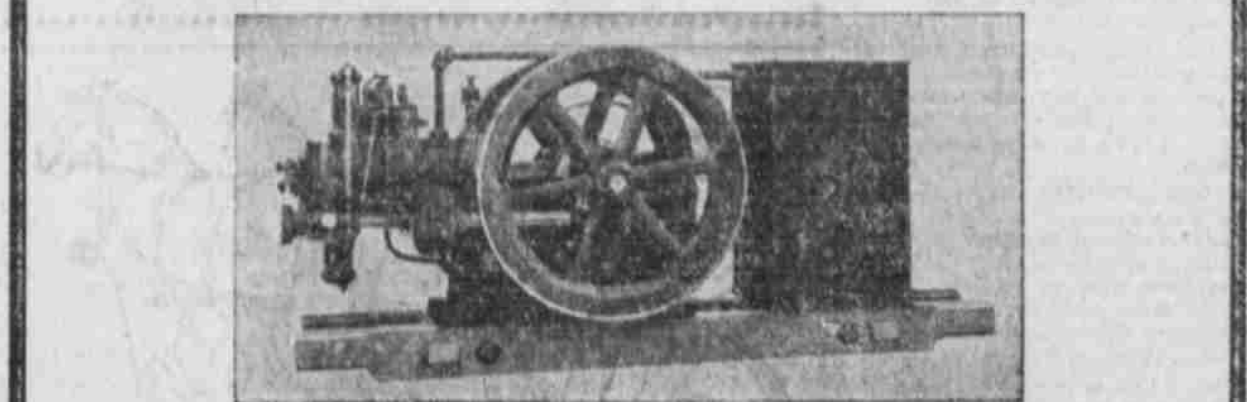
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