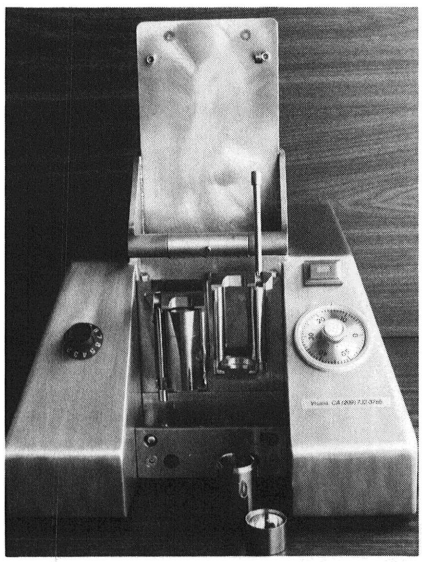
Tissue Pulverizer Processes Specimens in Seconds

The KLECO 2000 tissue pulverizer can render the toughest plant specimen—wet or dry—into powder or solution in seconds. The high-performance unit features a programmable interval timer and a variable-speed motor allowing precise power control, from gentle



agitation, through stirring, mixing, homogenizing, and grinding, to pulverization. The stainless-steel canisters are easy to clean and can be autoclaved.

Contact: Richard J. Garcia, Kinetic Laboratory Equipment Company, 14097 Avenue 272, Visalia, CA 93277; (209)732-3785.

FARMMAP Software Program for Farmer's Personal Use

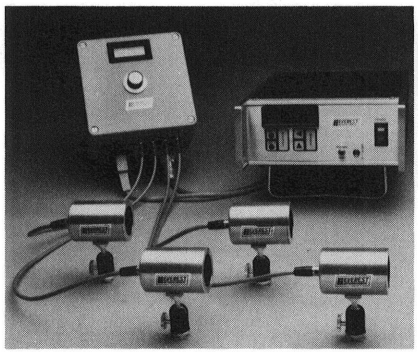
FARMMAP, a package of agricultural crop production software, features computer control of the spatial dimension of a farm's crop production resources—soil types and field locations. This information is typed in the computer in the first phase of the program, followed by crops grown, soil properties, and herbicide labels. The user then can call up screen displays of field and soil information for the farm and calculate the proper rate of a preplant herbicide for each field based on the crop, chemical, and soils. A county soil survey report is usually used for essential soil map information.

FARMMAP was developed by Lowell Hanson, soil scientist, and John Schafer, agronomist and programmer, at the University of Minnesota. The program runs on the IBM PC and compatible microcomputers and sells for $289. A "demo disk" is available for $5.

Contact: Farm & Forest Software, Box 10851, White Bear Lake, MN 55110; (612)426-8764.

Infrared Temperature Sensors Share One Electronics Set

Small infrared multiplexed temperature transducers for measuring surface temperature can be fixed-mounted on a process line; as many as eight can time-share one set of electronics. Because infrared sensors are relatively slow (approximately milliseconds) and signal conditioning electronics are relatively fast (approximately microseconds), the electronics can integrate many heads periodically and not lose any of the precision or speed of response of individual channels. The operating range of the transducers is −30 to 1,100 C or −30 to 2,000 F. As long as the target

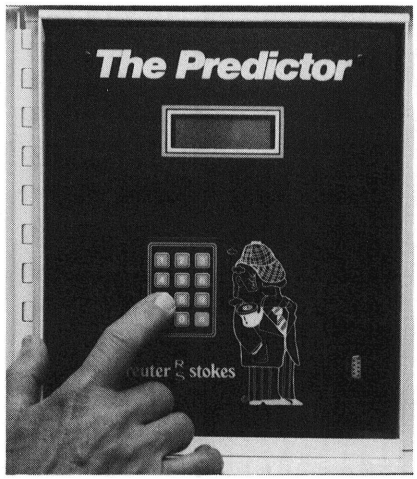


completely fills the instrument's field of view, a transducer can operate from 2 cm to infinity with accuracy of ±0.3% full scale ±1 digit.

Contact: Everest Interscience, P.O. Box 345, Tustin, CA 92681; (714)730-0747.

Predictor Model Available for Apple Fire Blight

The Predictor has been expanded to foretell the occurrence of apple fire blight as well as apple scab. The fire blight model can store 16 days of data in addition to the current day's weather conditions. The likelihood of fire blight occurring is stated as none, low, moderate, or high, on the basis of accumulated data on maximum temperature, average temperature, and rainfall. Also available are a model for advance warning of grape black rot and a model for detection of anthracnose on annual bluegrass.



Contact: Reuter-Stokes, Inc., 18530 South Miles Parkway, Cleveland, OH 44128.

Controlled-Droplet Sprayer Available in Backpack

Micropak, a controlled-droplet sprayer with a 3-gal backpack tank, will cover 2 acres at the recommended application rate. The atomizer head is powered by flashlight batteries, so pumping is unnecessary. Controlled-droplet application uses rotary atomization instead of hydraulic pressure for chemical spraying.

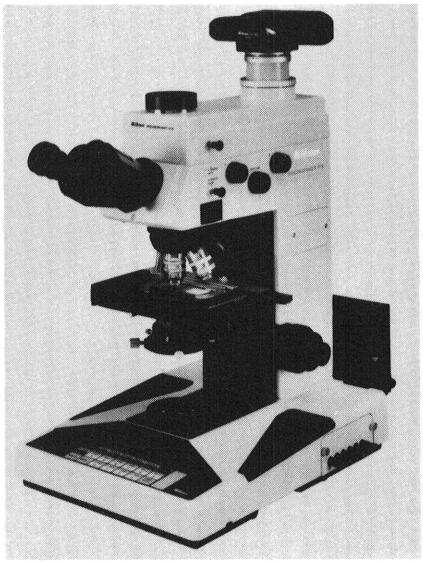
The need for water is significantly reduced, and an even spray with droplets in a very narrow size range is produced.

Contact: Micron Corporation, P.O. Box 19698, Houston, TX 77024; (713)932-1405.

Microphot Microscopes Offer Range of Optical Methods

The Microphot and Microphot-FX research microscopes offer a full range of optical contrast methods, including epifluorescence, Nomarski differential interference contrast, polarization, phase contrast, and bright field/dark field. The instruments are mounted on heavy, well-balanced stands and are capable of all viewing and analysis methodologies, including photodocumentation, image analysis, microspectrophotometry, and video microscopy. The Microphot-FX has a built-in camera, and the Microphot is equipped with a photo-port mount for any of Nikon's attachment cameras. Triaxial focus controls allow coarse, medium, and fine (1 μm) adjustments. The instruments use ultrawide and standard optics, have an in-base diascopic filter cassette and in-body epifilter cassette (both removable), and use halogen, mercury arc, and xenon illuminators for unrestricted light output.

Microphot and Microphot-FX feature CF optics, a Nikon-developed system for independently correcting chromatic aberration in both the objective and the eyepiece. The instruments are compatible with the full line of optics and accessories used on Nikon's Labophot and Optiphot microscopes; more than 130 objective lenses, 10 condensers, and 7 stages are thus at the user's disposal.



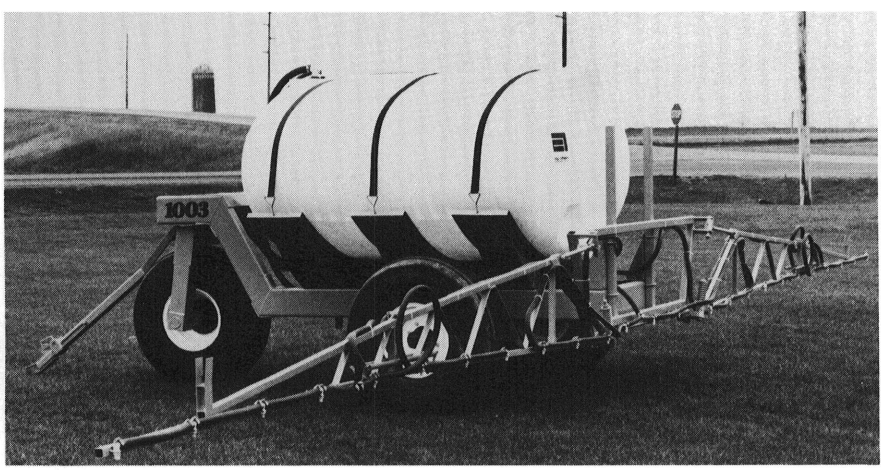
Contact: Nikon Inc., Instrument Group, 623 Stewart Avenue, Garden City, NY 11530; (516)222-0200.

Three-Wheel Pull Sprayer Comes Fully Assembled

The 1003 TP, a three-wheel pull sprayer, has a 750- or 1,000-gal rated capacity tank and an optional ground-driven centrifugal pump that automatically coordinates field speed and output. The three-wheel weight distribution avoids the compacting effects of double-tracking four-wheel units. The elliptic poly tank features a full-length stainless-steel sparger for complete product agitation and a large gathering sump for product withdrawal. Standard features include a hydraulic-driven 60 GPM centrifugal product pump, a full-length saddle, and electronic controls; 40-, 47-, and 60-ft. truss-type booms are optional.

The sprayer, which also may be used with toolbars or tillage implements to apply fertilizers and chemicals, comes fully assembled and field-ready.

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



ARAX Gathers and Stores Soil and Weather Data

The ARAX meteorological satellite station is a portable, solar-powered microcomputer and electronic measuring system that senses and records vital data about temperature, barometric pressure, wind speed and direction, rainfall, snowfall, solar radiation, crop growth rate, soil temperature and moisture, irrigation water salinity and pH, dew, thunderstorms, and many other factors. The 12 plug-in A/D sensor modules allow input of virtually any type of sensor measurement. At preselected intervals, the data are transmitted by hard-wire telemetry or radiotelemetry to a small, powerful base computer and filed historically. The base computer can support up to 16 satellite stations, or a satellite station can be connected directly to a personal computer.

All data are available on a printer or visual CRT screen. The system's speech synthesizer permits easily understood voice reports, and an internal modem

allows instant access to all ARAX reports by telephone from anywhere in the world. ARAX can initiate a telephone call automatically to contact the user and report on possible harmful or damaging conditions or direct reports to any prescribed telephone number.

Contact: Barbara A. Kovell, Transwave Corporation, Cedar Valley, Box 489, Vanderbilt, PA 15486; (412)628-6370.

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*.

Abbott Laboratories, Contact: Donald S. Kenney, Manager of Plant Science Research, 6131 RFD (Oakwood Rd.), Long Grove, IL 60047; 312/367-2900. Abbott Laboratories has recognized from its earliest days that health care included development of products and methods to benefit animal health and agriculture by increasing output and yields. The Agricultural and Chemical Products Division has maintained that tradition to conceive, research, and develop new agricultural technologies to help production of more and better crops. Our main interests are in the field of environmentally compatible biological and crop protection pesticides and plant growth regulators, with emphasis on fermentation processes and natural products.

Agriculture Canada, Contact: M. A. Fraumeni, librarian, Research Station, Vineland Station, Ontario, Canada L0R 2E0; 416/562-4113. Agriculture Canada was built in 1967 and was formed from amalgamating the Dominion Entomological Laboratory at Vineland and the Plant Pathology Laboratory in St. Catharines. A comprehensive program of crop protection research serving the horticultural industry is carried out at the Vineland Research Station. A multidisciplinary approach is administered, applying entomology, toxicology, acarology, nematology, virology, mycology, computing science, and residue chemistry expertise to the pest and disease problems of various horticultural crops. Pest and disease management programs at the station include research on tree fruits, vegetables, grapes, glasshouse ornamentals, small fruits, and woody ornamentals. Some work is also performed on forage crops and tobacco. The diversification of plant protection research supports a wide range of horticultural industry problems.

American Cyanamid Company, Contact: Dr. K. L. Hill, Agricultural Research Center, P.O. Box 400, Princeton, NJ 08540; 609/799-0400. American Cyanamid is a global, high technology, research-based company founded in 1907, and it currently ranks among the 100 largest industrial firms in the United States. Annual sales exceed $3.5 billion from agricultural, medical, chemical, and consumer product lines. The Agricultural Group serves crop and livestock producers and public health programs worldwide with technologically advanced, environmentally acceptable herbicides, insecticides, animal nutrition, and health products and fertilizers. We have recently introduced the first in a series of new chemical herbicides, the imidazolinones, which represent an entirely new class of chemistry. An expanding global agricultural research and development program has a number of additional significant new products under development.

Arizona Agrochemical Company, P.O. Box 21537, Phoenix, AZ 85036; 602/437-1510.

BASF Wyandotte Corporation, Contact: Earle Butterfield, Ph.D., Fungicide Specialist, 100 Cherry Hill Rd., P.O. Box 181, Parsippany, NJ 07054; 201/263-3904. BASF Wyandotte Corp., a member of the worldwide BASF Group, brings over 100 years of experience and accomplishments to the agricultural field. Backed by a network of highly trained people in research, market development, sales, and management, BASF is helping in the world's vital struggle to produce high yielding, high quality food and fiber crops. As a leader in agricultural chemical research around the world, BASF is firmly dedicated to the continued development of agrichemicals for a growing world.

1986 Advertisers Index

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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APS PRESS

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APS Press is the name for the publishing program of The American Phytopathological Society (APS). It is supervised by the APS Press Editorial Board and is responsible for all publications of the Society, i.e., books and audiovisual materials, except *Phytopathology, Plant Disease,* and *Phytopathology News*. The policy of APS Press is to publish primarily in areas concerning or relating to diseases of plants, although exceptions may be made with the approval of the Editorial Board.

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Those wishing more information concerning publication with APS Press should contact the current Editor-in-Chief:

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