A bird perch made of 2 wires spaced 2 to 23/2 inches apart is suspended above the plots approximately 10 to 14 feet high. The perch should be suspended over the entire length of the plots, and can be made in a network to cover the plots at an interval of 25 yards in width. Wire spacer insulators should be at 12-foot intervals on the perch to prevent the crossing and vibration of the wires.

When constructing a wire perch, mount the insulators on opposite sides at the top of the supporting poles. Then hang the perch wire to these knobs by using a short piece of wire looped and twisted through the insulator hole. The wire spacing will be greater than 21/2 inches at the poles; this will lend lateral support to the perch and the 21/2-inch spacing is again accomplished by use of the wire spacers. Use turnbuckles in the perch wires to tighten roughly cylindrical, 1/2 inch in diameter and about 1 inch in length.

Since the quantity of soil used is small, viz. 0.4 g., care must be taken to ensure a representative sample. The suction is adjusted till a steady rhythm is achieved. In this way it is possible to run the apparatus continuously for several days at a time without any further adjustment.

Samples as desired for analyses are withdrawn with a graduated pipette after unplugging the specimen tubes aseptically. They may be either spot tested or colorimetrically estimated for nitrite, nitrate, and/or ammonia after suitable dilutions.

Due to the small samples needed, replacement with a calculated quantity of perfusate every few days suffices.

Water loss due to evaporation is very slight, as the whole apparatus is saturated with water vapour. It can be made up by marking the level of the perfusing fluid initially and then making up to it with sterile distilled water whenever necessary.

The apparatus has been used to follow the course of nitrite formations in some Indian soils using Waksman's Medium No. 25 as the perfusing fluid.—P. J. Dubash, Department of Botany, Institute of Science, Bombay, India.

A BIRD-CONTROL APPARATUS FOR EXPERIMENT PLOTS

BIRD control at the Wyoming Experiment Station has been a major problem since the beginning of small-grains research. Annually, blackbirds and sparrows exact a certain amount of variability in field trials caused by their damaging the grain. Sizable quantities of money and time each year are expended in control of these pests. Nearly every method suggested for bird control has been tried there with varied degrees of success. Probably the most effective and also the most time-consuming method in the past has been to patrol the plots with a shotgun from dawn until dark during a 6-week period each year. Since the installation (in 1955) of the control apparatus described below, there has been no bird damage in the plots. (figure 1).

Materials

Materials used in constructing bird-control apparatus are as follows:

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Thirty thousand volt neon sign transformer with a 60 milliamperc rating.</td>
</tr>
<tr>
<td>6</td>
<td>Six strands of No. 18 galvanized iron wire for bird perch or stranded wire usually used for TV antenna mast guy wire of No. 9 gauge.</td>
</tr>
</tbody>
</table>


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