

Herbs grown for seed should be allowed to ripen and then harvested just before the seed starts dropping. Place the seeds with other attached parts on a paper or cloth to dry. As soon as they are dry enough, thresh them out and remove the dirt and refuse. Then spread the clean seeds in thin layers on a cloth or paper until they are thoroughly cured. Store in glass jars. The conditions for harvesting, curing, and storing should be the same as those necessary for preserving the foliage. Among the herbs whose seeds are commonly used are angelica, anise, celery, sweet cicely, coriander, cumin, dill, fennel, lovage, poppy (maw), and sesame (bene).

Herbs that may be taken up in the fall, potted, and used as house plants include bush basil, chives, pot marigold, sweet annual marjoram, mints, parsley, rose geranium, rosemary, and lemon verbena.

Most of the herbs mentioned can be

obtained from leading seed companies. For some of the less common ones, the gardener may have to shop around considerably to obtain them.

To the herb lover and to those who may become interested in additional herb lore and desire to pursue the knowledge of herbs to a greater extent, the following partial list of publications may be of value:

Herbs—Their Culture and Use. CHARLOTTE P. BROOKS AND ABBIE GRAHAM, Vermont Agricultural Extension Circular 83. 1935.

The Herb Garden. G. P. VANESELTINE, New York (Geneva) Agricultural Extension Circular 157. 1935.

Herbs in Cooking. GRACE TABOR, Editor, Garden Department, Woman's Home Companion. (A Woman's Home Companion Booklet.)

Savory or Aromatic Herbs in the Kitchen Garden. W. R. BEATTIE, SR., Horticulturist, Bureau of Plant Industry, United States Department of Agriculture.

Culinary Herbs. University of Minnesota, Agricultural Extension Circular 54. 1936.

A Simple Motor-pattern Test

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Three minutes in a biology classroom is enough to administer a simple student motor-pattern test.

Distribute sheets of paper with a line ruled down the middle, one column marked for right-hand work and the other for left. As the student makes the design called for, he places a dot over the end point. This gives the direction of the drawing. The design should be left slightly open at the end; this slight break emphasizes the direction of line, for the study of the tests.

Pencil in the dominant hand, the student draws a straight line to the right and places a dot over the end; he then draws a straight line to the left (under

the first line) and adds the final dot. With his pencil in his other hand, he draws first the straight line to the right, followed by the straight line to the left. This is the beginning of the test, in which he is instructed to make in succession, one under the other, a *circle*, *triangle*, *figure-of-eight*, *square*, and *watch-spring spiral*. Do not illustrate on the blackboard, as this is suggestive and influences the test. The student first uses the dominant hand, completing the five designs in one column. He then repeats the five designs *with the other hand*, in the *other column*. The pencil is not to be lifted from the paper while drawing the design, which must not be retouched.

ANALYSIS

In studying the results one notes that the designs are either clockwise or counterclockwise; why the student selects the direction he does is of interest, and suggests certain associations of motor patterns.

Having made the circle in one direction, the other designs may follow the same direction, showing *routine* effort. This may produce the best results if the student relies on experience and training. It may indicate his action complex in other occupations or processes. Or, we may find the student interferes, or experiments as he draws, changing direction of rotation. This may produce better or worse results, for various reasons too lengthy to detail here, but noticeable.

Having found from the work of the dominant hand whether the student's performance is to be classed as *routine*, *experimental*, *careless*, or *excellent*, compare the second five designs, one by one. If the circle is drawn in the same direction of rotation, it is a copy pattern; if in the reverse direction, it is a mirror pattern. If all are copy patterns or all mirror patterns, it is an interesting light on the motor activity of the individual. A straight copy pattern differs from a straight mirror pattern in the action of the brain, presumably selected for best results. (In breast-stroke swimming, the two arms move in mirror patterns.)

The circle and the letter "O" are associated in the minds of those who write. In testing defense workers as a group, and college students as a group, a difference in direction of rotation was noted. The college students to a high percentage rotated the circle counterclockwise; the defense workers did not. It is a question whether people write as they draw or draw as they write, by association.

In analysis, notice at what point in the design it is started and ended (top or bottom, left or right) and whether the spiral begins in the center or on the outside. Study direction and firmness of line, proportion and size variation. Observe gradual improvement or deterioration, abrupt changes in rotation or size. Percentages can be taken in a group, and these compared with another group.

This test is an attempt to analyze the control of movements by brain centers. We may wonder whether we can improve this control, which is supposed to come from the dominant side of the brain. We might try exercises in the movements of this test by using both hands simultaneously for a short time each day. By means of simultaneous "mirror" and "copy" writing, respectively, we introduce different controls. This is not essentially different from swimming or learning to play the piano. Movements of a separate discriminative nature are considered cortical. Regular, rhythmic movements (walking, swimming, flying) become transferred, so far as direct control is concerned, to the cerebellum. But complicated movements acquire character through the basal ganglia of the cerebrum. Here the thalamus is a great sensor reception center, and the striate body a motor center, where muscle movements are regulated in very individual patterns, and combined, so that once acquired they are resistant to modification.

ROBERT LIVINGSTON JOHNSON, president of Temple University, has announced that *The Rockefeller Foundation* has granted the university's biology department \$6,200 to carry on immunologic work for the next two years. The research will be directed by James A. Harrison, Professor of Biology.

SECRETARY-TREASURER RUSSELL announces that the *November* issue will be the last one sent to those who have not renewed their membership.