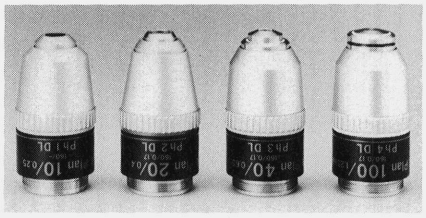
PB-Nox Approved Against Colorado Potato Beetle

PB-Nox insecticide, a premixed combination of rotenone-based Noxfire and piperonyl butoxide, has received federal registration for use on vegetable crops to combat the pyrethroid-resistant Colorado potato beetle. The rotenone-based products may also be used on tomatoes and eggplants, other crops preyed on by the Colorado potato beetle. PB-Nox, Noxfire, and piperonyl butoxide are all available in 1-, 5-, 30-, and 55-gal (or larger, if necessary) containers.

Contact: Forrest St. Aubin, Penick Corporation, Pesticides Division, 1050 Wall Street West, Lyndhurst, NJ 07071; (201)935-6600.

Phase-Contrast Objectives in Four Magnifications

The E Plan DL objectives, four phase-contrast objectives that incorporate the flatness of field and contrast provided by



Nikon CF lenses, provide high-quality optical performance at a cost of $135–450. The objectives are available in magnifications of 10, 20, 40, and 100× and feature, respectively, numerical apertures of 0.25, 0.40, 0.65, and 1.25; working distances of 2.6, 1.2, 0.6, and 0.23 mm; and focal lengths of 15.96, 8.7, 4.38, and 1.68 mm. The 100× is an oil-immersion objective; the others are dry. The objectives may be used with all Nikon upright or inverted microscopes equipped with a phase condenser.

Contact: Nikon Inc., Instrument Group, 623 Stewart Avenue, Garden City, NY 11530; (516)222-0200.

Flail Chopper Easy to Handle on All Types of Terrain

The KV-320 Perfect Flail Chopper has 18 flail blades to cut, mulch, or chop a 10 1/2-ft swath for conservation tillage ground cover. The chopper mulches cornstalks, soybean and cotton plants, and other growth up to 4 in. in diameter. Cutting height is adjustable from 3/4 to 4 3/4 in., and blade mountings have replaceable steel bushings. The vibration-free flail rotor is suspended in self-adjusting heavy-duty bearings and reaches 1,900 rpm from 540 P.T.O. rpm.

The rotor is connected to the tractor's P.T.O. by a flexible indirect drive. The KV-320 features a full-length rear roller with skids at both sides for easy handling on all types of terrain.

Contact: AgTec Division, Ag-Chem Equipment Co., Inc., 4900 Viking Drive, Minneapolis, MN 55435; (612)835-2476.

Agri-Scribe Monitors, Logs Environmental Conditions

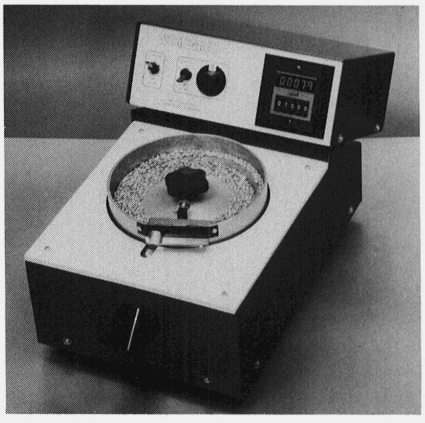
The RSS-413 Agri-Scribe monitors and logs into memory leaf wetness, temperature, humidity, and rainfall, every hour of every day for up to 2 weeks. Data can be retrieved on the display or through the printer. The Agri-Scribe also

provides a summary of environmental conditions during each leaf wetness period, including the start date and time, leaf wetness duration, and average temperature, humidity, and rainfall.

Contact: Reuter-Stokes Canada, Ltd., 465 Dobbie Drive, Cambridge, Ontario, Canada N1R 5X9; (519)623-4880.

Preselected Number of Seeds Can Be Counted with Numigral

The fully electronic Numigral can count up to 1,000 seeds, depending on the type and size. The control panel includes a thumb wheel switch for selecting the number of seeds to be counted; when the number displayed is reached, the system stops. Accessories include standard



bowls for counting specific-diameter seeds (sizes available are 2.5, 4, 6, 8, and 10 mm) and a universal bowl that is adjustable from 1 to 10 mm. A BCD output is also available for use with a printer.

Contact: Demaray Scientific Instrument, Ltd., S.E. 1122 Latah Street, Pullman, WA 99163; (509)332-8577.

Thick, Dense Foam Provided by New 80 to 1 Concentrate

When properly mixed with water and agitated with air, Ag-Chem 80 to 1 Ag Foam provides thick, dense foam that shows up easily in fields, so that fertilizers, herbicides, and pesticides can be sprayed without skips or overlaps. Only ½ gal of concentrate mixed with 40 gal of water supplies 40 gal of foam, which remains dense without harming skin or damaging soil. A softening agent is premixed with the concentrate. The foam is available in 8-oz and ½-gal sizes.

Contact: Ag-Chem Equipment Co., Inc., Industrial Park, Jackson, MN 56143; (507)847-2690.

No endorsement of the products or services described or of the statements or claims made in these listings is assumed by PLANT DISEASE or by The American Phytopathological Society.

Salute to APS Sustaining Associates

This section is designed to help APS members understand more about APS Sustaining Associates. Information was supplied by company representatives. Each month different companies will be featured. A complete listing appears in the January issue of *Phytopathology News* and in each issue of *Phytopathology*.

Buckman Laboratories, 1256 N. McLean Blvd., Memphis, TN 38108; 901/278-0330.

Calgene, Inc., Contact: Robert M. Goodman, Vice-President, Research and Development, 1920 Fifth St., Davis, CA 95616; 916/753-6313. Calgene was founded in 1980 to develop and commercialize new crop varieties and plant products through the use of recombinant DNA and related technologies. Calgene conducts research and development under contract with other corporations, in joint ventures, and on its own behalf. Calgene is developing new crop varieties with commercially useful traits. Product focuses are herbicide tolerance, improved carbohydrate metabolism, and altered vegetable oil biosynthesis. Calgene has successfully introduced an agronomically useful gene (herbicide resistance) into plants and has submitted an application to the USDA for permission to plant recombinant DNA-containing tobacco in California.

Cargill, Inc., Contact: James L. Dodd, Research Station, Box 470, Aurora, IL 60507; 312/892-4331. Cargill, Inc., is actively involved in agriculture from the production of crops to the processing of grain. Research ranges from development of new uses for agriculture products to development of new herbicides and varieties of corn, sorghum, wheat, sunflowers, safflower, and cotton. Use of genetics to control diseases of these crops is a major part of Cargill's international crop breeding efforts, and pathologists participate in each program. Seed from Cargill Seed Research is sold with the brand names of Cargill, P-A-G, Paymaster, and Bounty wheat.

A L Castle Inc., P.O. Box 279, Hollister, CA 95024; 305/245-6312.

Chevron Chemical Company, Agricultural Chemicals Division, Contact: R. G. Anderson, Director of Research, Ortho Research Center, P.O. Box 4010, Richmond, CA 94804-0010; 415/231-8100. The Agricultural Chemicals Division of Chevron Chemical Co. develops, manufactures, and markets agricultural chemicals including herbicides, fungicides, plant growth regulators, and insecticides for worldwide use.

Chevron Chemical Company, 575 Market St. 3651, San Francisco, CA 94105.

CIBA-GEIGY Corp., Contact: Vince Morton, Manager Phytopathology, P.O. Box 18300, Greensboro, NC 27419; 919/292-7100. CIBA-GEIGY Corp. is the U.S. subsidiary of one of the largest chemical companies in the world, CIBA-GEIGY Ltd., headquartered in Basle, Switzerland. The Agricultural Division of the U.S. company is situated in Greensboro, NC, and has been an important member of the agricultural industry for more than 30 years, manufacturing and distributing herbicides, growth regulators, insecticides, and fungicides. Among the latter are metalaxyl, sold as Apron® (seed dressing); Ridomil® (soil and foliar fungicide); Subdue® (for ornamentals and turf); and propiconazole, sold as Tilt®. There are several newer products in development, such as CGA-71818 (Topas™), for which we see a role in the future, the idea being to integrate these products in with the principles of integrated crop management. To this end, our scientists work with many university and USDA cooperative plant pathologists across the United States to limit disease losses in a responsible manner.

Call for Photographs

Full-color photographs will be published on the front cover of PLANT DISEASE each month. If you would like to have your photographs considered for publication on the cover (at no cost to you), please send them to PLANT DISEASE, c/o Mary Beth Hendrickson, 3340 Pilot Knob Road, St. Paul, MN 55121.

Send slides only. Slides will not be returned unless arrangements are made before their submission. A copy or photocopy of the form at right must accompany each slide. If more than one slide is submitted, number each one and place the same number after the word "Number" on the corresponding form.

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Group _____ Category _____

Source _____

Host _____

Disease

_____

Pathogen—Scientific name

_____

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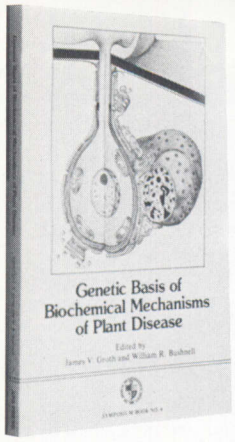

Genetic Basis of Biochemical Mechanisms of Plant Disease

List Price: $24.00
APS Member Price: $18.00

Based on the 1984 symposium at the APS-CPS Annual Meeting in Guelph, Ontario

Edited by
James V. Groth,
Department of Plant Pathology, University of Minnesota

William R. Bushnell,
Cereal Rust Laboratory, U.S. Department of Agriculture, and Department of Plant Pathology, University of Minnesota

Until very recently, most research in the area of biochemical mechanisms of host-pathogen interaction was led by two distinct groups of scientists - one stressing biochemistry-physiology, the other stressing genetics. Each group attacked problems with a different set of tools and philosophies, and as a result, experiments often were not designed as efficiently as possible. The editors of this book suggest this may be changing.

Genetic Basis of Biochemical Mechanisms of Plant Disease reflects the current trend toward a more interdisciplinary approach to host-parasite interaction. Contributions to the book span coevolution, pathogenesis, and cytology, as well as genetics and biochemistry-physiology.

Each of the five chapters is distinct in both subject matter and style. Although some issues discussed in more than one chapter are addressed in different ways, the contributions complement each other well.

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