

## Ozone damage in oil crops

Ozone and other air pollutants are costing farmers at least \$1 billion in agricultural crop losses each year, according to U.S. Department of Agriculture researchers. "Farmers don't see ozone damage happening to their field crops, but it is," according to Walter W. Heck, who heads air pollution research at Raleigh, North Carolina, for USDA's Agricultural Research Service in cooperation with the Environmental Protection Agency.

Heck said observations in field test chambers and greenhouses have shown ozone has caused leaves of soybean, wheat, cotton, peanut and other agricultural crops to die prematurely, reducing yields and costing farmers money.

Heck's laboratory has been studying the problem since 1980 as part of the National Crop Loss Assessment Network set up by EPA to estimate crop losses from ozone and other air pollutants. Results observed include the following:

- Peanut yields decreased about 12% during 1980 tests at Raleigh, one of the highest losses for crops tested.
- Soybean yields also decreased 12% when exposed to .05 parts per million of ozone in 1980-82 field tests at Argonne, Illinois; Beltsville, Maryland; Ithaca, New York; and Raleigh.
- Cotton tests at Shafter, California, showed a 7% reduction while 1982 tests at Raleigh showed that yields of a common type of cotton grown in the South decreased by 10%.
- As ozone increased, yields declined for all the crops tested. At .06 ppm, for example, soybean yields were cut by 17%, and at .09 ppm the loss was 31%.

Ozone enters a plant as its leaves absorb carbon dioxide necessary for photosynthesis, in which plants use sunlight to form carbohydrates. When damaged by ozone, a plant's leaves will age prematurely and discolor, leaf cells will die, and photosynthesis and growth will decrease.

## Biotechnology office created

U.S. Secretary of Agriculture Richard E. Lyng in late April announced the establishment of an Office of Agriculture Biotechnology, responsible for developing and implementing policies and procedures pertaining to biotechnology.

The new office will serve in a staff role for USDA's Agricultural Recombinant DNA Advisory Committee and for the national biological impact assessment program, which is a biotechnology clearinghouse composed of federal and state scientists.

## Argentinean soybean taxes

The Office of the U.S. Trade Representative (USTR) has requested bilateral consultations with Argentinean government officials to discuss Argentina's differential export taxes on soybeans and soybeans products. USTR requested the meeting after the National Soybean Processors Association (NSPA) filed a petition in April claiming unfair trade practices by Argentina.

Argentina applies an export tax of 28.5% on soybeans and 16.5% on soybean oil and meal. NSPA claims the tax differential provides an artificial and unfair cost advantage to Argentina's soybean crushers. The petition also claimed that the differential tax has allowed Argentina to export much more meal and oil; this has suppressed world prices and reduced U.S. exports of soybean products.

## Petitions for GRAS status

The Victorian Chemical Co. Pty. Ltd. of Australia has submitted two petitions to the Food and Drug Administration (FDA) asking for generally recognized as safe (GRAS) affirmation for ethyl esters of fatty

acids and sulfated butyl oleate for use in an aqueous emulsion for dehydrating grapes to raisins.

Meanwhile, Diamond Crystal Salt Co. has petitioned FDA for GRAS status for *d-a-* and *dl-a-* tocopherols as inhibitors of nitrosamine formation in a dry-cured bacon. Details: *Federal Register*, April 9, 1986, pp. 12212-12213; April 10, 1986, p. 12395.

## Environment for botulism?

Researchers with FDA's Center for Food Safety and Applied Nutrition have proposed that margarine used for frying may have provided an ideal anaerobic environment for the growth and toxin production of *Clostridium botulinum* in sauteed onions implicated in a botulism outbreak in Peoria, Illinois, in 1983.

In a paper submitted to the *Journal of Food Protection*, Haim M. Solomon and Donald A. Kutter of the center's division of microbiology reported that strains of *C. botulinum* type A inoculated into onions and those isolated from patients in the Peoria incident were able to grow and produce toxin in Spanish onions sauteed in margarine within 48 hours from an inoculum as low as 1 spore per gram of onions.

They reported that there was enough toxin measured in onions inoculated with the outbreak strains to cause botulism in the approximate 100 grams of sauteed onions in each patty-melt sandwich. Details: *Food Chemical News*, April 28, 1986, pp. 35-36.

## Technical report on isophorone

The National Toxicology Program has completed a technical report describing toxicology and carcinogenesis studies of isophorone, a solvent or cosolvent for polyvinyl and nitrocellulose resins, lacquers, finishes, pesticides, herbicides, and a variety of fats, oils and gums.

Free copies of "Toxicology and

## From Washington

Carcinogenesis Studies of Isophorone in F344/W Rats and B6C3F<sub>1</sub> Mice (Gavage Studies)" are available from NTP Public Information Office, MD B2-04, PO Box 12233, Research Triangle Park, NC 27709.

## Nutrition for the 1990s

A Federation of American Societies for Experimental Biology (FASEB) panel has drawn up "A Report of the Scientific Community's View on Progress in Attaining the Public

Health Service Objectives for Improved Nutrition in 1990."

In the report, the panel advocated distributing the "Dietary Guidelines for Americans" to all families in the nation, either directly or indirectly through educational efforts and mass media exposure, and urged that efforts be undertaken to help consumers understand nutrient labeling.

In addition, the panel said, "By 1990, food service operations should provide food choices that make it possible to follow the 'Dietary Guidelines for Americans.'"

The panel suggested that serious consideration be given to including objectives on diet and cancer and

osteoporosis in the 1990 objectives for improved nutrition. "By 1990, public and private sector support for biomedical research on interrelationships of dietary factors, dietary patterns, specific nutrients and related nutritional factors with cancer should be increased over that designated in 1985," the panel wrote. It also suggested that efforts be started on planning objectives for the 1990-2000 decade, including such topics as nutrition and dental health, dietary claims and health fraud, hypervitaminosis, anorexia and bulimia, nutrition in pregnancy, and nutrition in the elderly.

Details: *Food Chemical News*, May 5, 1986, pp. 54-58.

## Inside AOCS

# President's Club and Honor Roll

The AOCS members listed here have qualified for the 1985-86 AOCS President's Club or Honor Roll. Members who recruit at least one new member qualify for the President's Club; those recruiting three or more qualify for the Honor Roll. President's Club and Honor Roll members receive recognition at AOCS annual meetings. Forms for use in recruiting new members are available from AOCS Headquarters, 508 S. Sixth St., Champaign, IL 61820 USA.

### Eleven

A.P. Menasian

### Ten

D. Meiners

### Nine

M.A. Gorman

### Seven

R.C. Hastert

F.C. Naughton

### Five

A.C. Peng

### Four

J.L. Beare-Rogers

W.N. Elder Jr.

F.J. Flider

C-T Ho

R.G. Krishnamurthy

J.B.M. Rattray

### Three

R.K. Arundale III

T.A. Foglia

E.N. Frankel

G. Maerker

E.G. Perkins

F.W. Sosulski

D.K. Strayer

### Two

A. Cantafora

N.M. DiMarco

D.R. Erickson

H.P. Gormley Jr.

A.B. Herrick

D.M. Holcomb

J.J. Kabara

H.A. Martin

L.J. Monty

T.L. Mounts

R.T. Penning

N.J. Smallwood

K.T. Zilch

### One

R.G. Ackman

C.B. Amos

C.W. Bailey III

H. Baker

W. Baturusa

W.J. Baumann

J. Bazzano

K. Berger

M.L. Besemer

J.L. Braun

A. Cahn

J.R. Carroll

G.C. Cavanagh

J.E. Covey

R.V. Crawford

C.K. Dartey

J.K. Daun

R.W. Delashmit

F.D. Doca

M. Eijadi

W.E. Farr

G.K. Feldhaus

D. Firestone

F. Friedrich

E. Fritz

J.P. Galloway

J.K. Gilpin

S.E. Gloyer

J.M. Gonzalez

L.S. Gray Jr.

L. Hall

T.A. Hamme

T.T. Hansen

J.M. Hasman

D. Hausman

K.C. Hayes

J.E. Heilman

M.J. Hein

R.T. Holman

B.J. Holub

E.F. Hoover

N.Y. Hsu

A.W. Johnson

L.A. Johnson

L.A. Jones

C.W. Jordan Jr.

F.P. Khym

D.R. King

F.X. Kicken

D. Kochavi

K.Y. Lai

G. Leipa

R.C. Lindsay

E.C. Louis

E.R. Lowrey

F.E. Luddy

E. Lusas

M. Maclellan

J. Mai

R. Maxwell

A.C. McConnell

S.L. Melton

D.B. Min

D.T. Munsey

C.R. O'Bryan

F.E.L. Oh

D.A. Okiy

F.T. Orthofer

P.M. Parker

A.J. Perla

M.D. Pickard

D. Plummer

R. Price

R.H. Purdy

R.R. Regutti

W.F. Reinking

J.S. Rhee

K.C. Rhee

M.J. Richard

C.L. Riggs

N. Rockwell

L. Rogovin

C.D. Roth

E.F. Sanders

H.F. Schleutker

D.W. Schmadeke

D.N. Schmidt

K.F. Schoene

G.E. Severson

F.C. Shook

W.B. Sizer

M.H. Sopora

B. Sova

H.T. Spanuth

P.J. Stern

R.O. Stevens

H.R. Strop

J. Stroszel

H. Stupel

J.F. Suriano

B.F. Szuhaj

T. Takagi

D.C. Tandy

I. Tauscky

D.R. Taylor

D.D. Terry

B.E. Thompson

A. Traska

P.D. Vail

P.J. White

N.R. Widlak

R.F. Wilson

D.R. Worley

The AOCS members listed below have qualified for the 1986-87 AOCS President's Club or Honor Roll.

### One

R.C. Hastert

B.L. Major

G.R. Mirmira

D.V. Okonek

J.G. Turcotte Jr.