

General Irrigation Guides Recommended for Farmers

Editor's Note: This is the second in a series of articles on irrigation for the Rogue River valley. Some of the information is from a booklet on irrigation-soil and water management prepared by a teacher trainer in agricultural education, University of Nevada, Reno, Nev. The rest was supplied by irrigation district managers and various agricultural authorities.

Right now it looks as if farmers and orchardists will be faced with a definite lack of irrigation water this spring. Since every drop of water must be used to good advantage it will be even more important next irrigation season that good irrigation practices be followed.

Before a person can do a good job of irrigation he must have his land properly prepared, irrigation district managers assert. And after this he must follow definite principles of irrigation. The Rogue valley soils cover a great variety. Much information is needed on soil and land care as well as on irrigation.

Do you as a farmer, know what these terms mean—percent of slope, water table, field capacity, wilting point, soil profile, contours, water holding capacity, sheet erosion, and gully erosion?

A soil profile consists of well-defined layers of soil. These layers or horizons are revealed by digging straight down into the soil. First is the top soil, then subsoil, then third substratum or parent material.

These definite soil profiles can be found in most farm areas in the United States as they can in the Rogue valley.

Ideal Irrigation Described

An ideal irrigation should wet all the soil filled with plant roots. The soil acts as a reservoir to store irrigation water. Plant roots take from one to several weeks to absorb the stored water to the permanent wilting percentage or the point at which the soil has insufficient moisture to prevent plants from wilting. Different soils have different water holding capacity. A farmer needs to water sandy soil about twice as often

as loam and loams about twice as often as clays.

However, over irrigation wastes water and may harm plants. Soils which have a definite hard pan will pond water and if over irrigated will cause the roots to die. Generally, irrigation authorities say, the water holding capacity of sand would be 1, loam 2, and clay 4. Considering weight, sand holds about 7 per cent of its dry weight in water, loam 14 per cent and clay about 28 per cent.

Most crops have a definite pattern of water usage, agricultural experts say. Soil should be filled but not saturated with water in the spring. An orchard's irrigation pattern might be, depending on type: April, 1 acre inch, May, 3 acre inches; June 5 acre inches; July and August, 6 acre inches; September, 3 acre inches, and October, 1 acre inch depending upon type.

The slope of land has an important effect upon irrigation, irrigation authorities note. Per cent of slope is the term given the fall or rise expressed in feet, for each 100 feet of horizontal distance. A 5 percent slope, for instance, would fall or rise 5 feet per hundred feet. It is important, also, to remember the dominant slope or direction of the field and the horizontal slope or crosswise of the field. Both are equally important.

Land Leveling Practices

A farmer is often limited in what he can do to change the slope. Leveling in deep soils can change the slope within limits. On a steep slope he can run his water on the contour or sprinkle. Or he can change his crop practice and plant permanent woodland or pasture and not plow the steep land.

Irrigation authorities warn that before spending too much money on land leveling a farmer should ask the Soil Conservation Service to help him study all factors involved.

An irrigation system for each farm should be properly designed to prevent soil erosion and/or excessive irrigation water use. Erosion of top soils is one of the most

damaging result of over irrigation. Other possible damage comes from leaching of water soluble plant nutrients and water logging. About one-fourth to one-half of the top soils may be washed away in a 25-year period when the slope is steep and the soils shallow. This results in declining crop yields hence lowered income. Soil lost does not return, irrigation authorities explain.

How to apply water to crops without wasting away the top soil is one of the major irrigation problems, authorities note. In wild flooding on steep slopes shorten the length of run. The steeper the slope the narrower should be the border irrigation. Be careful with smaller streams of water on new ground or ground just planted.

Level Borders

Level borders or basins can be used for all close growing crops and most cultivated crops. They can be used on soils suited to adequate leveling.

Generally, borders are not adaptable to lands with a slope of more than 2 per cent, nor on land with an intake of more than 3 acre inches an hour. Cross slopes should not exceed 1 inch of border and less is desirable.

For non-sod crops like alfalfa, small grain, borders can be used on land slopes up to a maximum of 4 per cent. Well sodded pastures can be irrigated on slopes up to a maximum of about 6 per cent.

In both cases, special water application practices, and facilities for collection and use or disposal of the surface run-off will be required on steeper slopes. Borders cannot be used for steeper slopes unless sprinkling or other methods could be used to get crops established. Usually borders require more expense and land leveling than furrows or corrugations, irrigation authorities point out.

Furrows Can Be Used

Furrows can be used for cultivated crops, orchards and vineyards. They can be used on all soils, except very high intake rate sands that provide for poor lateral distribution of water between fur-

rows. This method is not adopted on slopes of more than 2 per cent. A method of distribution is needed so all furrows get the same amount of water. These include water-curved siphon tubes, small boxes, or a distribution basin with sod to regulate the water.

Corrugations can be used for all close growing crops. The term furrows applies to cultivated row crops, mainly, and corrugation to other forms of irrigation which uses small individual streams for irrigation. Corrugations can be used on land slopes or on a slope of 1 to 8 per cent. This also applies to furrows.

Contour ditch or controlled flooding can be used for all close growing crops, particularly wild hay. This can be used on all soil types. It is generally used for land slopes between 1 to 8 per cent and with medium to fine textured soils. It can be used, also, on slopes up to about 12 per cent.

Sprinklers are adopted to almost all commonly irrigated crops. They can be used on all soils having an intake rate more than 0.2 inch per hour. In some cases, they can be used on tighter soils.

Soil District Plans Meeting

The annual meeting of the Sams Valley-Beagle Soil conservation district are scheduled for 8 p.m., March 21, in the Eagle Point Grange hall, according to Elwood Abbott, district chairman.

Three supervisors will be elected, 1959 progress will be reviewed and 1960 plans for soil, water and plant conservation will be discussed, Abbott said.

Sams Valley development and watershed protection will be featured on the program. A film, "From Ridge to River" will be shown.

The Sams Valley - Beagle Soil Conservation district covers nearly all of the northern half of Jackson county.

All interested persons are invited to attend the annual meeting, Abbott said. Coffee and ice cream will be provided by the district. Wives are asked to take pies.

Grading Standard Discussed by OSC

Corvallis—More lambs now being readied for market will qualify for the choice and prime grades when new U.S. department of agriculture lamb and mutton standards go into effect March 1, reports Stephen C. Marks, extension agricultural economist at Oregon State college.

This will be particularly true for the more mature lambs that usually are sent to market this time of year, Marks said. This means that many lamb producers may want to hold their lighter lambs until the new grading standards go into effect.

Under the new grading standards, announced by USDA earlier this month, lamb carcasses will need to carry less "finish" or fat to grade prime or choice, and more emphasis will be placed on carcass conformation, Marks explained. This should provide leaner lamb cuts more to the homemaker's liking, he added.

The new standards are expected to have less effect on spring lambs, Marks said.

Official grades for lamb are USDA prime, choice, good, utility, and cull. Only the higher grades are usually available in retail meat markets.

FARM NOTES

Washington - (UP) - There may be an upturn in milk production this year, the Agriculture Department said today. This could mean that dairy surpluses will grow again.

The numbers of milk cows for the year may average as high or higher than in 1959 and a further increase in production per cow is likely, the department said in its publication, "The Dairy Situation." It is possible, the department said, that milk output will increase more rapidly than commercial use of milk and its products during the next year or so.

Chicago - (UP) - The board of directors of the new American Agricultural Marketing association met recently to adopt by-laws.

The association was organized recently by the American Farm Bureau Federation to serve as a national bargaining organizer for farm cooperatives.

Washington - (UP) - The Farm Bureau predicted today that American poultry producers and processors face tough competition for the lucrative European market.

During the past two years the United States has shipped a substantial quantity of frozen turkeys and chickens to Europe. The rising European standard of living, especially in Western Germany, has given U.S. poultry a ready and expanding market at good prices.

A recent survey, however, showed that producers and packers in Denmark and Holland rapidly are adapting themselves to supply the German, Swiss, and other continental markets with ready poultry, competitive with U.S. products in price, quality, and packaging.

Dogwood Borer Seen In Oregon

Salem—Dogwood borer has been found in Oregon for the first time, coming in on shipments of nursery stock from Tennessee and Alabama.

The trees on which it hitchhiked into Oregon are being treated or destroyed under supervision of the state nursery inspectors. Also, immediate steps are being taken to prevent spread to the state's established dogwood trees.

The borer, a clearwinged moth, damages by girdling the plant at the base.

Grain Exports High January Records Show

Salem - January grain exports out of Portland approached an all-time monthly Oregon high, with 7.9 million bushels or 23 full cargoes leaving the docks there, according to T. Ralph Harry, grain inspection division chief, state department of agriculture.

Export loadings for the first month of this year were 2.7 million bushels ahead of December and only 117,185 bushels under the combined Portland-Astoria export loadings in January, 1959. No grain for export was loaded at Astoria last month.

Wheat accounted for about 60 per cent of the January exports, barley 30 per cent and oats and rye the remainder.

--- CHIT CHAT ---

By JOE COWLEY
Mail Tribune Farm Editor

This is the time of year a man driving past a well kept farm remarks to himself—"To live in the country! That's for me."

Carrying his spring daydreams further, he sees himself perched on the back step of his house, puffing on his pipe watching his steers grazing in the field developing into eventual thick beef steaks and a cow or two bawling in the barn waiting for the lady of the household to milk her. Idly he speculates what his wife would look like on a tractor seat, taking over, of course, when he is too tired from office work to do his regular farming.

If the would-be farmer carries through with his daydreams he may get a rude jolt, if he doesn't take a few simple, but necessary precautions. First, he should check with county planning commission office in the courthouse to see what zoning is being considered for the area in which his future farm is located, if an subdivisions are platted near it, or if real estate developers might be cutting new roads through near his future land.

Then, it might help to check the soil type with the county extension agent, plus the back history of the farm. He might study the land himself to see if his back acreage is accessible from a road so in the future he could sell it for lots if he wanted to. The county sanitarian can tell him the condition of sewage disposal and water supply.

It's true, agricultural experts and long experienced full-time farmers do sound gloomy about a greenhorn's chances in part-time farming. But lots of people are doing it, experienced and inexperienced. Here in the Rogue River valley a large number of people are part-time farmers. Two of our friends said they would rather farm than play golf or follow some expensive but profitless hobby. Both of them, however, were raised on farms. There is certain security that goes with owning some acreage (except when the mortgage payments and taxes become due.)

Small farms can pay, the experts say, if they produce high income crops. Some full-time fruitgrowers are becoming interested in raising sour cherry trees as interplants with their other fruit trees. This type of fruit tree produces a large quantity of fruit, about up to 5 to 7 tons per acre on irrigated land with a minimum of care. No, you won't get rich with this fruit, but it will be a good steady money-maker. Bagley cannery in Ashland is preparing to handle these cherries again this upcoming season. There are many other ideas.

Generally the experts advise aiming for a gross profit of \$10,000, \$20,000 and even \$50,000. Plan to buy and sell at the best times. Many profitable part-time farmers handle their own retailing. Costs can be cut by using second-hand machinery, doing all the labor and repair work. Naturally, the more feed you grow, the less you have to buy, and the cheaper it is for you.

Farmers should also figure profits before they expand. A small family dairy herd of 25 to 40 cows does have the advantages of family interest and incentive, the experts point out. Figure it this way—A 120-acre farm with 20 cows averaging 10,000 pounds of milk might make a net income of \$3,980. Expand to 30 cows and the increase is \$4,470, perhaps. However, it might take 7 1/2 years to pay back the \$4,700 invested in the new cows and equipment. Expand to 50 cows and the net profit drops to \$3,970 because of the need for a \$50,000 investment. Of course, if you get much bigger, you increase your net profit but then you are in the hired man class.

One idea which might work for a milking-machine salesman friend is "cow sitting." A fellow in Michigan does this and makes \$5 an hour for the first 2 hours and \$1.50 for each

additional hour plus 7 cents a mile travel pay, according to the Ford Almanac.

We know of at least two part-time farmers who are raising Christmas trees. This is a fairly new enterprise for this area and requires much study and even more experimentation.

Seven farmers in Ravens, Mich. feed out pigs on contract to a cooperative grain elevator company. The co-op provides the pigs and the feed and the farmer the labor and equipment. A part-time farmer in that area uses self-feeders to care for the hogs while he is at work. This same gimmick might be profitable in the Rogue Valley area with broilers. The Western Farmers association officials here say they can make broiler raising popular here. We don't know. We haven't seen the contracts.

Part-time farmers might build up their farms and improve their income by retiring crop acres and receiving annual rental through the conservation reserve program.

Speaking of hens, a Waynesboro, Pa. couple, according to the Ford Almanac care for 10,000 layers themselves. They work from 7 a.m. to 5 p.m. Every 20 months they sell out their flock and take a two-months vacation. Feeding and watering is all automatic, according to the Ford Almanac.

A dairyman in Dearborn county, Ind. keeps 40 cows and heifers on a 125-acre ranch. He uses a self-feeding trench silo and a loose housing system.

Two brothers near McHenry, Ill. have found that heavy cropping is the key to profit on their 60-acre farm. Ten acres of alfalfa provide all the hay for 20 top-producing cows.

Sometimes, too, neighbors can jointly own farm equipment or can form a partnership to help out on the labor end. For instance, three farmers in Lincoln county, South Dakota, each own a quarter section of land but operate their farms as a single unit. An amount agreed upon is drawn out monthly by each of the partners. Then when the books are balanced at the end of the year, the amount left is equally divided. Each pays his own taxes and makes his own permanent improvements.

So much for part time farming. Need money to buy equipment, livestock, buildings or land? You can get it at the Production Credit association, National Farm Loan association, or the Farmers Home administration.

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ONLY 3 SCABBY APPLES OUT OF 600 BOXES PICKED

"Cyprex has made it possible for me to continue raising apples in this area," says Oregon grower

Alfred Hopper, Box 112, Route 1, Freewater-Milton, Oregon has 100 acres in apples. In 1959 all were sprayed with Cyprex 65-W, the new fungicide chemical. Applications were made at pre-pink, pink, calyx and first cover—at the rate of 1/4 lbs. per 100 gallons.

1958 was bad year

Said Mr. Hopper at the start of the 1959 picking period: "In 1958 I sprayed 10 times with other materials for scab control and ended up with 25% scabby fruit and another 25% russeted fruit from the use of these materials."

"This past season I sprayed four times with Cyprex and found three apples out of 600 boxes picked so far. Cyprex has made it possible for me to continue raising apples in this area."

Other apple growers in the surrounding district also applied four Cyprex sprays in 1959. Varieties treated were: Red and Standard Delicious, Jonathan, Rome, Golden Delicious, McIntosh and Lodi.

Results with Cyprex were uniformly excellent in all the orchards.



Alfred Hopper and scab-free apples from his 1959 crop.

How Cyprex works to give long-term protection PLUS eradication

Cyprex is an entirely new fungicide chemical that has proved its value in hundreds of tests over a 5-year period. It works as a protectant and an eradicant in control of scab fungus. It is equally effective against apple scab and pear scab and also controls cherry leaf spot.

Applied as a standard spray, it spreads a tough fungicidal barrier on leaves and fruit that gives top scab control even through heavy rains. Cyprex has built-in spreader-sticker action. Some Cyprex actually "moves around" during rains to cover adjoining new growth, while the original tissue remains protected. Cyprex penetrates throughout the leaf where it works from the inside out—killing scab spores that land. This is called local-systemic action. Even when Cyprex is sprayed after scab infection begins and spores begin to germinate, Cyprex can knock out the infection inside the leaf. The spray also has deposited a protectant

covering on the leaf. The next time it rains, this stick-tight fungicide will be ready to knock out new spores before they penetrate.

No fungicide in common use can give you the protection, plus extra-long eradicant action, you get with Cyprex. Cyprex is compatible with most commonly used insecticides and other fungicides. It's non-caustic, low in toxicity to orchard workers.

All the extra advantages you get with Cyprex give you that margin of control that can make the difference between fair and excellent crops. However, none of them eliminates the need for proper timing, good coverage, and a sound schedule.

Consult your local agricultural authorities for further information. Or write for leaflet PE 5061, American Cyanamid Company, Agricultural Division, Los Angeles 54, California.

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