

IRRIGATION NEEDED TO PRODUCE LARGE CROP, REPORT SAYS

Many crops in the Willamette valley are injured each year because of lack of water during the summer months. Irrigation trials at the permanent station for the last 17 years show an average gain of 50 bushels of potatoes, two tons of clover or alfalfa, five tons of beans, and three tons of corn, when water is applied. These crops were grown on brown silt loam on the valley floor. The average depth of water applied for the season was 6 inches.

The soil best suited for irrigation are the finer working and sandy loams that are neither sticky nor coarse. The soil survey of the valley nearly completed indicates that there are about 200,000 acres of bottom land that need irrigation. The free working valley floor soils where the water can be applied will make 50 to 60 per cent increase in crops due to supplemental irrigation.

Many crops respond to summer irrigation in the Willamette valley. Pasture lands have been kept green and have carried two cows to the acre. The early growth can be cut for hay, and a good surplus afterwards provided for maintaining the milk flow in the late summer. Late season truck crops all require irrigation. Summer irrigation has also made early fall plowing possible.

Water filings have been made by some 425 applicants in the valley. Half of the water is pumped from wells and the other half comes from streams. Reports from more than half of the users of irrigation show increased yields, quality and marketability. Increases from 25 to 300 per cent are reported.

Difficulties reported are those of distributing water, getting sufficient water, and trouble from siphons and weeds.

"A person with a quarter section of river bottom land will do well to provide irrigation for 10 to 40 acres," says W. L. Powers, chief of the soil department at the Oregon experiment station.

'GAS THE GROUND PESTS' IS ADVICE

Methods Explained For Use of Calcium Cyanide in Fighting Field Invaders



One tablespoonful of calcium cyanide is enough to make the burrow of a groundhog family uninhabitable. Be sure to keep away from the fumes, and to wash the hands after applying the poison.

ITHACA, N. Y., May 20.—Protect your garden truck and other crops by gassing the ground.

This is the surest means of getting rid of the burrowing animals that ruin gardens and fields. That includes not only the woodchuck, but such burrowing animals as prairie dogs, gophers and ground squirrels.

But avoid killing the skunk, not because of its notoriety, but because it's protected by law. Therefore, before giving woodchucks the gas treatment, be sure no skunks are in the holes. Skunks are valuable for-bearing animals.

The gas treatment is advised by M. D. Pirnie of the extension service of the New York State Agricultural College here.

Calcium cyanide and carbon disulphide are the poisons suggested for the gassing process. Shooting, trapping and poisoning are good enough, says Pirnie, but the gas method is quickest and surest.

The openings. Heavy sods are good for plugging the holes, and the gas liberated from the flakes or granules of cyanide will do the job.

Carbon disulphide works the same way, except that it is a liquid. Soak a small wad of cotton or old rags with the bisulphide and shove it well into the burrow.

It is well to fasten the cotton to the end of a stick or a stiff wire. Then after it is placed as in the cyanide treatment, plug the hole or holes tightly.

Care Essential

Some persons say exploding the carbon bisulphide gas gives surer results. They reopen the hole after about half an hour and set it off with a torch fastened to the end of a pole.

Carbon bisulphide is so explosive and inflammable that it is unwise even to smoke while placing it.

These precautions should be strictly observed.

Carbon bisulphide is explosive and must be kept from flames and heat. Calcium cyanide is very poisonous and must never be scattered where poultry can find a single particle.

Cyanide cans must always be opened outdoors, for a concentration of the gas from it can prove fatal to humans as well as to woodchucks. The hands should always be washed after using cyanide.

How to Do It

In using either calcium cyanide or carbon bisulphide, plug all the openings but one. With calcium cyanide take about a tablespoonful and place it deep down in the burrow.

In extensive holes, with several openings, it is best to place some cyanide in each of them, closing all

the openings. Heavy sods are good for plugging the holes, and the gas liberated from the flakes or granules of cyanide will do the job.

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Farm Reminders

Cultivation of row crops in Oregon should begin while the weeds are small, says the experiment station. The first cultivations are usually made with a harrow or weeder and later cultivations with a toothed cultivator. The cultivator should be run about three inches deep or just deep enough to stir the soil sufficiently to kill weeds and cover up weeds in the row. In some instances in rather heavy soils deep early cultivation should be made.

Kale Needs Manure

Land for kale should be well manured and after plowing must be kept clean of weeds until planting time, which is usually after a favorable rain in June. Kale plants should be set deep to make them grow close to the ground and avoid excessively tall stalks in the field, the experiment station finds. The tall stalks are more susceptible to winter injury.

Weeds Killing Told

The principal object in cultivating row crops like potatoes or corn is to kill weeds. Many farmers think their cultivation is largely for the purpose of stirring up the ground, but really the cultivation is principally to prevent weed growth, since weeds are the worst masters of moisture we have. Cultivation should be just deep enough to sufficiently stir the soil to kill the small weeds, the experiment station finds. Deep cultivation, which digs up a lot of moist weeds, not only costs more but may do much harm by tearing off a great many roots. When a field of potatoes or corn is free from weeds and has a loose dry layer of soil on top there is nothing to cultivate for.

Mildew Work Told

Onion growers in Oregon may discover mildew attacks following the recent wet weather. If outbreaks occur, the experiment station will appreciate notification. Instructions as to control measures will be forwarded immediately. Notice of such attacks should be sent to H. P. Bars, professor of botany and plant pathology at the agricultural college.

Plant is Explained

An irrigation plant operated by electricity is being installed on the farm of Fleckman and Moohan on Riger Island. No good results were obtained by these vegetable gardeners with a 2 1/2 inch outfit last year that they are installing a bigger outfit this year. Irrigation more than doubled their yield of tomatoes, according to their report.

The new outfit consists of three-horse power motor directly connected to a five-inch centrifugal pump. Water will be pumped from two wells that were sunk on the place last year. Leveling has been done on two fields in preparation for irrigation, and more work will be done this fall so that river water can be used.

POINTERS IN SPRAY FOR ORCHARD TOLD

Only a few fruit growers in Oregon are getting maximum results from their spray program. This is not necessarily a result of applying wrong materials, having poor equipment, or spraying at the wrong time, but a lack of skill in handling the spray rod, reports H. P. Bars, professor of botany and plant pathology at the agricultural college.

The usual difficulty is reaching the uppermost parts of the trees. Many growers who pride themselves on their thoroughness would find if they checked up carefully they are missing many branches or hitting from only one direction. This prevents the complete covering of the foliage and fruit with the spray material.

Diseases and insects develop in the uppermost part of the trees as the result of this lack of thoroughness. They then spread to parts below that are not thoroughly protected. It is not enough to guess that the tree has been covered, Professor Bars declares. The operator must know that this has been accomplished.

Farm Facts

The last quarantine against foot-and-mouth infection in Texas has finally been lifted. No new infection was discovered one month after the outbreak of this disease, Sept. 27, 1924. But the territory under quarantine has been held so until now to give any dormant infection time to come to life and to guard against possible further spread of the disease.

Government economists predict better times for beef producers. They point to the fact that prices of beef cattle this year have been higher than last year's, and to the more significant fact that this business has come to a point at which the potential supply of beef is much reduced.

New York city hotels annually buy about \$3,750,000 worth of fruit and vegetables. Yet that is less than 2 per cent of the total value of all produce handled by the New York city trade.

VITALITY OF SEEDS FACTOR IN GROWTH

YONKERS, N. Y., May 20.—A new method of testing seed for its vitality has been devised by Professor W. E. Davis at the Boyce Thompson Institute for Plant Research here.

The new vitality test is said to show in 12 hours what heretofore required from five to two years.

Dr. Davis has been on a year's leave of absence from the Kansas State Agricultural College for special service at the research laboratories here. According to William Crocker, director of the institute, Dr. Davis' test is an important scientific contribution and a practical advance in seed testing.

"Professor Davis' work in throwing seeds into and out of the dormant condition is an important advance scientifically, explaining why stratification fails and probably how dormancy is produced in nature," says Crocker. "This finding is the very crux of our nursery troubles."

"Also he has made an advance in showing how daily alterations in temperature bring about the germination of certain seeds. Some seeds that have given gardeners and nurserymen much trouble can be easily handled by the use of proper daily alternating temperatures."

The very simple apartment is one which the architect said was very popular. It had only one window, but that one faced the east. Yellow and sea-green, he told us, were popular hues for the walls, the curtains, the furniture, and even the dishes.

He produced a sketch done in colors. "This particular breakfast room," he explained, "radiates light, and it is the proper color treatment that produces the light, for there is but one window. The ceiling and walls are done in a lovely sea-green flat-tone paint which is sparkling in itself and attracts light to it. The woodwork and window trim also are done in a green—but it was made a trifle darker than the walls.

BEAN LEAF-BEETLE

The small beetle that eats holes in the leaves of bean plants is called the bean leaf-beetle. To combat it, dust with one pound calcium arsenate thoroughly mixed with nine pounds hydrated lime. Or spray well with a mixture of calcium arsenate, 3-4 pounds, hydrated lime, 1 1/2 pounds, water, 50 gallons.

Pimples



You will be startled how quickly and thoroughly you can stop skin eruptions and beautify your complexion with S.S.S.

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DINING ROOM NOW GIVES WAY BEFORE BREAKFAST NOOKS

Efforts made lately to help a young couple from the east to find a house on the Pacific Coast revealed the fact that the formal dining room is becoming obsolete in small homes. This was true in Oregon and almost with one accord the real estate men spoke of the room in which meals were served as "the breakfast room."

As a rule, less space has been allotted to this than is given over in the older houses to the dining room, and the space thus saved was either added to the living room—which, incidentally, seems to grow larger as the dining room grows smaller—or was converted into a tiny apartment suitable for a bedroom or library.

A Simpler Note is Struck

At what seemed like a reasonable price, the writer and her friends called upon an architect to ask his advice about building. During the conversation, books of house plans were produced, and here again were breakfast rooms, instead of dining rooms.

The architect explained that there were a number of reasons for the preference for an informal room in which to eat. In the first place, he said, the old-fashioned dining room takes up too much space in the house plan, and space costs just so much a square foot. In the second place, the furnishings of the old-fashioned dining room cost too much in ratio in the service they give. Not only are the chairs and tables and dressers expensive because they are of well-finished expensive wood, but the linens, silver, china and glass have to be in accord with the room in which they are used.

The architect assured us that in many homes the breakfast room serves for just the purpose which its name indicates, and no more, for the other meals are taken outside.

The arrangement is popular also in families which eat at home for in these more or less servanless days, an informal meal in an informal room, especially when she invites guests. Usually the table in the breakfast room, which opens off the kitchen, can be extended to include six or eight persons. In houses where this room is omitted altogether, the breakfast alcove is situated in the kitchen.

Farwell Mahogany, Silver, Damask

In further explanation of the increasing popularity of the modern arrangement, the architect showed us books of furniture. There were gaily painted chairs and tables and sketchy cupboards like the one in the sketch, fern boxes and plant stands.

To furnish it are used carefully designed pieces of furniture built of inexpensive wood painted with light colors, and usually finished in enamel. A table so finished is cleaned in a moment by rubbing a damp cloth over it. Runners, dollies, and small lunch cloths are in order, rather than the full tablecloths the dining room seems to demand. Everything about the idea of the breakfast room tends to minimize the work of the householder.

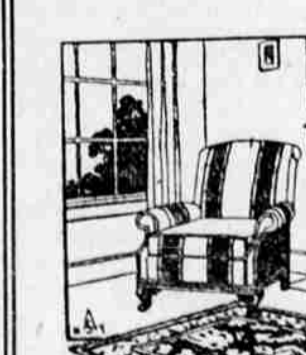
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The furniture was finished in a bright and cheery yellow enamel—a decorative gloss and a surface easy to keep clean. Little decorative motifs in complementary colors, and stripes of vivid green were used to dress the furniture and add to the effectiveness. The china cupboard was lined

Very Provoking

A negro was recovering bricks at the top of a ten-story building in Los Angeles where some repair work was going on. Another negro on the ground was loading the bricks on the carrier. The negro above accidentally dropped a brick, hitting the one on the ground squarely on the head. He was very indignant and yelled to the one above: "Be a little more careful up there, nigger. That brick hit me and made me bite my tongue."—The Highway Magazine.



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FOUR - ROOM BUNGALOW IS SPACE SAVER

PLANS SUPPLIED

Detailed plans and specifications of this home may be obtained at low cost by writing to the Home Plan Editor of The Guard.

WHERE could one find a more charming four-room bungalow design than this? Living room, dining room, kitchen and bedroom—just right for the couple starting out, or the small family.

Its size is 26 feet by 30 feet 10 inches. The arrangement of the interior is ideal, in that not an inch of space is wasted. It is a model of convenience, and is well-equipped with every modern built-in feature.

In the tiny house, of course, one does not use space for the vestibule or hall. The front door opens directly into the living room. Here are long wall spaces for davenport, piano and other large pieces of furniture. A closet in the hall between living room and bath is convenient as a coat closet.

The dining room is made delightful with a pair of built-in corner china closets. This is not an extravagance, even for the four-room house, because one can buy them ready-made nowadays in lovely patterns at reasonable prices. The basement stairs allow space, by using corners which would not otherwise be used.

The kitchen is a model of convenience in arrangement and built-in equipment. The basement stairs placed at the back, and the entry where the refrigerator may be placed are so arranged that there is no unnecessary tracking into the kitchen.

The bedroom occupies a front position. The bathroom is between bedroom and kitchen. It is not necessary for the housewife in the kitchen

with a yellow similar to that used on the furniture.

The wicker flower box was left in the natural shade, but was given a couple of coats of varnish to make it durable and waterproof.

"For the drapes, an exquisitely fine silk material in pale yellow was used, which gave the light a more mellow tone. The little glass curtains were of very sheer net.

Inexpensive earthenware dishes carrying touches of the same yellow and green, with dishes of vivid blue and lacquer red, make a picture in the corner cupboard. I not only built but furnished this particular house," he concluded, "and this room pleased the owner more than all the others."

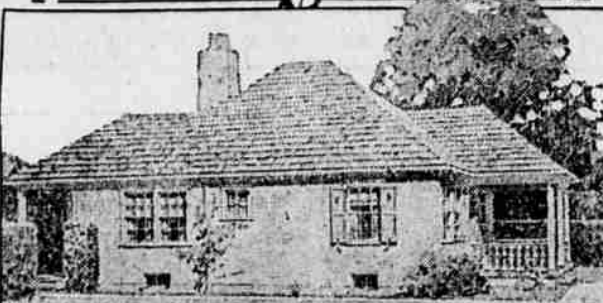
Plaster Made in Patching Cartons

To meet the requirements for materials for home-repairing and to make it possible for painters, decorators and home owners to do small patching jobs without the expense of buying large quantities of plaster the United States Gypsum company is putting on the market red top patching plaster in 2 1/2-pound cartons.

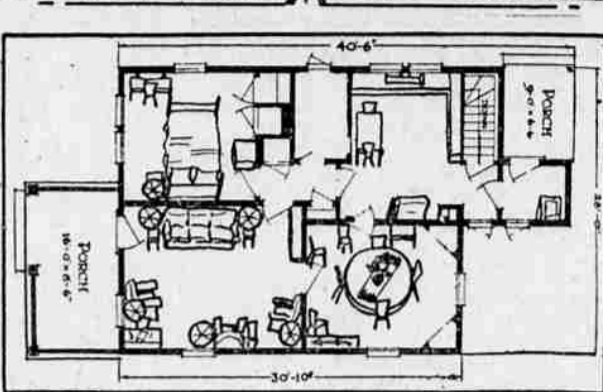
It is ready-mixed, subject to quality-control at the factory, so as to require the addition of water only before it is applied. It has been formulated to work easy, to spread far and to set after ample time has been allowed for smoothing the surface. It is adapted to filling fine cracks or larger wall defects.

Plaster of paris and other substitutes used by decorators and householders for such work do not make permanent repairs. This material makes a chemical bond with the old plaster. By making the patch homogeneous with the old plastering it safeguards against reappearance of the crack or hole. It makes the patch uniform in appearance with the rest of the wall and its equal in strength and durability. It eliminates the necessity of dealers handling "broken bags."

A nail on which to hang the broom will save considerable money as well as annoyance in the course of a year. Here a hole through the handle of the broom about an inch from the top, and run through it a loop of wire or strong cord if the hole is not large enough to admit the nail on which it is to hang. Always kept free from



Courtesy, Curtis Companies, Clinton, Ia.



to pass through the dining room on her way to answer the front door. The little passageway takes care of that.

There is a built-in linen case in this passageway, as well as the coat closet. In the bedroom is a chest of

trays, built-in, in addition to the hanging closet.

A full basement is divided off into heater room, coal bunker, storage and laundry.

This home, in the average community can be built for \$5200.

KITCHEN OF VARIED METHODS IS NOVEL

It is really surprising how many little things women can devise to make their kitchen work easier—things many other women leave for men to do and for which they seldom find time.

Of course nails must not be driven just anywhere into woodwork. With a little care, however, a great many conveniences may be put up in such a manner as to leave no disfiguring marks when it is necessary to remove them. For instance, two or three rows of at least eight cup hooks, each with olefin behind it, may be put up over the drainboard or the table to hold long-handled cooking utensils that are light in weight. Lacking cuphooks, nails may be used by first driving them into the piece designed for the top row, tack to the back of it a strip of olefin of sufficient size to protect the wall below, clear down to the table. Then with nails of as small diameter as can be bought, fasten each end of the cross-pieces into the woodwork adjoining, adjusting the top one first, and driving the nails diagonally into the sides of the casings wherever possible. Towel racks and other fixtures should be put up in the same way, never nailed down into the face of woodwork or in plastered walls if it is possible to use the side of a casing.

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the floor when not in use, and left over night occasionally in a pail of water when the whisks get dry and brittle, a broom will give excellent service, fully twice as long as one not so cared for.

A Kitchen on Wheels

Many times kitchen furniture must go in certain spaces, regardless of the fact that the arrangement causes unnecessary steps for the worker there. One woman who has this to contend with has solved the problem by putting everything on wheels. The gasoline stove rests upon a wooden stand, with casters screwed on at the corners. On ironing days she sits in the breeze in the doorway and pulls the stove around where she may reach the iron easily from her stool. The fireless cooker is raised to the level of the kitchen table on a castor-fitted stand with a shelf below, and may be moved around to supplement the table space when needed.

The table on casters saves many steps, especially on baking days and in canning time. It is shoved close

to the sink while fruit is being prepared, and once the stove when the cans are sterilized and the fruit is back to the sink it goes to the sink. It is wheeled to the wash tub when the whole bunch of cans is at once, instead of only a jar at a time.

"When sweeping or mopping, I can easily move the furniture in my kitchen, and find it induces me to do the old way of having stationary."

Extension Light Box

Lack of light is vexing to those who have little to spare for extension cords. A lack of light is vexing to those who have little to spare for extension cords. A lack of light is vexing to those who have little to spare for extension cords.

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CONDUIT FLANGES INCREASES

Culvert tests at the laboratory of the University of Iowa, have proved that flow of water through a conduit of any size can be increased 10 per cent at an added cost of 10 per cent by adding a flange conduit, according to D. L. Senior, drainage engineer in the United States department of agriculture. It is believed that the flange conduit not only increases the flow, but also is less expensive, because of its lighter weight and maintenance. The flange conduit is made of cast iron, and is made in sizes ranging from 12 inches to 48 inches in diameter. It is made in lengths of 10, 15, 20, 25, 30, 35, 40, 45, and 50 feet. It is made in standard sizes, and is made to fit standard sizes of pipe. It is made in standard sizes, and is made to fit standard sizes of pipe. It is made in standard sizes, and is made to fit standard sizes of pipe.

Mr. Yarnell has been director of the university college of engineering for three years to co-ordinate the work of the faculty. He is a graduate of the University of Iowa, and has a Ph.D. degree in civil engineering. He is a member of the American Society of Civil Engineers, and is a past president of the Iowa Hydraulic Laboratory. He is located on the Iowa campus, and is one of the best equipped of the kind in the country.

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