

Low sulfur dioxide levels injure trees

UNIVERSITY PARK — Increased use of coal to generate electricity, expected in the future, could injure trees and other plants with sulfur dioxide pollution, according to experiments at The Pennsylvania State University.

Using hybrid poplar trees, the Penn Staters found that low levels of sulfur dioxide — often common near power plants — can cause premature loss of leaves and decrease normal growth by 3 to 4 percent.

Alan R. Biggs of Lewisburg, graduate assistant in plant pathology, believes that defoliation and leaf injury interfere with photosynthesis, the process whereby plants use carbon dioxide and solar energy to produce sugars for growth.

Biggs indicated earlier studies by Donald D. Davis and associates suggested that future vegetable varieties and other plants may need to be bred or selected for resistance to air pollutants. Increased air pollution seems inevitable, it was pointed out, in long-range plans to rely on coal for producing electricity.

Studies involving air pollution of plants are carried out within the Agricultural Experiment Station of the College of Agriculture.

Hybrid poplars were chosen as test plants for their importance in shelter belts, for use in fuel alcohol and firewood, and in home plantings. The experiments examined the effects of low levels of sulfur dioxide on plants over one growing season or less.

Biggs found that fallen leaves from poplars exposed to sulfur dioxide had 300 to 740 percent more sulfur content than leaves not exposed to the pollutant. He indicated the high sulfur content

places undue stress on plants and accounts for leaves falling earlier than normal.

Height growth of poplars was reduced where the trees were exposed to sulfur dioxide levels of 6 to 12 times the normal content in the atmosphere. The trees were exposed for 72 hours per week for 6 to 14 weeks, from one-half to a full summer season.

Leaves exposed to sulfur dioxide gradually turned yellow, beginning with the oldest leaves. The injury progressed upward as exposure to the pollutant continued.

Small brown patches of dead tissue, usually between the veins of leaves, were observed frequently. Such dead patches were found only on trees exposed to the highest level of two sulfur dioxide dosages. When viewed from a distance, exposed trees generally appeared lighter green than unexposed trees.

The hybrid poplars were kept outdoors for six weeks prior to exposure to sulfur dioxide in a laboratory. Known for their fast growth, the poplars were at least 12 inches tall before they were exposed to the pollutant.

Sulfur dioxide concentration, temperature, and relative humidity were carefully controlled in the experiments. The plants were examined throughout each 72 hour exposure. They were placed outdoors between exposures. Height and defoliation measurements were taken three days after each exposure.

In past years, high levels of sulfur dioxide were more common than today, Biggs pointed out. A current trend is to build extremely tall smoke stacks on power plants, which help to disperse and dilute

air pollutants. However, some scientists believe that regional dispersion of sulfur dioxide contributes significantly to acidic rain — "another ball game."

Davis heads up a series of long-range experiments analyzing the effects of air pollution on urban and rural vegetation. He said additional studies will deal with the importance of vegetation in removing atmospheric contaminants.

Sale Reports

The Sansky Farms held a public sale of 48 registered and grade Holsteins on Nov. 14. The owners were Thomas and Lois Salansky, Rt. 1, Uniondale.

The top cow sold for \$4,600, the second high was \$2,800 and the third high sold for \$2,600.

M.L. Bunnell & Wayne Weaver were the auctioneers.

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A public auction of miscellaneous items was held Nov. 11 at the Southern Manheim Twp. Fire Hall, Fruitville Pike & Orchard Sts., Lancaster.

Some prices received were old baseball cards \$2.50 each, old jewelry \$10 to \$35, sterling tumbler \$11, R.S. Prussia tea set \$90, old petticoats \$22.50, old misc. toys \$5 to \$75 and a set of hall china \$90.

Auctioneer was John H. Cooper.

xxx
A public estate sale was held Nov. 11 for the estate of Emma S.

Barner, 10 miles south of Selinsgrove. There were 335 registered buyers present and the sale was finished on Saturday, November 14.

The 53-acre farm was sold for \$40,000 and included a frame, 6-room dwelling and a pole shed.

Other items sold were Super C Farmall tractor \$1,250, 1976 2-door Ford Grenada \$1,300, organ w/top \$175, oak bedroom suite \$300, pressure cooker \$35 and 6 sailboat tumblers \$50.

Earl Eash was the auctioneer, with Donald C. Fogle.

xxx
The Cranberry Meadows Farm Holstein Sale was held Nov. 13 on Sullivan Rd., Westminster, Md.

The average of the 82 head sold, which were mostly grades, was \$1,046. The top priced animal was a bred heifer for \$1,925. There were three animals sold for \$1,700.

Sale Manager was Rensburg Sale Service.

ABSOLUTE AUCTION
EQUIPMENT, AUTO PARTS, OFFICE EQUIPMENT, BUSINESS MACHINES, ETC.
AT "BOLAN MOTORS, INC." (A FORD AGENCY FRANCHISE), 1127 S Dupont Highway, Dover Delaware

SALE DATE: WED., NOV. 25
11:00 A.M.

Tool Room Service Dep't Complete With Equipment Parts Shelving Compressor Plus Office Furniture Office Machines Hundreds Of Important Items INSPECTION Tuesday, Nov 24, From 11:00 A.M. to 3 P.M.

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P O BOX 1007, Wilmington, DE 19899
(302) 658-7264

PUBLIC SALE
OF FARM MACHINERY
THURSDAY, DEC. 10, 1981
12:00 P.M.

LOCATED: 1 mi. North of Manchester, Pa. turn in lane on right, (at white rock).

FARM MACHINERY

Farmall M tractor - Farmall H tractor, Farmall 200 tractor w/fast hitch, Farmall C tractor, 1972 Int. 1800 truck w/(Van body G.V.W. 33,000 lbs., 2 speed rear & air brakes), J.D. 45 Combine w/Grain Head, New Holland 69 Hay Baler, New Idea #7 Corn Picker, Little Giant elevator drag, 24 ft. elevator, New Idea Hay Conditioner w/large wheels, J.D. Killifer disc on wheels, J.D. K.B.A. Disc, Int. 3 bottom Plow, (2) New Idea Hay Rakes on Steel, Stalk Chopper with hood attachment, 3 Flat Bed wagons, 100 gal Sprayer Tank, Int. C mower, Cult for M.H. & C, New Idea 12A Manure Spreader, Land Roller, 8 ft. Cultipacker, Oliver Superior Grain Drill, Int. Loader Model 31 for H or M, Int. 12 ft. Spring Harrow.

There are no small items on this sale "BE ON TIME"

TERMS: CASH OR GOOD CHECK (Full settlement sale day)

FARM CREDIT ASSN. OF YORK, PA.
AUCTIONEER:
Blaine R. Rentzel
Emigsville, Pa.
764-6412

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SATURDAY, DECEMBER 5

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BANKRUPTCY SALE
U.S. BANKRUPTCY COURT
FOR THE DISTRICT OF DELAWARE
RE. NEW CASTLE CONSTRUCTION COMPANY, INC.

THURSDAY, DEC. 3, 1981

@ 11 A.M.

CONSTRUCTION & EARTH MOVING EQUIPMENT

THIS IS A PARTIAL LIST
(2) Michigan Earth Movers Allis Chalmers Bull Dozer w/Blade Allis Chalmers Front End Loader Dozer Additional Dozers plus M 100 Series B/Grader w/Ripper (2) Caterpillars #12 Motor Graders (3) Ford Front Loader Backhoes Asphalt Paver Ray Go Roller Model 600 Gallon Roll O Matic Roller Static Stone Paving Roller Front End Loader w/Track 1 1/2 Yd Bucket 7G Series B Plus Trucks Low Boy Tandem Trailer Plus Tools AND Additional Heavy Equipment LOCATION U.S. 13 to MIDDLETOWN DEL S Through Middletown On Rt. 301 about 3 1/2 Miles to COUNTY RD 445 Just Before Md Line Left On 445 Look For Signs
INSPECTION WED DEC 2nd From 11 A.M. to 3 P.M.
TERMS GUARANTEED FUNDS To Include Irrevocable Bank Letter Of Credit Certified & Cashier's Check etc
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(302) 658-7264

AMOS HAMMOND & SONS
HAMMOND FARMS
MACHINERY DISPERSAL
SAT. NOV. 28

10:30 A.M.

PennYan, N.Y.

Sale to be held at the field on Rte. 54-A in Keuka Park, 3 miles from PennYan, app. 4 miles from Branchport, or 1/2 mile west of Keuka College.

Having sold their farm, all machinery sells including:

6 Tractors. J.D. 2630 diesel with 636 original hours; J.D. 950 diesel with 449 hrs.; I.H. 454 diesel with 1638 hrs.; Oliver H.G. model narrow gauge crawler with belt pulley; J.D. 440 backhoe with front loader, J.D. 440 crawler with blade; nice 1968 Chevy. 50 series truck with hoist and 14 ft. body; 1974 G.M.C. 1500 series 4-wheel drive pick-up; 1972 Dodge 200 series 3/4 ton pickup; 1978 Ford LTD 2-door auto. with 33,000 miles, 1977 G.M.C. 35 series truck with 14 ft van body, 38,600 miles dual wheels, etc.; Like brand new Berthoud air blast vineyard sprayer with 165 gal. fiberglass tank; B.M.B. 5 ft. 3 pt. rotary mower; Howard 3 pt. 50 in. rotovator; Oliver 4-16 in. mounted plow; 1 row 3 pt. cabbage setter; J.D. 24 in. vineyard disk; 2 J.D. 3 bottom 3 pt. vineyard plows, Shaver post driver; J.D. 483 haybine, Smoker 24 ft. elevator, J.D. #9 3 pt 7 ft. mower; J.D. 14-T baler; 1 row tree or grape planter; 64 in. vineyard disk, 60 in. vineyard tiller; J.D. 4 row #42 front mount cultivator; J.D. side rake; 14 ft. farm trailer; I.H. 4-row corn planter, J.D. ground driven manure spreader; Ontario 15-8 disk drill, 2 E-zee flow vineyard tert. spreaders, 2 Hardee 150 gal. steel tanks, 2 new 330 gal water tanks; 2 vineyard trailers; 68 in. corn stalk chopper; Hyd. grape take out; Vermont 3 x 12 ft. sap evaporator with 3 pans and hood; 22 in. disk tool bar mount; 500 plastic grape trays; 12 apple pallet boxes; 10 grape tote boxes; quantity of bushel crates; 200 beer boxes; Franklin stove; Marquette retr.; and Scandia air tight wood stove and other items! A good sale here!

Lunch available.

Terms: Cash or good check day of sale. I.D. required!

For complete info. contact the owners:

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