

FARM ADVISER AIDS GROWERS



Hardy W. Campbell, Farm Adviser for the Southern Pacific Company, and grain showing the efficacy of the principles of tillage he advocates. Above, at right, the four heads in the center were grown according to Campbell's plan; the other two by the ordinary method.

Principles of Tillage to Increase Yields Explained by S. P. Farm Adviser.

The same principles of tillage, in preparation of land for crops and subsequent cultivation, which have proven so successful in raising grain crops on Western semi-arid lands without irrigation, are proving successful for crops raised under irrigation and for orchards and vineyards, according to Hardy W. Campbell, Farm Adviser for the Southern Pacific Company. Campbell has inspected this season a number of new orchards and vineyards in California, Oregon, Nevada, Arizona, and New Mexico.

Campbell is the man who evolved what is now called the "Campbell System of Dry Farming." Campbell, however, objects to the word "dry" and insists that the principles used in his present plan apply to all kinds of farming, with or without irrigation, as well as under a much lower rainfall than even now is commonly conceded necessary for successful crops. Campbell emphasizes the importance of proper preparation of the seed-bed and sufficient intelligent cultivation afterwards.

Campbell arranged to address the Nebraska Bankers Association at Omaha, September 22 on the subject of "Soil Fertility by Utility of Soil Water," and to discuss the same subject before the Minnesota Bankers' Association at Minneapolis. On his return from these conventions he will stop at Yuma, Arizona, to investigate conditions there.

Interesting evidence of the direct effect of properly prepared lands was recently received by Campbell from a Metropolis, Nevada, grain field prepared under his direction. In the form of three stools of wheat, one stool had 81 stalks, one 103 and one 120, each the result of one grain of wheat drilled in well prepared soil that was liberally supplied with fertility through well planned and timely work. This crop was raised without irrigation, but was prepared for by summer tillage in 1921 and grown this year.

More evidence of what cultivation of a growing crop means was sent to Campbell by A. B. Shield of Delano, Kern County, California. In four heads of wheat from a stool grown on Shield's ranch. This stool had ample space and was cultivated while growing, no fertilizers or irrigation being used. The stool contained forty-four heads averaging 78 grains each or slightly over 3400 grains from one stool. Such results, says Campbell, simply mean that under certain physical conditions brought about by the right kind of tillage at the proper time, very much more grain, fruit or vegetables may be grown per acre than is commonly obtained. The usual query is "Does it pay?" to which Campbell replies very emphatically in the affirmative.

Campbell recently inspected a number of new orchards and vineyards in the southern and central portions of California to study methods and principles commonly practiced in preparing the land and the after care in irrigation and cultivation. One of these inspections was of a 4000 acre peach orchard of one, two and three-year-old trees belonging to the California Packing Corporation and located east of Merced, Calif. What

Campbell saw here in connection with his general observations shows that the real advantage of careful preparation of the soil before setting is sometimes, but not generally fully considered and appreciated.

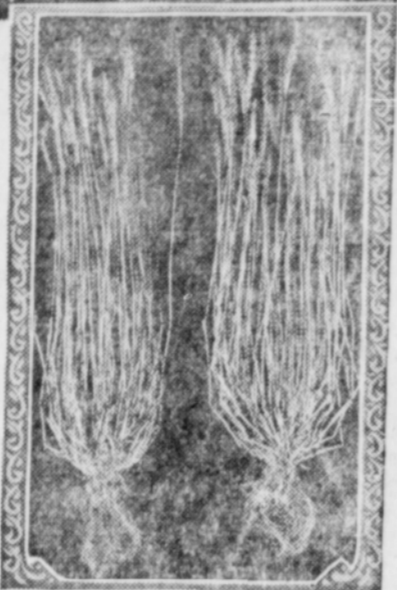
"It is very important to first prepare the surface by leveling," says Campbell. "Then arrange for irrigating in such a manner that water may not only be evenly applied over the whole surface but in as short a time as possible. In other words establish an even surface with reasonably short laterals. Too much water in the soil beneath some trees or too little for others is detrimental, usually. Again, the lower places, especially in heavy soils, gather more water, and frequently surface wet longer and frequently delaying timely cultivation, and not infrequently causing the higher spots to lose much of its already short supply. When the trees or vines reach the bearing period, the profit is increased or decreased in both quantity and quality of the crop. Both of these results are governed by the amount of fertility resulting from soil condition in which the per cent of moisture and air carried therein, especially during the warmer weather, is a big factor. The ability to supply this desired moisture in proper quantities the entire season through each year, is the first consideration.

"The next question is the perfect root bed. This should be supplied liberally with available plant food evenly distributed, so that when the trees or vines are set, there is a condition so favorable that not only the weaker sets may quickly take root and grow vigorously, but a healthy, uniform growth may be obtained the first year, which means much to the early and annual fruitage of the trees or vines.

"To achieve this result, after leveling, the field should be cultivated practically an entire season before setting to trees or vines, with only sufficient irrigation to assist in establishing the ideal root bed which should be both fine and fairly firm from the very start. The object is to continually carry the proper quantity of both air and water through the heated part of the season. Under this condition, with the high percentage of moisture held at the top of the firm soil, through careful and timely cultivation, there will be a liberal development and growth of that most desirable soil bacterium. This procedure increases the much needed plant food more evenly in all parts of the field, before setting, than can possibly be developed after setting. This gives an advantage not otherwise obtainable.

"Much can be said of irrigation and cultivation after setting, but to be brief, care should be taken not to over-irrigate, for to obtain the best results, the soil in and about the root zone must be moist but not wet. When the soil is saturated there is practically no healthy growth. As a rule cultivation is not only insufficiently frequent but too often is so untimely as to be of little value.

"There are certain conditions of moisture in the soil following irrigation, the same as following a rain, when the high value of cultivation to the final crop is very much greater. These conditions



must be considered. Nothing can prove this more convincingly than the soil auger.

"It is very desirable, so far as possible, to not only carry the percentage of moisture at the top of the firm soil, immediately below the mulch, but also to induce free access of air throughout the entire growing season. The ideal condition to furnish this air is to cover the firm soil with a granular mulch, neither too fine nor too coarse. To obtain this ideal mulch, the cultivation must be done when the soil is moist—not wet or dry. The loosened soil soon dries, leaving the firm soil moist to the top. This is usually easy to obtain in sandy soils, but to do this properly in heavy soils it is sometimes necessary to so over the field a second time, after first going over just enough to loosen the top when the surface is simply dry enough not to stick. This prevents the crusting or drying out. Then the second operation should come one to four days later, after the free water has gone down, leaving the soil moist, when it more readily separates, and makes a finer and much more effective mulch. This procedure means much to the tree, as a higher percentage of moisture is held in the root zone and a crusting and cloudy mulch is prevented.

"The high value of this plan of preparation and one season's cultivation before the setting of the trees or vines, is borne out by the interesting results obtained from careful summer tilling for wheat, oats and barley, and the preciseness of time in doing this work is just as vital. There are numerous records of large yields of wheat as high as 40 to 60 bushels per acre, grown on correctly summer tilled land, where nearby fields, prepared and sowed under the more common plan of 'any old way,' yielded very poorly or nothing at all."

The Southern Pacific Land Department "Bulletin No. 10" deals quite explicitly with questions of increased fertility by tillage. Bulletin No. 12 also explains in detail the summer tilling question as applied to the coast country. One or both may be obtained without cost by letter or personal application to Hardy W. Campbell, 981 Southern Pacific Building, San Francisco. A Bulletin is now under way dealing with tillage and irrigation of orchards and vineyards.

Campbell's greatest pleasure is to visit a farm or ranch where the proprietor or manager feels he is not getting satisfactory returns and work out, as far as possible, a practical remedy. The Southern Pacific follows the theory that its interests are tied up with the territory it serves, and Campbell and the Company wish to be helpful in increasing agricultural productivity.

CEDAR AND VICTORY

A baby boy was born to Mr. and Mrs. Harold McCreary of Portland on October 25. Mr. McCreary is well known as a former resident of Victory district.

Mrs. Frank Gerard and four-months' old son, John Milton, arrived Sunday from Los Angeles, California, to visit the parents and grandparents, Mr. and Mrs. W. F. Wood and other relatives. Mrs. Gerard had not been home for three years and the parents had never seen their only grandson. She will stay about two weeks. Visitors at the W. F. Wood home last Sunday to welcome her were the Rev. and Mrs. J. H. Wood of Gresham, Mrs. Alta Gentry and son Russel of Powell Valley, Mr. and Mrs. I. T. Wood, Mr. and Mrs. George Hayden, Harlow and Crystal Hayden and Floyd Stafford.

Dinner guests at the Sweet Brier Farm on last Saturday, October 25, were Mr. and Mrs. E. B. Williams, parents of Mrs. A. C. Althaus, Mr. and Mrs. Ellis McLean and son Corbett, of Portland and Herman Blaser of Troutdale. The dinner was in honor of the birthday of Mrs. Althaus.

I. T. Wood has a fine new cellar made of hollow tiling. It was built by C. P. Lord.

A. A. McMillan is employed in Portland now and drives back and forth in his machine. Mr. McMillan's mother and father have rented an apartment in Portland and expect to live there this winter.

Mrs. H. L. Douthit returned home last Saturday evening from Eugene where she went to attend the state Parent-Teacher association convention.

PLEASANT VALLEY

Mrs. C. G. Johnson and daughters, Mrs. Arcey Palmer and Mrs. Raner Smith of Centralia, Washington, Mr. and Mrs. Lester Richey of Pendleton, Oregon, were visitors at the home of G. H. Richey during the week, all relatives of Mr. E. Richey.

C. F. Kesterson transacted business in Oregon City Tuesday.

J. D. Lee, of Portland, was a Valley visitor last Saturday.

Ralph and Verne Richey went to Bull Run one day last week. Mrs. Meacham of Hillsboro visited her son, W. F. Meacham, and daughter, Mrs. E. P. Evans, of this place. Charles Erickson's entertained friends from Portland last Sunday.

A man once boasted that he had stayed home with his wife every night for 30 years. He was paralyzed.

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The Burnside Bridge Pays its Cost

The Property Owners along Burnside street pay over \$100,000.00 more in taxes each year than do the property owners along Ankeny or Couch streets, on account of the present bridge making the street a thoroughfare and consequential higher assessed valuations.

In the event the present bridge is condemned (it being already closed to heavy traffic) and not rebuilt, property along Burnside street will be assessed the same as along Ankeny or Couch streets and the general tax fund will loose over \$100,000.00 each year; our great traffic artery closed, trans-river commerce and travel seriously impeded and a growing district in the center of our city paralyzed.

In the event the new bridge is built the saving of \$100,000.00 to the general tax fund each year, together with further increased assessed valuations along Burnside street, will more than twice pay for the bridge during its natural life.

Further, we will have a central bridge vitally necessary to the business activity of the entire city, a great widened artery running east and west with many new buildings erected thereon and a city undivided within itself. This bridge costs money because it is substantial and ninety feet wide, almost twice the width of our present bridges.

The new bridge is to be constructed in accordance with the Laugaard Water Front Project and the City Beautiful Plans, and is approved by United States Officials and endorsed by State Officials, the Commissioners of Multnomah County, Our Mayor and City Commissioners, The Planning Commission, The Entire Bodies of Organized Labor, The Chamber of Commerce, Association of Building Owners, The Associated Contractors, Various Automobile Associations, Greater Portland Association, and numerous Clubs and Civic Bodies.

We Must Have Bridges

Paid Adv.

BRUNS LUMBER CO. IS PROGRESSING

The mill of Bruns Lumber Company near Sandy is running to full capacity and putting out 20,000 feet of lumber a day or a total of 6,000,000 feet of lumber during this year. The company is hiring 25 men and five trucks. The trucks deliver lumber from Mt. Hood to Portland and from Clackamas river to the Columbia river.

Some new improvements have been made at the mill during the past year. A new lathe mill and a planer have been installed. It is the intention of the company to add a woodworking machine to the equipment which will be used for making doors and window frames and for cabinet work but it will not be installed until this winter.

It is the aim of those in charge to conserve everything possible and thus avoid waste of material. There is at the present time very little waste at the mill. Practically all of it is used for making various marketable articles. It has become very popular to use slabs for making summer homes and mountain hotels to make them look like log houses. A ready sale is thus made for the parts of the logs that are not suitable for lumber. Some of it is also made up into slabwood. The mill also makes many lathes.

Bartsch Brothers have taken over the work of making broom handles and mop stick handles. The mill supplies the material and they make the handles. All of the work is done at the mill.

PLEASANT HOME

At the Baptist church Bible school will convene at the usual hour on Sunday. Baptist Young People's Union meets at 7:30. The sermon at 8:20 will be by the Rev. A. J. Ware of Oregon City.

Notwithstanding a veritable down-pour of rain, a number of the members of the Baptist church went to Gresham on October 25 and gave their pastor, the Rev. D. Q. Barry, a birthday surprise. When he came home from the prayer meeting he found the parsonage in possession of a happy group. After spending the evening in a social manner refreshments were served and the company returned, after presenting the pastor with a token of esteem and wishes for many happy returns of the day.

A baby girl was born to Mr. and Mrs. Joseph H. Dollowitch November 1. The baby died immediately and was buried November 3. Mrs. Dollowitch is doing fairly well at the home of her parents, Mr. and Mrs. J. B. Lent in Pleasant Home.

The Ladies Aid of the Methodist church will meet at the home of Mrs. M. Lennartz next Wednesday afternoon, November 8. Many articles, beautiful and useful, are being made for the bazaar on the evening of November 24.

HALEY

The 11th chapter of Romans will be studied at the morning worship hour at the Baptist church. The subject of election will be continued, and the popular view, that the Jews will set up a commonwealth in Palestine and be all converted at the second coming of Christ, will be dealt with. The evening service will be given over to a discussion of the so-called Compulsory Education Bill. Any one who desires will have opportunity to speak on this bill either pro or con. Prayer meeting every Thursday evening at 7:30.

CORBETT

The Letsinger family moved to Kelson, Washington, last week and Mrs. Rickert is now occupying the cottage vacated by them.

Ralph Kipcaid was stricken with appendicitis and was taken to the St. Vincent hospital where an operation was performed. He is reported as well as could be expected after the ordeal.

Miss Georgie Kieger, of Portland, was the guest of Miss Eliza Berner, at Ferndale Place, Sunday.

The upper classmen of the high school entertained the freshmen at a Halloween party at the grange hall Friday evening.

And the night shall be filled with music. And the cares that infest the day shall fold their tents like the Arabs, And as silently steal away.

—Longfellow.