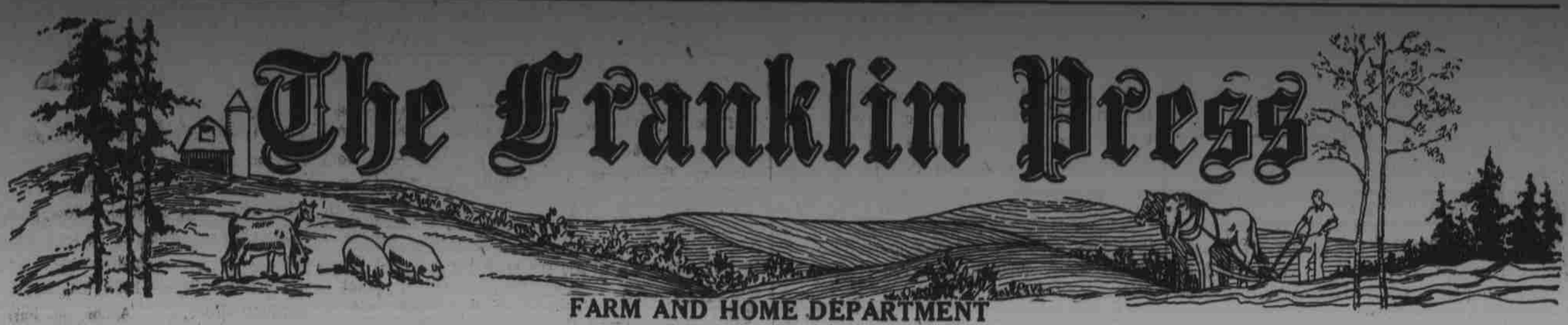

QUANTITY OF WATER NEEDED

Amount Needed Depends On Kind of Crop, Soil And Intensity of Heat

(By Elmo G. Harris)
PART XVI

No definite figures can be given under this heading. Even in arid regions where dependence is entirely on artificial irrigation, the quantities of water used varies with the kind of crops, the nature of the soil (especially the subsoil) the climate, and the judgment of the irrigator. In the humid or rainy countries there is the additional factor of the amount and time of rainfall.

The most satisfactory way to express the quantity of water needed for irrigation is so many inches, meaning that the quantity needed (or used) is enough to cover the whole area so many inches deep. From this we get the convenient unit for measuring the large quantities used. This is "acre feet" meaning such a quantity as would cover so many acres one feet deep. Ten acre feet being a quantity that would cover ten acres one foot deep.

Thus if we expect to irrigate a ten acre field to the extent of 6 inches we will need a total of 5 acre feet or if we want to irrigate 3 acres to the extent of 9 inches we must have 2 1-4 acre feet.

quantity of water must be applied. This will fix the rate of pumping, the horse power required, and the size of pipes and ditches.

Suppose there is a spring or stream at such an elevation that its water would flow by gravity to a certain field that is under study for irrigation. The spring or stream yields 60 gallons per minute. How many acres can this spring irrigate?

Before this qquestion can be answered we must know: (a) how many "inches" will be needed to get thru the worst drouth; (b) is the water to be held in a reservoir when not being used; or (c) are we to depend on the 60 gallons per minute only in time of need? Case (c) will give about 1-4 acre foot per day of 24 hours or will give one acre about a 3 inch irrigation per day. If all the water from the spring is held in a reservoir the flow in a year would give 365 acres 3 inches of water. If a reservoir could be built to hold one month's run from the spring it would give 30 acres 3 inches of water.

In none of these arithmatical examples have we mentioned loss of water by seapage and by evaporation. If water is carried thru an earth channel for any considerable distance a considerable percentage will escape into the ground. When water is stored in a pond evaporation must be taken into account in any careful computation, the amount depending on the humidity, heat and wind. In Arizona, records have shown over 100 inches vertical depth taken out by evaporation in a year. Along the Atlantic coast it may be almost equalized by rainfall on the surface of the pond.

Returning to the question how much water is needed to tide over a drouth; 2 inches is equivalent to a very good rain and if the soil is in good filth it will readily take in the 2 inches (in time of drouth) in a working day. The owner must decide on how often this should be repeated. It will depend on the kind of crop, the kind of soil, and the intensity of the heat. Observation and experience must guide in this. Be sure of this: Irrigation will not take the place of cultivation. To get best results the ground shoeuld be cultivated as soon after irrigation as possible except of course in case of meadows. It will often be the case that a single irrigation to the extent of say 2 inches will fully mature a crop when applied at a critical time, as for instance when strawberries are beginning to ripen or when corn is beginning to "silk."

THE GARBAGE CAN

Hide the garbage can from sight by encircling it with wire fencing and train vines over this. Make the circle large enough that you may handle the can with convenience.

For the Woman Reader

by Florence Riddick Boys

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THE GUEST

It is a nice courtesy to take your hostess some little gift, candy or a book. Conform to her plans for entertaining you. Be prompt for meals and in keeping appointments. When you arrive, announce the date of your departure and hold to that date even if she politely urges you to stay longer. Act as though you are having a good time and be cordial with the friends to whom she introduces you. Make as little work as possible and adapt yourself to the customs of the family. Entertain yourself a part of the time to relieve your hostess of a feeling of strain.

Respect the property of the household and do not set medicine or a wet tumbler on a polished dresser, put your feet on the counterpane or use towels for cleaning shoes.

If your hostess has no household help, assist her with the housework unless you are sure that she prefers to do it alone. Pay scruplously all telephone or laundry bills you have incurred. When you have left, write within twenty-four hours, thanking your hostess for her hospitality.

MAKING JELLY

To make good jelly, fruits must contain both pectin and acid. Peaches, tain plenty of pectin, but not enough acid. To make jelly of them, combine them with some tart fruit, such as the juice of lemons, grapes, crabapples, cherries and gooseberries.

To test the amount of pectin in fruit juice, put a teaspoon of it into a teaspoon of witch hazel. If the mixture forms a gelatinous mass, it contains sufficient pectin. If only half of it becomes jelly like, it is deficient in pectin. Add some of the commercial pectin, or orange peeling, or mix it with fruit which is rich in pectin.

You can save sugar in making jelly and jams, if you boil the fruit juice for about ten minutes before adding the sugar.

COLD DRINKS

It is a good stunt to keep always on tap in the ice box, a sugar syrup as a foundation for cooling drinks, ready for the chance guest or the famished hubby. Syrup sweetens better than granulated sugar. To make the syrup, boil together one cup of sugar to two of water, let it cool and set away, perhaps in a bottle in the ice-chamber. To the juice of lemons and oranges, add the juice of canned fruit—raspberries, pineapple, cherries or any other fruit. Tea or ginger ale may be added for variety.

THE IDEAL HOSTESS

The hostess, who would give joy to her guests, must have the appearance of being happy at the task. The hostess who fusses unduly, undertaking too elaborate a menu, and then is all worn out and nervous when her guests arrive, is sure to reflect her spirit and her guests will not have a good time, but feel anxious.

It is better to put on a simple party and be full of pep and gladness in the affair. One way to do this is to plan a simple menu; another scheme is to get the house ready the day before and to prepare in advance as many dishes as you can. Do not economize on help at this time, but have someone in the kitchen who will keep track of the doings out there, while you are playing with your guests.

They want you for a playmate, a hostess; not a servant, fretted by much care of them. The danger is that we eat too much in our company meals. The old-fashioned gulttonous feast is out of style. Better is the delicious but simple repast with plenty of fruit, a cool or hot drink, dainty sandwiches, wee cakes—and a lot of jollity.

THE CHILD'S CLOTHING

A young child should wear nothing —except his shoes which cannot be washed. For this reason cotton is especially appropriate for a young child's garments. Wool and silk or wool and cotton are appropriate for hot weather, but garments of ali wool harden and shrink in laundering. If the child wears cotton undergarments he may be kept warm by wearing a sweater over his cotton dress or waist.

White clothing for children has the advantage that it may be boiled. But it soils easily, or rather it shows the soil readily. In buying materials for children's clothing, test the blues, pinks, and lavenders to make sure they will not fade too quickly. Gingham should be shrunk before it is made up. It is a wise precaution to make children's clothing with tucks or devices for making them larger the next season. The kimono sleeve and wide hem serve this purpose.

Seersucker and crinkled crepes need not be ironed. Rough materials are mot and should be made with loose necks and no sleeves, to avoid chafing. Loosely woven materials are more easily washed than tight, firmly woven materials.

Even in cold weather do not dress a child too warmly. He is more active than an adult and warmer blooded and suffers more from being dressed too warmly than too coolly. If he is dressed so warm that he perspires, he is more likely to take cold when exposed to draughts.

neck down, should be covered in cold weather. Half socks with bare knees are not the proper clothing when the winds get chilly—the Scotch to the contrary notwithstanding.

The child's clothing, as the adults, should be loose enough that it will not interfere with circulation. In the summer, the nearer the child can go bare the better. The sun on his body is health-giving, and the ventilating breezes encourage a healthy skin and sturdy vital organs.

MODERN BUYING

Looking back over the expense accounty of a typical family a century ago, we are amazed to see how many things we buy today which were unknown then, or so expensive as to be prohibitive. We live in better houses, have better food, and wear better clothing. We spend taxes for community paving, lighting, sewage, and schooling such as would appear miracles to our great-grandfathers.

Besides this, we buy canned goods, prepared breakfast foods, oranges and gas or electricity for fuel. We have better medical and dental care. We light our houses with electricity instead of candles. We spend money for golf, country clubs, automobiles, radios and talkies. It costs about twice as much to live now as then, but the average income is twice as large. The important question is: Are we happier?

SCOUT RICE

This is the way the Girl Scouts prepare rice for their outdoor meals. Try it on your family for a picnic meal. Wash a cupful of rice in cold water and cook it in a double boiler with three cups of boiling water and three tablespoons of bacon fat. When the water has all been absorbed add two cupfuls of boiling hot canned tomatoes and a quarter pound of diced cheese. Continue cooking in the double boiler until the cheese is melted.

THE COOLING DRINK

For variety, beat jelly until it is syrupy and add it to iced tea or lemonade. The mixture will make a rare, elusive flavor. If the jelly has a color it will tint the drink and make it more inviting to the eye as well as to the palate. Try adding mint jelly to lemonade. Mint is a revived flavor just now coming again into favor. Our grandmothers appreciated it but we had forgotten its deliciousness for years. Lime is another revival of a pleasing flavor, too much neglected heretofore.

COOLING FISH

If you wrap fish in oiled paper and put it in a covered dish in the refrigerator, the odor will not reach other foods.

TOADS INSURANCE POLICY AGAINST VARIOUS INSECTS

A healthy supply of toads about a place is an insurance policy against heavy insect infestation as about 90 per cent of the toad's food consists of insects.

"The common toad is generally recognized as an important enemy of insect pests," says Dr. Z. P. Metcalf, head of the department of entomology at State college. "Those who have studied the habits of the toad have come to the conclusion that insects make up about 90 per cent of its food and the number eaten at a single meal is almost beyond belief. While the toad eats nearly any kind of insect which comes its way, it especially destroys large numbers of cut worms which are active early in the morning and late in the evening, the principal feeding time of the animal."

UNIQUE SCHOOL IN MOUNTAINS

Dr. Ritchie's Dream of 30 Years Ago Coming True; 458 Students

Just across the Georgia-North Carolina state line at Rabun Gap, Ga., stands the Rabun Gap Industrial school and was founded twenty-seven years ago by Dr. A. J. Ritchie, a native of the immediate vicinity. Dr. Ritchie when almost thirty years of age went to Harvard and was graduated four years later. He worked his way through that institution with the aim in view of establishing at his old home and industrial schol for the mountain children. After his graduation he returned to Rabun Gap and started his school. He first bought five acres of land and gave his personal note for the purchase price. For twenty-four years he and Mrs. Ritchie, also a university graduate, struggled with more or less success in the interest of the poor mountain folk. Three years ago the school building was burned to the ground. At the same time the buildings of the Nachoochee school in northern Georgia were burned. This latter school was a Presbyterian school. After the fires the two schools were consolidated and are now conducted as a corporation under contract with the Presbyterian Synod to furnish $20,000 per year toward operating expenses.

From the small beginning of twenty-seven years ago the auditor's report just published shows that the institution now has assets of $460,508.02. Within the last three years several handsome buildings have been constructed including main building, library, dormitories and ten or fifteen bungalows for the farmers who tend the fifteen hundred acres now belonging to the school. The school has a private water supply system with source at a bold spring on the mountain side 100 feet above the site. The school also has large barns and a fine dairy herd.

The large farm is tended by mountain farmers under the supervision of an agricultural expert. The children of these farmers attend school and aid in the farm work.

When Dr. Ritchie started this school twenty-seven years ago the number of students was less than twenty. The annual report this year shows an enrollment of 458 students.

This unique school in the mountains of North Georgia draws pupils from adjoining counties in North Carolina, particularly from Macon county. It is a school where poor boys and girls work their way. Only boys and girls of limited means and promising personality are admitted. Each year the school has more candidates for admission than can be accommodated.

Dr. Ritchie's dream of 31 years ago, he says, has only partly come true. The school has grown, but there is much yet to do. According to Dr. Ritchie the school needs more homes for the Family Plan. After talking of his plans for the school Dr. Ritchie went on to say: "If we can get the money to build one of these homesteads at a time, including a barn and a garden, at a cost of $2,000, now that we have both a man and a woman trained in agriculture and adult education to work with these families, we can go ahead with this most original and unique feature of our enterprise. The school also needs a group of cottages for use of the teachers so that all the room in the dormitories may be utilized for the pupils. The school needs a modern building to be used as a laboratory for the practical teaching of cooking and allied subjects.

The citizens of the extreme western part of North Carolina, and especially in Macon county, have taken a keen interest in the Rabun Gap-Nacoochee school. They are proud of the success that has so far attended the efforts of Dr. and Mrs. Ritchie.

STUDENTS DESIGN WOVEN PICTURES

Produced By Textile School of N. C. State College On Fabrics

Woven pictures on fabrics produced by the textile school of North Carolina State college at Raleigh are designed by students in the school. Samples of fabrics on which are woven the pictures of O. Max Gardner, governor of North Carolina, John G. Pollard, governor of Virginia, John G. Richards, governor of South Carolina, Bibb Graves, governor of Alabama, L. G. Hardman, governor of Georgia, Albert C. Ritchie, governor of Maryland, and Dr. E. C. Brooks, president of N. C. State college, have been received by The Press.

The woven pictures were designed by students from photographs. The latest Saentis enlarging photographic camera, which is a part of the designing equipment, is used to enlarge the picture on design paper, after which the design is painted and shaded to produce the desired effect.

Any of these woven pictures will be sent to readers of The Press if they will send a stamped, self-addressed envelope to the Textile School, North Carolina State college, Raleigh, N. C.

IT HAPPENS EVERY DAY

"Mandy, who is that a-coming cross the field?"

"I'll be bound if it ain't that worthless Ezra. He's right now on his way here to borrow The Franklin Press."

"Well, I've got to go and feed the pigs, Mandy, but don't you let Ezra have that paper."

"There you go putting the burden on me. If you don't want him to have the paper, you stay right here and tell him so. Neither one of us has had a chance to read this issue yet."

"Mornin,' Si. Thought I'd just drap over and borry The Press to see what's happening in old Macon. Course if'n you ain't read it yet I can wait."

"Well, Ezra, neither Mandy nor me has read this week's paper yet, but I reckon you can take it along.

"Thanks, Si. So long."

"Now ain't that just like a man. Work and scrape to subscribe for the county paper and then let any lazy, good-for-nothing in the neighborhood take it away from you. Besides, Si, it ain't treating the editor right. If we can subscribe for the paper, so can our neighbors."

HINTS

A rusty screw is hard to remove. To turn the trick—and also the screw—put a little oil on it, or try holding a hot iron against it until the screw is hot.

A button hook is a convenient utensil for the kitchen. Use it to draw out the hairs and threads from the brush of the carpet sweeper.

A whiskbroom in the kitchen is useful to sweep up many small bits when it does not pay to get out the big broom and dustpan.

If your toaster will make only two pieces of toast at a time, slip the extra pieces, to keep hot, underneath the gas flame over which the rest of your breakfast is being prepared.