

the shade of dye it will produce. Brightly colored autumn leaves are not a source of dye. Berries are often disappointing.

A dye that is fast on one fiber may not be so satisfactory on another. Or it may be fast when dyed by one method and not at all fast when applied by another. Of all the textile fibers, wool is the best. It can be dyed easily and the resulting colors change the least. It combines with practically all dyes.

For those who want to discover for themselves which plants are a good source of dye, here is a standard recipe that can be tried on almost any plant part, be it blossom, leaf, root or bark. For each pound of cloth, use a peck of fresh dye-plant. Crush or tear into small pieces, then cover with water and soak overnight. Boil the plant for about an hour, then strain off the colored broth. To this dye extract add enough water to make four gallons for the dye bath, place the wool in the liquid and simmer for 30 minutes. Rinse the cloth and let dry.

Those who prefer to dye just a small piece of cloth each time until the exact shade desired for a scarf or pocketbook has been produced can use only a handful of flowers, leaves or roots each time. Just be sure to cover the dye-plant well with water when you let it soak overnight and replace the water as it boils away.

### Mordant Required

A large number of natural dyes require a mordant. Madder, for instance, produces no color on the wool unless alum, chrome or some other mordant is used. The lovely gold dye of privet leaves is entirely lost if a mordant is not employed.

One of the simplest mordanting recipes calls for four ounces of potash alum, one ounce of cream of tartar and four gallons of water to each pound of wool. After the alum and cream of tartar are dissolved, the wool is immersed in the solution and heated gradually to a boil. After boiling for an hour, it is allowed to cool and the wool remains in the mordant overnight. Then the liquid is squeezed out, the wool rolled in a dry towel and placed in a cool place until ready for use.

The fastness or permanence of a dye is important, but no dye is absolutely fast under all conditions. It may be fast to light, or to perspiration or to washing, but not fast to all three. A number of simple tests, similar in principle to those



**DYE BATH**—It is only necessary to boil the raw materials in water to bring out the color. But you may get an entirely different color from what you expect.

used in testing cloth professionally, can be applied in the home.

A series of cut-outs will show whether a color will fade in the sun. Cut openings an inch square in two pieces of heavy cardboard. With gummed paper fasten the dyed cloth to one of the pieces so that the cloth shows through the cut-out. Cover the cloth with the other piece of cardboard, being careful to have the openings correspond so the light comes through the fabric. Put the frame in the direct sunlight and tilt toward the sun. After a dozen sunny days, comparing the area exposed to the sun with the protected portion will show if the dye is sun-fast.

A two-inch square of dyed wool sewed to a similar piece of undyed wool will help show how water affects the dye. If this is placed in a fruit jar partly filled with soapy water and shaken thoroughly for about a half hour, you can pretty well tell how it will withstand washing. After the water has been squeezed out and the sample rinsed a number of times and ironed dry, unsatisfactory colors will have faded or "bled" onto the undyed piece.

The late summer or autumn garden offers a wide variety of natural dye sources. A large number of experiments has been worked up for the benefit of those interested in obtaining dyes from what is available in and around the home. These, plus three of the ancient vegetable dyes and a mordant are contained in a kit specially prepared for you by Science Service. Just send 50c to Science Service, 1719 N St., N. W., Washington 6, D. C., and ask for the Vegetable Dye Kit.

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### VETERINARY MEDICINE

## Sulfur Found To Prevent "Over-Eating Disease"

➤ A TIME-TESTED remedy from grandma's medicine chest has become the newest way of preventing the most serious disease of lambs in the West.

Confronted with the problem of cutting down feeder lamb losses due to the "over-eating disease", technically known as enterotoxemia, four Colorado veterinary scientists decided to experiment with ordinary ground sulfur mixed with the lamb's feed.

Results of this treatment over an extended test period are reported in the *Journal of the American Veterinary Medical Association* (Aug.). They indicate that it was of distinct value in keeping down "over-eating" losses on feedlots. While mortality ranged as high as 8.2% in untreated control lambs, losses of treated animals did not exceed 1%.

The researchers, J. F. Christensen, A. W. Deem, A. L. Esplin, and F. Cross, all of the Colorado Agricultural Experiment Station, said there was some reduction in grain consumption and daily weight gains of lambs fed relatively large doses of sulfur, but no toxic effects were observed. They believe that by reducing the amount of sulfur fed in continuing experiments, the unfavorable effects upon weight gains and grain consumption may be eliminated without sacrificing the benefit of the experiment.

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So popular has the insecticide DDT become that it is now being produced at a rate of over 3,000,000 pounds a month.