BRIEF ARTICLES

CALIBRATION

1. Set A, B, C, D at maximum.
2. Set \( W_a, W_b, W_c, W_d \) at desired weightings to total 100; For example, let \( W_a = 40, W_b = 30, W_c = 20, W_d = 10. \)
3. Set calibrate knob at 50.
4. Turn on and adjust 10K until \( R = 0 \)
5. Turn to CHECK and mark down check current.
6. Adjust calibrate to check current as needed during operation.

If line voltage variation is troublesome, either plug computer into a 15 watt or greater voltage regulator or disconnect a.c. supply at \( X \) and replace with a storage battery.

Figure 2—Wiring diagram and operating instructions for analog computer.

Figure 3—Ranges in computer indices for 5 weightings in a segregating population of 88 plants.

Those plants with low computer indices were, in most instances, outstanding for a single property, showing a strong bias to select such plants in a personal evaluation method of selection. Computer selection ranges which would include 28% (at least 25 plants) of the population are presented. These ranges were relatively narrow with some variation among weightings, and indicate that computer selection would be considerably more effective than personal evaluation in identifying outstanding plants.

Experience with the computer indicates that it would be of considerable value to breeders in speeding up selection work. Once weightings are assigned, data can be rapidly processed by clerical or sub-professional workers. The computer is flexible, and a breeder could select for different purposes in the same materials by assigning different weightings. Automatic selection of plants or progenies with the highest indices is rapidly made.

EFFECT OF 2,4-D ON THREE WINTER WHEAT VARIETIES GROWN IN OREGON

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Most of the winter wheat grown in eastern Oregon is sprayed with 2,4-dichlorophenoxyacetic acid (2,4-D) for annual weed control. These applications vary considerably in rate, formulation, date of application, and stage of wheat growth. This experiment was initiated to determine if winter wheat varieties respond differentially to formulations of 2,4-D applied at several rates and stages of plant growth.

In general it has been found that wheat, oats, and barley were most susceptible when the 2,4-D was applied at the early stages of growth. Varietal differences also were most pronounced when spraying was done at the early stages of growth. The ester form was observed to be more injurious to the crop than the amine salt form.

The experiment was conducted in 1956 and 1957 at the Pendleton Branch Experiment Station near Pendleton, Oregon. Omar, Brevor, and Burt, winter wheat varieties


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