HOT WEATHER AND OTHER DIVERSIONS DEPICTED BY BRIGGS

Chats With Home Gardeners

DEAR Friends.—We have our gardens planted and our vegetables are all up and growing nicely. We have our spray pumps and solutions and other remedies ready for the ceaseless warfare which has already begun on our enemies which never surrender and "stay beaten"—the insects and diseases which attack our plants.

We have had a long cold "spell" of weather with much rain and it is now time that it is over and that we look forward to hot weather and little moisture for the next two months, so our thoughts naturally turn now to the subject of applying water artificially to our gardens, and we wish to know whether irrigation is needed here, and if so how it is best accomplished.

Irrigation in Oregon.

According to the Oregon almanac, less than 5 per cent of the Willamette valley is under regular irrigation systems. The Rogue River and Umpqua valleys have between one-quarter and one-half of their cultivated land irrigated; central and northeastern Oregon a little more—except Hood River and Harney counties, where one-half to three-quarters of the farms are irrigated—and Lane and Malheur counties in the extreme southeastern part, have three-quarters to nine-tenths of their farms irrigated.

Much of eastern and southern Oregon is very deficient in rainfall and irrigation is essential if good crops are raised, but the Willamette valley has a good total annual rainfall; at Glenora, Tillamook county, 24 miles inland in the Coast Range there is probably the largest annual rainfall in the United States—an average of 135.3 inches, and Portland has the large average of 43.1 inches annually. So it would seem that our soil would contain an abundance of moisture the year around.

Irrigation in Portland.

The trouble is that only about three inches of this 43 inches of rain falls in summer when we need it for our gardens and crops. If farmers and gardeners were wise enough to prepare their soil properly in advance the large winter rainfall could be caught and held in the soil like a sponge. But this sponge must be kept carefully covered by the dust mulch or soil mulch in summer to keep the sun and wind from drying it out. This is the basis of "dry farming" and it is so exceedingly important that we will go into it more carefully in a later letter.

Now, with our gardens more or less poorly prepared and not well furnished with water stored in the soil, there are two things which are vitally important to be done: First, to keep stirring the soil lightly on top of the ground; and second, to irrigate our gardens thoroughly as needed.

Remember one thing. Irrigation is like taking medicine; it is always better to put it off until you are absolutely sure that it is needed—that your plants are suffering from drouth. Just as long as your plants appear green and flourishing it is better to hoe them often and not water them at all. We must remember that we often have heavy dew at night here when there is no rain and that the plant roots can draw moisture from deep in the soil, so don't ruin your plant children by pampering them and stuffing them, as some mothers do their children. Be very sure they "need the drink" before you force it upon them.

How Not to Irrigate.

When the ground dries out and water is really needed it should be applied at once and is very beneficial, of course, as an entire lack of it will kill any plant. But do not water your garden by turning the hose directly upon the plants. This is a most important matter and generally disregarded. It is the cause of many garden failures in Portland. One can hardly go up any street here without seeing some man or woman standing out in the broiling hot sun turning ice water from Mount Hood's glaciers full force upon the delicate plants of his garden. The next day if you go by the same garden you will find the soil washed flat and dried by the sun into a hard crust, which prevents all light, air and moisture getting through to the roots of the plants. Nothing could be worse. We have active societies for the prevention of cruelty to animals, but I have often wished we had laws against cruelty to plants. People do not seem to realize that plants are alive and have feelings, and they are held by their roots, so they must stand any treatment given them. They can only wither and die.

All plants take the nourishment which makes them grow from the soil by means of their roots, and plant roots can only take "liquid nourishment." Every element entering into plant food must be dissolved in water before the plant can drink it in. These mineral salts are then taken into the circulatory system of the plant and the excess water given off by the leaves, which act as plant lungs. When you water the leaves of a plant you do not give the plant nourishment. You might as well turn your hose on a hungry and thirsty child to satisfy his desire for food and drink.

How to Irrigate.

The roots of small plants naturally go down six to eight inches in the ground and those of larger plants like potatoes go down 1½ to 2 feet in search of nourishment, so in applying water it must be applied in sufficient quantity to penetrate down where the tiny end rootlets which suck up the moisture are. This can be easily carried to any part of the garden where you wish to irrigate, applying the water just when and where desired and being able to regulate the flow and only apply it in the desired quantities.

This is very important. Never allow the hose to run water full force with the water rushing, but shut it off to a small stream that will sink into the ground as it creeps gradually forward.

Never try to water much of the garden at a time. Irrigate your peas one afternoon thoroughly. Let the water run down your little ditches and soak in by each row and spread around by absorption all night. Then if the ground is dry enough be sure to hoe or rake it over lightly the next morning. If it is too wet for this draw some dry dirt lying along by your trenches over them and cover them up so that the hot sun will not dry out the moisture.

That afternoon irrigate your lettuce or radishes. Let the water sink in as before and hoe the following morning. Never irrigate more at a time than you will have time to hoe carefully the next day, leaving the surface of the ground rough and loose. Your ground might far better not be irrigated at all than left for a crust to form over the ground, as this cuts off the air supply and chokes the plants to death.

Irrigation Ditches.

Some of you may never have seen a garden irrigated by means of little ditches and might like a more detailed description of the process.

It will depend on the slope of your land just how you begin, as your water must run down hill of course. If one corner is higher than the remainder, let the stream from your hose flow out there and run from there wherever you wish it to go. If your garden is generally level or slopes in the same direction you can run one small main ditch and opening off from it four or five small ditches which run down parallel like the tines of a fork.

When you are watering small vegetables growing near together one little trench down between two rows is sufficient if the water moves down slowly and sinks into the soil.

But for larger plants farther apart you get more direct use of the water when you run two little trenches, one along side each row of vegetables.

If your ground is quite sloping you can make dirt obstructions every little ways or run your ditches winding back and forth across the space. Always have your ditches carefully made with the hoe before you turn on the water and stay right by to guide the water and see that it does not break through and overflow the ground and to plug up mole holes, etc., if the water finds them and starts running down them. If the water breaks through and floods your ground, change your channel and draw dirt over the wet soil. Do not let the water run rapidly down your channels, because it forms a hard, impervious bottom layer, puddling the ground as you used to do for mud pies, and the remainder of the water flows over this without sinking in. Change your channel if this happens.

On the other hand, do not soak your ground so that water stands around the roots of your plants, as this smothers them. They must have air as well as food, just like yourself.

How Much Water to Use.

You may not know when you have applied enough water. The amount needed will depend on two things—first on what kind of soil you have, sandy, clayey, etc., and second, it will depend equally as much upon how carefully you prepared your seed bed last spring before you planted any of your garden. If you left it lumpy and unevenly worked below the surface or if your soil is clayey, you will need more water to wet it down to the plant roots. A sandy or gravelly soil lets the water right through, but does not retain it. The ideal soil is a soft, evenly prepared loam, where there is sufficient vegetable matter or "humus" in the soil to suck up the water like a sponge and hold it. You cannot remedy this now, but remember about it for next year.

The only way to determine whether your soil has been sufficiently irrigated is to dig down the next morning before you hoe and see how far down the soil is damp, and you can then judge whether you have given your vegetables enough water. Remember the water must go clear down to the roots. If it does not the roots will feel it above them or on the surface of the ground, and grow up there for it. (Now isn't that just as "smart" as any tricks animals do?) But this causes such shallow rooting of the plants that it ruins them and they soon shrivel up and die.

Water Vegetables Differently.

All this spring we have been saying that some vegetables need much water and some very little. Be sure to look this up and study it when you irrigate your garden. Celery must have an abundance of water and peas need plenty of water to do well, and with good irrigation may be kept bearing well into summer.

By the way, there is an exception in watering with the hose directly when we come to peas. They are a cold season crop, so a chill does not hurt them as it does the tender plants that cannot be planted until warm weather, and I have learned that a direct and hard spraying with cold water is sometimes the very best cure for aphis and plant lice, as it knocks them on the ground and the hot sun kills them, but remember that this is not supplying water to the roots. That must be done by irrigation.

The "cold" crops all need plenty of water, but our county agriculturist said he would never irrigate corn at all here and potatoes only once, when they first come into blossom, which is the time the potatoes are setting. Late irrigation or rain causes a second growth to start and makes the knobs we often see on potatoes. So be sure you do not water your potatoes after they blossom and study carefully the needs of all your vegetables before irrigating them. Your garden neighbor,

INEZ GAGE CHAPEL.

German Shells Have No Terror for Chinaman.

"Whas-a-Mellu? I Gotta Bakem Biskit," Said Tin Him.

PHOENIX, Ariz., June 28.—The baking of good biscuits for his comrades in the firing line was a matter of more importance to Tin Him, Chinese cook for battery A of the 340th field artillery, than the bursting of any number of German shells about the dugout in which he pursued his culinary way. Tin worked in a Phoenix restaurant before he went to war.

This is the story of members of the battery, who have just arrived here from the battle zone.

One day, say the artillerymen, a shell exploded at the mouth of Tin Him's dugout, but the cook still stirred his dough. A second and a third followed in its wake, and an artilleryman stuck his head through the door.

"Get out of there, you fool," yelled the worker of guns." Don't you know the Germans have the range?"

"Whasamalla?" queried Tin Him in reply. "I gotta bakem biskit."

And he did.

WAR HERO IS TO SPEAK

Captain E. K. Brown Will Address Kelso Visitors.

KELSO, Wash., June 28.—(Special.)—Fourth of July visitors in Kelso are due to hear an excellent address, as the committee has arranged with Captain E. K. Brown, who was decorated for distinguished service in the Argonne battle, to talk. Captain Brown is a veteran of the Spanish-American as well as of the great war, and is well known throughout the northwest as an orator who has few equals.

Kelso is preparing to entertain a record-breaking crowd. Among the features will be a patriotic parade and a championship log-rolling contest.

WOMEN BEST ORGANIZERS

KLAMATH CLUB LEADER LAUDS WORK AMONG CHILDREN.

Miss Helen J. Cowgill Assists in Forming Youngsters Into Active Classes in Husbandry.

OREGON AGRICULTURAL COLLEGE, Corvallis, June 28.—(Special.)—That women are best qualified to arouse enthusiasm in children for club work is the opinion of Frank W. Sexton, county club leader of Klamath county, who is attending a conference for leaders at the college. He says the boys and girls are much more interested in their club work since the visit of Miss Helen J. Cowgill, who met with the various clubs of Klamath county recently. Forty standard clubs have been organized in Klamath county with a membership of 350. The individual club members number 150.

The cookery clubs lead with the largest membership, while sewing and gardening come next in popularity. Other clubs in potato growing, calf, sheep and rabbit raising have been organized. Community meetings are held in the county districts at the school houses. Programmes are given and the work of the children is demonstrated at these meetings. Competent local leaders look after the work of each club.

A large county fair will be held October 1, 2 and 3 where the club work of the boys and girls will be exhibited and demonstrated. One day previous to this, fairs will be held in each of the 30 districts of the county to display the work of the local clubs.

American Graves Decorated.

DUBLIN, May 30.—The Knights of Columbus today placed wreaths on the graves of American soldiers and sailors—22 in Belfast, four in Queenstown, four in Dublin and one in Wexford. Each decoration bore the inscription, "He died that we might live. In grateful memory from his fellow countrymen."

Takes Adler-i-ka

"I had serious bowel and liver trouble. Lost 50 pounds and could eat only liquid food. Commenced taking Adler-i-ka and now weigh more than ever and eat and sleep splendidly." (Signed) George LaFond Little Falls, Minn.

Adler-i-ka expels ALL gas and sourness, stopping stomach distress INSTANTLY. Empties BOTH upper and lower bowel, flushing ENTIRE alimentary canal. Removes ALL foul matter which poisons system. Often CURES constipation. Prevents appendicitis. We have sold Adler-i-ka many years. It is a mixture of buckthorn, cascara, glycerine and nine other simple drugs. Skidmore Drug company and leading druggists.—Adv.

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You Can Prevent It!

—A prominent hair and scalp specialist of Chicago has discovered the secret. The result, sought through 40 long years of scientific study and laboratory research, is certain.

—Co-Lo Hair Restorer will restore the natural color to your hair, no matter how gray it has become.

—Harmless to hair and scalp. It contains neither lead nor sulphur. Will not wash or rub off—has no sediment—and is as clear as water. A pleasing and simple remedy to apply.

—A6—For black and all dark shades of brown.

—A7—Extra strong, for jet black hair only.

—A8—For all medium brown shades.

—A9—For all very light brown, drab and auburn shades.

—Co-Lo Hair Restorer is on sale at all stores of The Owl Drug Co.