Simple Quantitative Application of Auxin

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In any experimental procedure involving the application of auxins in a lanolin base, a number of problems are frequently encountered:

1. It is difficult to get an accurate amount of the lanolin mixture applied directly to the plant surface; a good bit of it tends to cling to the wooden applicator stick which may be used to transfer the grease to the leaf.
2. If small applicator sticks are used in a container of control lanolin and similar sticks are used in the container of lanolin and auxin, students frequently mix the applicators from one container to the other, thereby causing trouble for future users of the materials.
3. Lanolin is a messy substance and frequently is wiped on table tops, edges of benches, etc., as students attempt to eliminate it from their fingers.

For several years we have used disposable plastic syringes for application of these substances. The regular hypodermic needle is removed from the

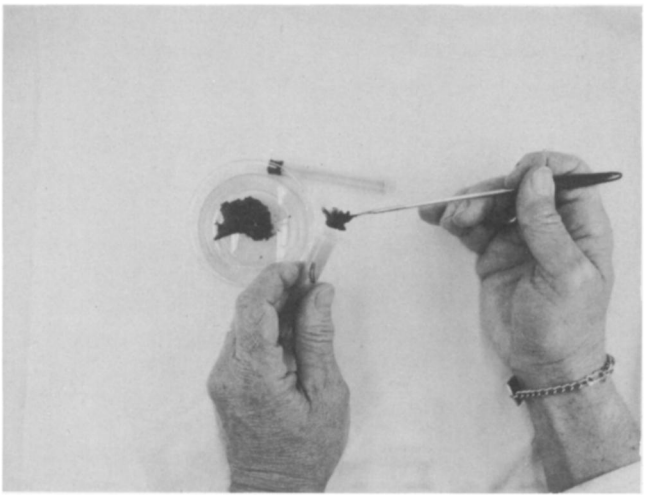

Fig. 1. Filling the syringe.

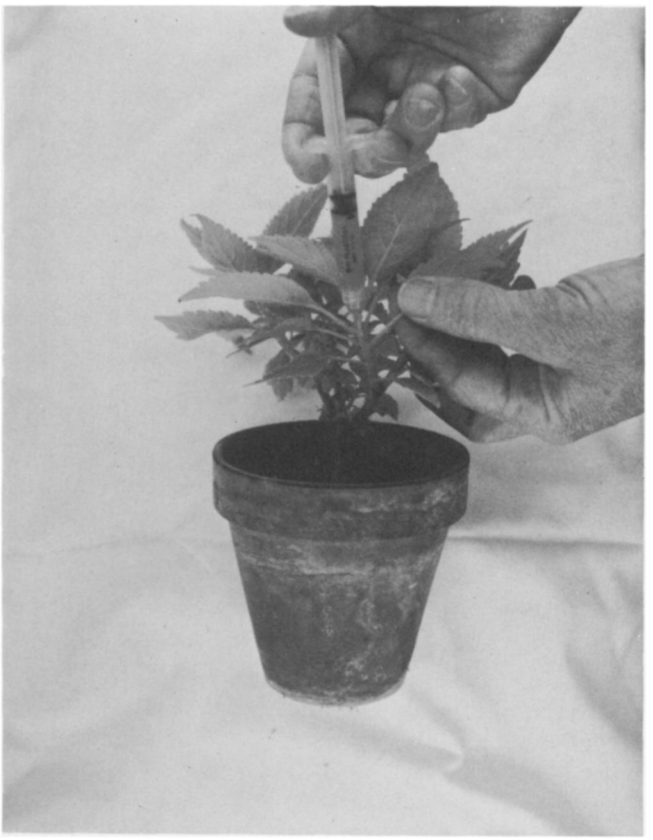

Fig. 2. Applying the auxin.

syringe, leaving only the small hub at the tip of the cylinder of the syringe. The plunger is removed from the syringe and the carefully mixed lanolin preparation is introduced into the syringe. The plunger may be used to press down part of the lanolin and then removed so that additional lanolin may be added to fill the syringe completely. Gentle plunger pressure is used to eliminate all air pockets. The syringe may now be used to apply a quantitative amount of the mixture to plant materials, either by squeezing out a measured strip (i.e., one centimeter long) or by reading the calibrations given on the syringe. The actual auxin used can be calculated from the amount originally mixed in the lanolin using volumetric or gravimetric methods.

We have found that the method permits a simple quantitative measurement of the auxin used. It also assures the application of the auxin directly to the plant with less chance of the grease ending up on fingers and desk tops. Finally, particularly with the identification of the syringes with a Dymo tape marker, there is little chance of confusing the various concentrations of auxin which might be used in a single experiment. The filled syringes may be easily stored in a refrigerator from one laboratory period to the next with a slight warmup period involved to soften the lanolin for convenient use.

A similar use for a plastic syringe is to fill it with vaseline and use it to apply the small amounts of grease necessary for making of hanging-drop preparations.

HAND CARD TEST DEVELOPED TO TEST EYE SQUINT

A simple hand card test may soon enable parents to visually screen preschool children in their own homes to determine early cases of amblyopia ex anopsia.

Amblyopia ex anopsia is a condition which results in loss of vision in one eye, and frequently causes crossing of both eyes or other types of squint.

The card, called the modified Sjogren hand card, has been developed by the Illinois Chapter of the American Academy of Pediatrics, the Illinois Department of Public Health, and the Chicago Medical Society. It is intended for testing three, four and five-year-old children.

The 5-1/2 x 5-1/2 inch card, showing a small picture of a hand, is held by the parent in six distinct positions in differing sequences to insure effective results.

The child is asked to point his hand in the same direction as the hand pictured on the card at a distance of three feet, and again at twelve feet, using both eyes, the right eye only, and finally only the left eye.

If a child cannot identify the correct direction in at least four of six positions, he may have an early case of amblyopia ex anopsia. An opthalmological examination would then be recommended.

DROWNPROOFING

Parents can now teach children how to protect themselves from drowning by following the directions on a new wallet card published by the Public Health Service. The technique is called "Drownproofing" and can be learned by adults and youngsters who can't swim.

The card contains other safety information for use around the water. The card, called *Safety Tips In-Out-and-Around the Water*, may be obtained free in quantities of up to 100 by writing to the Injury Control Program, National Center for Urban and Industrial Health, 222 East Central Parkway, Cincinnati, Ohio 45202.

AFLATOXIN

Chemicals produced by molds will add to the growing arsenal against insect pests at some future date, if research findings at the University of Wisconsin are significant.

Fumio Matsumura and S. G. Knight examined the insecticidal properties of a substance produced by a certain mold. The mold is usually found growing in various kinds of feedstuffs, especially on stale peanut meal.

The researchers discovered the mold produces some kind of a toxin which apparently kills adult houseflies and fruit flies. Known as aflatoxin, the substance also retards the fertility of mosquitoes, houseflies, and fruit flies.

A NEW APPROACH TO MOSQUITO CONTROL

The Tokelau Islands in the South Pacific have been the scene of trials of new techniques in the control of mosquitos, including a biological method—the introduction of fungi pathogenic to mosquito larvae. Such fungi are self-perpetuating and self-distributing, causing a marked drop in the mosquito population. Tests were also made of a larvicidal technique using dieldrin-cement briquettes placed in mosquito habitats. These experiments have cleared the way for a broader research program, and field trials on a larger scale are now being considered. (Who *Chronicle*)