

Apollo 9 Photographs Farms For Signs Of Drought, Disease

When the astronauts of Apollo 9 returned to earth this week, they may have brought back information that could help to solve the problems of hunger. The answer lies in the performance of a battery of four 70-millimeter cameras.

Some time after the fifth day of the Apollo 9 flight, the astronauts turned their attention to the multispectral photography experiment which was one of the most important tasks remaining until deorbit and splash-down. One of the areas photographed was to be Arizona farm lands. Along with U.S. Department of Agriculture scientists, the astronauts wanted to know if orbital photography can detect signs of drought and plant disease — if a certain field lacks vigor, to find out why, disease, bugs, drought?

Success could mean that when experiments such as this become operational, they could provide information that would afford farmers enough time to save their crops.

Earth pictures for the Apollo 9 flight were programmed in part by USDA's Agricultural Research Service and Forest Service. While photographs of the earth have been taken be-

fore by most of the astronauts, no one has ever deliberately shot photos of farmland. It is hoped that the four cameras, operating from a height of 120 miles, will have uncovered different types of change in the terrain.

The still photographs are expected to show the type of crop in large fields, the vigor of these crops, and whether or not they are diseased. Similar information will be obtained on the nation's timber and grazing lands.

Four film filter combinations, developed over the last five years, comprised the photographic experiment Apollo 9's astronauts performed for USDA: camera 1 exposes only for green wavelengths; camera 2 exposes only for red wavelengths; camera 3 exposes only for near infrared; and the fourth camera includes film sensitive to all three color bands.

Scientists believe that the Apollo 9 cameras will be able to determine healthy crops from diseased ones by the way they reflect sunlight and early signs of drought by the way water-starved crops appear in sequential photos. They predict that

ultimately, cameras and other more elaborate instruments in space will be of great help in assuring the nation's food supply.

The more elaborate equipment may be able to tell if soil in a location is suitable for growing a particular crop, and spot overgrazing of ranges before it happens.

At the same time the astronauts were photographing the primary test area for space, conventional aircraft photographer the same areas from altitudes of 1,000-1,500 feet and 18,000-20,000 feet.

The purpose of the coordinated photo mission was to establish a correlation between what the astronauts picture and what the scientists photograph near the ground.

The Committee on Science and Astronautics, in a recent report, said the successful use of remote sensing from space presents the National Aeronautics and Space Administration an opportunity "to achieve tangible economic returns from the substantial investment already made by the American taxpayer in the United States space program."

Forage Crops

Alfalfa continues to rate as Queen of the forage crops; however, in the recent decade the alfalfa weevil has been a major problem and has decreased the value and the popularity of this legume on some farms. We are told of some progress in plant breeding work to produce a strain of alfalfa that is resistant to weevils. The work is being done at several research stations but seed will not be available for at least one or two more years. Growers are urged to keep alert for the progress of this work and to learn if the varieties are adapted to southeastern Pennsylvania. In the meantime the established spray schedules of recent years should continue to give us the best known protection.

PUBLIC SALE OF FARM EQUIPMENT, PERSONAL PROPERTY AND ANTIQUES

To Be Held

SATURDAY, MARCH 29, 1969

Located 4 miles Northwest of Manheim, near East Fairview Church of the Brethren, Rapho Twp., Lancaster Co., Pa.

Allis Chalmers G Tractor with plow & cultivator, Ferguson Tractor with loader, Ferguson 7 ft. grass mower, MC 28 disc harrow, roller harrow, 3 pt. corn planter, 2-wheel trailer, potato plow, air compressor, platform scales, David Bradley garden tractor with cultivator & cycle bar, roll snowfence & posts, lawn mower, Wright power-saw, 8 ton hydraulic jack, 1/2 in. elec. drill, anvil, socket set, 32 ft. ext. ladder, 20 ft. tree ladder, step ladder, forks, shovels, tomato baskets, stripping room stove.

Frigidaire 4-burner elec. stove, Frigidaire refrigerator with freezer, Monarch coal range, 12 cu. ft. freezer (chest type), kitchen cabinet, Black Stone washing machine, ext. table with 10 boards, small tables, china closet, buffet, 6 chairs, piano & bench, lounge chair, book case with glass doors, 3 pc. living room suite, roll-top desk, piano stool with claw feet, Singer sewing machine, side board, clothe trees, child's bed, 2 bedroom suites, other bedroom furniture, 2 blanket chests, Empire chest of drawers, Empire secretary, marble top wash stand, jelly cupboard, wood chest, flour chest, 3 sets of 6 plank bottom chairs, 1 high back rocker, cherry drop leaf table, porch furniture, 12 guage shot gun, 32 single shot rifle, meat slicer, meat grinder, metal tubs, wood tubs, old fashioned cradle, dough tray, cheese molds (heart shape), butter molds, candle mold, set of sleigh bells, cow bell, dinner bell, picture frames, 3 - 9x12 rugs, throw rugs, chime clock, Victor adding machine, jugs, crocks, dishes, pots, pans, jars, books, and many other items.

Sale to begin at 11 O'CLOCK SHARP. All Farm Items will be sold first.

Sale by
WILLIS R. PETERS, ESTATE

Geib & Hossler, Auctioneers

Food Stand — Mastersonville Fire Co.

PUBLIC SALE

John Maust Farm, 5 miles NW of Somerset off Husband-Edie Rd.

TUESDAY, MAR. 25, 1969

10:00 A. M.

Tractors and Farm Equipment

Massey Ferguson model 300 self-propelled combine, like new; John Deere 3020 Diesel, wide front end, 1000 hours, power steering; Farmall 504, 1500 hours, row crop type; Allis Chalmers WD 45, wide front end; John Deere 4-bottom pickup plow for 3020; New Holland forage harvester 717, like new; New Holland forage wagon, self-unloading, with high sides; New Holland #36 Field Chopper, 6 ft.; International 4-row #56 corn planter, new type, like new; New Idea corn picker, good shape; New Holland model 271 baler; John Deere #10 side-mounted mower; John Deere No. 22 hay conditioner; New Holland No. 56 rake; New Holland elevator; New Holland 130 bushel PTO manure spreader; 12 ft. Cultipacker like new; Ontario 17 disc grain drill; John Deere 12 ft. fertilizer and seed spreader on rubber; Walsh weed sprayer with 27 ft. boom; John Deere 6 & 4 section harrows; 5 extra good hay wagons, 2 with grain and hay beds; snow plow for John Deere 3020; John Deere hammer-mill; International dump trailer; International corn binder; 2 wagons with boxes for corn picking; Homelite chain saw with brush bow; 2 feed carts; Hog feeders; 3 sets tractor chains; large umbrella; 2 tractor cabs for John Deere and Allis Chalmers; drill press; vise; chains; grabs; picks; belts; 5 and 10 gallon milk cans; milk scales; cow clippers; hoof trimmers; Rheem 80 gallon water heater; gas stove for milk house; DeLaval milker pump; Butchering tools; copper kettle; 2 iron kettles; sausage grinder and stuffer; scalding trough; Allis Chalmers cultivator; barn fogger; water tank on trailer.

FEED AND GRAIN

Hay and Straw by the ton; approx. 1000 bu. Oats

1964 Chevrolet 3/4 ton T license truck, dual wheels.

HOUSEHOLD GOODS AND ANTIQUES

Round oak kitchen table and chairs; plank bottom chairs; crocks and jugs; Admiral refrigerator; 3-pc. living room suite; wash stand; chest of drawers; three 9x12 rugs; large wall clock; dry sink; some dishes; gas and coal range; porch swings; library table; oil lamps; flax reel; gas iron; 2 heating stoves; side board; gold-frame mirror; sugar trough; 2 apple peelers; round heating stove.

TERMS CASH

Lunch will be served.

All Machinery in Good Condition

ERNEST & WM. MAUST
Owners

Merle S. Mishler — Auctioneer
Davidsville 479-4897

R. D. 3, Somerset, Pa.
Phone 445-5038

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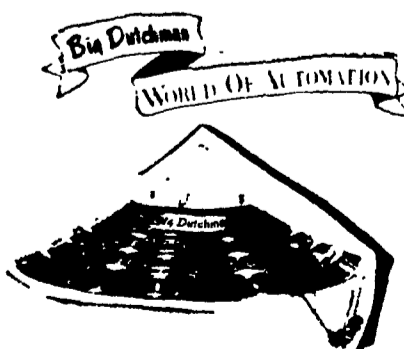
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