

Ag researchers work to improve on nature

WILMINGTON, Del. green plant, "nature's perfect factory," which turns sunshine, water, and soil nutrients into food. Who would have suspected that the green plant is, in fact,

photosynthetically inefficient? Ralph Hardy, a biochemist who heads up the Dupont Com-

pany's Life Sciences Group, says the green plant fritters away much of its energy on unnecessary enzyme activity.

Speaking at a recent University of Delaware seminar on the world food crisis, Hardy explained how agricultural researchers are tinkering with the inner workings of the plant's factory to make it more efficient. Using the tools of biochemistry and genetics, scientists are striving to enable plants to direct more of their energy resources where they are so badly needed—in growing food.

The U.S. is one of only a handful of nations with grain to export, Hardy noted.

World population continues to expand at the rate of two percent per year. It's expected to reach six billion by the year 2000. But each year we're losing more irreplaceable agricultural land to other uses. Thus, U.S. agriculture is constantly challenged to grow more food for more hungry people on less land.

Hardy believes it can be done. It can be done by increasing food plants' photosynthetic efficiency. It can be done by breeding plants that can stay green and growing longer, or by breeding plants that can finish their growing faster in order to make room for the next batch. These are just a few of the promising areas of agricultural research.

According to William C. Leibhardt, moderator of the world food crisis seminar, University of Delaware Experiment Station researchers are attacking the problem of food production efficiency from a number of directions.

Experiment Station researchers are breeding corn especially suited to Delaware conditions: they're tackling insects and plant diseases that reduce yields; they're breeding livestock to yield maximum possible food with minimum necessary feed; they're increasing the efficiency of soil amendments such as lime, fertilizer, poultry manure and sludge; they're looking for the most efficient tillage and irrigation practices; and at the same time, they're working to conserve scarce fossil fuels.

Hardy pointed out that farmers tend to be very efficient users of energy. Most of the energy costs in food production are incurred after the raw products leave the farm gate. The lion's share of energy is used not in farming, but in transportation, refrigeration, and processing.

By economic necessity, U.S. farmers must be both productive and energy efficient.

PUBLIC AUCTION

OF FARM EQUIPMENT & TRUCKS

Location: Going from Smyrna, Del. to Leipsic on Rt. 12 turn left at third crossroads. 2nd. farm on left.

SATURDAY, FEBRUARY 28
11 A.M.

4400 John Deere combine with #444 corn head (241 hrs.); 1850 Oliver diesel tractor, 1750 Oliver gas tractor, 15' JD disc, Oliver 14' #252 disc, two 15' Brillion packers, 2 sets 3 ph Oliver cultivators, Brillion 4 row stalk beater, #565 Oliver 4x16" plow, 5 bottom plow packer, 4 bottom plow packer, 16' Brillion mobile springtooth, 490 JD planter, 2 funnel body grain wagons, Oliver Superior grain drill, 36' K W elevator, 4 row Int. rotary hoe, 4 section drag, Rhyno 3 ph blade, meeker harrow, Ezee Flow drill, snow blade, tractor seeder, 1976 Chevy with 16' flat metal dump body and grain sides (3400 miles), 1975 Chevy with 16' grain body (1800 miles), tools, misc., #565 Oliver 5x16" plow.

Terms: Cash or Approved Check

Owner,
SAMUEL SHAHAN

Sales Mgr. & Auctioneers
C. T. Scuse & Sons
653-7530

PUBLIC SALE

OF FARM MACHINERY & DAIRY EQUIPMENT
SATURDAY, MARCH 14
At 10 A.M.

Located 1 mi. North of Rt. 254 at Limestoneville, which is between Milton & Washingtonville, Pa. Montour Co. Watch for signs.

Approximately 25 Reg. & Grade Holstein Heifers in various stages
MACHINERY

2 Tractors — J.D. 4030 Diesel, J.D. 3020 Diesel; J.D. 7000 Conservation Corn Planter with Bean Units, used 1 yr.; N H 479 Haybine, N H. 770 Harvester with One Row Corn & Grass Heads; N.H. 357 Grinder Mixer; 2 N.H. Forage Wagons #7 & 8; 2 N.H. Manure Spreader #516 & #676; 4 N.H. Bale Thrower Wagons; 2 N H Balers #276 & 269 with Throwers; 2 N H. Rakes #258 & 56; Wood C114 Rotary Cutter 10', N.I. Mounted 305 Corn Picker with #307 Husking Bed; N.H. 36 Flail Chopper; J.D. 4 Bar Rake; Walsh Field Sprayer, N.H. #25 Blower, 2 J.D. 4B 16" Semi Mount Plows; Brillion 16' Transport Harrow; I.H. 12' Transport Disc; J.D. 4 Row Cultivator; J.D. 2 Row Cult.; M.M. Grain Drill 13 Disc; Allied 6" Grain Auger 41'; 4" Auger 12'; 2 N.H. 32' Grain & Hay Elevators; 12' Little Giant Drag Elevator, 2 Alum Elevators; 3 Gravity Bins 1 new & others on good chassis; Hyd. Dump Cart; Stablecleaner Unit Farmway 2 H.P. Motor; I.H. Motor; Spare Tractor Wheel 18-4x34 complete; Platform Scales; Air Comp.; 4 Hyd. Cylinders; Lincoln Welder A C. 225 amp, P.T.O. Seeder; 275 gal. Water Tank; 2500' 3/4" 100 P.S.I Plastic Pipe new; 6 Rolls Barb Wire; 30 Steel Posts 5'; Bolt Bins; Parts Bin; Shop Supplies

FEED & EQUIP.

Approx. 20 Ton Good Alfalfa & Timothy Mixed Hay; 360 Bu. Feeding Oats; 20 Ton Ear Corn, 100 Ton Corn Silage; 8 Ton Schuld Storage Bin with Center Stir & Unloader; Eubler 35 Bu. Power Feed Cart with Gas Engine; 15' Green Chop Box; 2-15' Hay Racks on Wagons; I.H. Truck New Motor with Dump Legal 27,000 lb. with Fertilizer Auger; P T O. Fertilizer Spreader 3 pt.

MILKING & DAIRY EQUIP.

Stainless Steel Strainer; 4 Delaval Magnetic Milker Units; 1 Sputnick; 2 Stainless Steel Carrying Pails; Can Rack; 2 Fly Foggers; 2 Fans; 10 Milk Cans; 1 Semen Tank; Breeding Kit, 5 Straws 7H058 Elevation; 5 Straws 9H174 Jerry; 5 ampules Bootmaker 29H1881; 4 Straws 9H143 Job; 12 Straws 9H533 Ace; 10 Straws Harrsburg Gay Ideal, 38 Straws 9H107 Arlinda Chief.

Terms By,
TITUS & SUSANNA SNADER

Elton & Alvin Horning Auctioneers
HORNING FARM AGENCY, INC.
Main Street
Morgantown, Pa.
215-286-5183

LUNCH AVAILABLE

PUBLIC AUCTION

VALUABLE FARM EQUIPMENT; TRUCKS

FRIDAY MARCH 13
11 A.M.

(five miles north of Allentown) get off at 15th St. exit from Rt. 22, go north on Mauch Chunk Rd., between Ruchsville & Ironton, (near Ironton Agway), Lehigh Co. Pa.

Oliver 1750 diesel w/3 pt. hutch w/over under hyd shift & WF end recently ovr hauled; Farmall super MTA w/wide & narrow front ends, live hyd & alternator; Meyers 8' snow blade for same; White 7300 combine w/cab, 13' grain head w/hume reel, & four r wide C head nice; Oliver 568 five bot semi mt. auto hyd reset pl; Oliver 4340 three bot 16" trailer pl; Athens 10' offset transport disc; Oliver #252 12'-9" transport disc; Brillion 13' single roll cultipacker; JD 10' roller harrow; White 5400 four r no-till C planter w/monitor, herbicide attach, etc; Int four r 3 pt culti; Int. #510-16 double disc grain drill; Oliver #415 PTO trailer type mower; New Idea parallel rake; JD 14-T baler; JD 10' lime spreader; JD three beater model N PTO Manure spreader; New Idea 302 two rear mt. C husker w/M Farmall mt. brackets; Century 300 gal. trailer weed sprayer; Lilliston 7' rotary cutter; Farmec 36' b & c elev; (2) Grove 4/w dump trailer; small two w/trailer; Cardinal 16' transport elev; 500 gal. water tank; 38" tire chains; scrap iron piles; platform scale,

TRUCKS: 1968 Int 1600 Loadstar w/7'x14' dump body; Ford F-600 w/rebuilt motor, & bulk potato box w/chain unload.

Terms: Cash or check

Refreshments served

Ordered by
LEROY & THELMA MANTZ

Conducted by Ralph W. Zettlemyer
Auction Co., Inc.
(215) 395-8084

PUBLIC AUCTION

VALUABLE 123 ACRE LEBANON COUNTY FARM & FARM EQUIPMENT
SATURDAY, MARCH 28
10:00 A.M.

Located along the Colebrook Road app. 2 miles North of the Village of Master-sonville, Pa.

Real Estate to be offered at 10:00 A.M. Consists of 123 Acres M/L Farmland located in South Londenderry Twp. Lebanon County Penna. Thereon erected a large barn and equipment storage area, with cattle feeding barn attached. 60' trough and feeding unit, 20'x80' concrete silo with feed ezy silo unloader.

Farm inspection anytime or by appointment with auctioneers.

The following machinery and equipment has been well maintained.

John Deere Tractors 2840 app. 500 hrs. 1520 with 1325 hrs with front end loader, Massey Ferguson 35 "Nice", IHC 16 hoe grain drill about "new", 3 bottom 16" I.H.C. plow about new N.H. 519 Manure Spreader, J.D. 7' Mower, 30' N.H. elevator, 16' little giant elevator, new 20' grain or feed auger, Mohawk Chisel plow, 4 wagons, 5' Bush hog, dump trailer, John Deere offset disc 10' Brady 12' portable harrow, John Deere 4 row cornplanter, John Deere 10' rake new, N.H. 68 Baler, 20' high speed conveyer, N.H. Crimper, post hole digger, Misc. lumber, locust posts, hay app. 10 tons, metal feed racks 9 Angus cows - 10 head young Angus Cattle, various weights 450 to 1000 lbs

Sale By
WALTER H. & GLADYS M. WEBER

Attys. Seigrist, Koller & Brightbill

E.M. Murry Associates

287 Lime Rock Road
Lititz, PA 17543
Elmer Murry 626-5244 - 626-2636
Richard Murry 626-8175 - 949-2280
Ken Miller 665-2073
Professional Auctioneers
Appraisers and Advisors
Since 1953

PUBLIC SALE

VAL. MODERN FARM MACHINERY, HORSE & PONY, ETC. on farm 15 miles NW of Danville, Pa., 3/4 mile N of White Hall off Rt. 44.
THURSDAY, MARCH 12
11 A.M.

J.D. 4020 D w/t/e tractor, fully loaded, nice; AC D-14 G utility tractor w/front end loader; Farmall Super M; AC WD-45 w/t/e Tractor; Glencoe 10 Tooth 3 pt. Chisel plow; 10' Transport Disc; IH 275 Tandem Axle Spreader w/Dbl. Apron; N.H. 354 Grinder-Mixer, Nice; N.I. 305 Mtd. picker; N.H. 269 PTO Baler w/PTO Thrower; 2-16' thrower wagons; Little Giant 36' A.P. Elevator, like new; 20'x30' hay-o-vators; Rhino 3 pt. 8' H.D. blade; Shaver hyd. post driver; N.H. 36 flail chopper; 3 pt. Fert. spreader; 67 Ford 12' (high rack) Truck; 1600 lb. Livestock Scales; headgate; Steam Jenny; Large Air Compressor; Engine A-Frame; 12' F.G. Rowboat w/Trailer; many other items; etc.

Owner,
SAMUEL HALLOWELL

Auct.
Max Fraley & Son
546-6631

Lunch Available

EDWARD FROELICH ESTATE



PUBLIC AUCTION

VALUABLE 125 ACRE MANOR TOWNSHIP, LANCASTER COUNTY FARM
THURSDAY, MARCH 19

AUCTION TIME 1:00 P.M.

Property is located along Franklin Road, Manor Township, 1/4 Mile East of Prospect Road Intersection.

Take Route 30 West of Lancaster, Pa., to Prospect Exit, Go South on Prospect Road to Franklin Road. "Watch for Auction Arrows"

125 Acre Lancaster County Farm
2200' Road Frontage along Frankin Road
600' Road Frontage along Seitz Road

Approx. 100 Acres Tillable
Approx. 20 Acres Pasture
Approx. 5 Acres with Buildings and Improvements

Large 2 1/2 Story Limestone House with Frame addition. Easily converted to a 2 unit family dwelling.

Large roomy kitchen with early built-in Corner Cupboard and cabinets. 2 Large Dining and Living rooms with hardwood floors, deep window seals, 2 Fireplaces, Full Bath, Attic, Basement, Concrete Porch, Other Large Rooms, Heated by Kerosene Room Stoves, Spring Water, 4 Large Bedrooms with double staircases.

LARGE FRAME BANK BARN WITH SLATE ROOF WITH 3 BAY BARN FLOORS.

4 LARGE FRAME TOBACCO SHEDS, CORN BARN, OTHER BUILDINGS.

If looking for a large Lancaster County Farm in a high state of cultivation with thousands of feet of road frontage inspect this farm.

To inspect farm go to property on February 28, March 7, 1:00 to 4:00 P.M. or call auction firm 717-733-7917 or Fulton Bank Trust Dept. 717-291-2561.

TERMS: 10% Down Day of Auction Balance within 30 to 45 Days.

Ranck and Ranck Attorneys.
John M. Ranck Lancaster, Pa.

EDWARD FROELICH ESTATE

Fulton Bank Trust
Department Executors
Auction Conducted By The:

J. Omar Landis
Auction Service
Jay M. Witman and
J. Omar Landis

Box 501 Apple and Robert Streets
Ephrata, Pa 17522