

Firm Develops Detassling Machine

A unique approach to producing corn seed resistant to the southern leaf blight which threatens millions of acres of corn was demonstrated for the first time recently by National Starch and Chemical Corp. at the headquarters of the Moews Company, a hybrid seed producer at Granville, Ill.

The new system, developed jointly by National and Moews, is based on a new material which is rolled onto tassels after they appear on the stalk and prevents pollen from being released.

Last year's blight destroyed more than \$600 million worth of corn. To counteract the blight, seed companies switched to blight-resistant corns containing "N" or normal cytoplasm.

However, this has a problem of its own: pollen release must be closely controlled to avoid self fertilization. If the corn fertilizes itself, it becomes useless to seed corn companies because it is not cross-fertilized to yield the highly desirable hybrid qualities.

Until now, the only way to stop corn from self-fertilizing was to remove the tassel — the part that produces pollen — either by hand or cutting just prior to pollen release. But detassling is expensive and potentially hazardous to the plant.

The new method, called the Polin-8⁺ system, solves the two most serious problems associated with detassling. First, it allows the corn to be treated anytime between the time the tassel first appears and the time it is ready to release pollen. This gives the seed company anywhere from five to seven days rather than only one or two days. Second, the system eliminates the possibility of damage caused by cutting the leaves. Damage to the leaves can significantly reduce yield.

The Polin-8 system has been tested in Texas and Florida during the last six months and has proven effective in coating the tassels, sealing the pollen into the tassels, and holding the pollen until the fertilization

cycle has ended. The system is significantly faster than hand detassling and as fast or faster than cutting. One machine can treat 60 to 80 acres of corn a day without injuring the plants.

Application equipment for the system has been developed by Hagie Manufacturing Company of Clarion, Iowa. So far, three pre-production units are in operation in Clarion and Pe.ry, Iowa, and Granville, Ill.

Bob Huey, president of Moews Company, explained that detassling is a costly operation. "Detassling cost from \$30 to \$70 per acre and in some locations even more. In addition, the timing is critical. If detassling is done too soon, the leaves and the corn plant itself are often damaged. On the other hand, if detassling is late — even just a day late —

the entire field might be lost through self-pollination."

Dr. Chester Szymanski, manager of applications research for National, explained that more than 50 different products were tested before Polin-8 was chosen. "We were looking for the product with the best mechanical stability, film-forming properties and holding characteristics. Originally, we thought the product should be sprayed onto the plants. But our tests showed that too much product was wasted with spraying."

Ray Hagie, president and owner of Hagie Manufacturing Co., explained how the system works. A high-clearance spraying machine has been specially adapted for the system. The product is pumped from the tank to three booms, each containing two application units.

The booms are separately controlled hydraulically to match the height of the corn.

Each application unit consists of three rollers, 18 inches long and 5 inches in diameter which are mounted on shafts and driven by a small motor. The rollers receive the Polin-8 in controlled amounts through a series of specially designed spray nozzles. The machine treats six rows of corn with each pass through the field. Each row of tassels is directed

through one of the six sets of rollers and coated with Polin-8.

"We designed the machine for precision application," Hagie said. "By using a flow control valve we set the peripheral speed of the rollers slightly faster than the linear speed of ground travel. Then we adjust the pump pressure and nozzle orifices to coincide with machine speed. All these variables depend, of course, on the plant population of the field."

MID-SUMMER REGISTERED

Holstein Sale

TUESDAY, AUGUST 10, 1971

1:00 P.M. SHARP

Location: Along Route 222, 7 miles South of Lancaster, 6 miles North of Quarryville, Lancaster Co., Pa., at Carl Diller Barn.

40 HEAD OF CANADIAN and PENNA. YOUNG COWS and 2 YEAR OLDS

Mostly 30 day tested for interstate. Many with R.O.P. Records.

Special Mention —

- 2 top springers sired by Mayers Dark Leader, (1) scored 84 points has over 15,000, her dam has over 19,000.
- 2 year old Kingpin dtr. due at sale time from a dam which in 8 lactations averaged over 20,000. (She by Woodbourne Lass Reflection)
- 3 year old, 327 days, 17,000 milk, 654 butterfat, 3.8%
- Glenvue Skychief dtr. with 15,000 at 3 years. Bred to "APEX"

Dividend Clipper, Rosafe Shamrock Perseus, Brown Dale Achilles Roeland, and other United Breeders Sires. Among those that are classified include 1 Very Good and many Good Plus. Cattle have plenty of size and dairy type.

Others sired by THORNLEA TEXAL Supreme, Forest Lee Rocket Centurion, Oak Ridges Regal Promoter, etc.

Catalogues Available.

Sale by

CARL DILLER

Auct. Everett Kreider

Lunch

Kent R. Ferrell Auctioneers John H. O'Neill

PUBLIC AUCTION

COMPLETE HERD DISPERSAL OF 90 REGISTERED & HIGH GRADE HOLSTEIN DAIRY CATTLE AND DAIRY EQUIPMENT

The undersigned, discontinuing dairy farming, will sell the following at public auction on their farm located on U. S. Rt. 1, 2 mi. south of Rising Sun at the south end of the Rising Sun By-pass, in Cecil Co., Md., on

SATURDAY, AUGUST 7, 1971

at 11:00 Sharp EDST

This is a high quality herd which has used certified breeding for 15 years from Curtiss and Maryland-West Virginia. These cows show production, good breeding and size. The herd has been on D. H. I. A. since 1957. Some cows milking as high as 90 lbs. per day. We will sell daughters of Skoie, Tidy Gold, Archie, Segis, Admiral, Black Eagle and Ivanhoe Emperor. This herd is bred for average months. Several fresh cows calved within the past 30 days; many are close springers; balance milking now and bred back.

IF YOU ARE LOOKING FOR QUALITY AND PRODUCTION, PLAN TO ATTEND THIS SALE. Cows will be checked for pregnancy, T. B. and blood tested, within 30 days of sale for out of state shipment.

Sample of cows to be sold:

No. 77	305 days	20,310 milk	862 fat
No. 27	305 days	17,740 milk	622 fat
No. 99	305 days	17,580 milk	595 fat
No. 107	305 days	16,700 milk	568 fat
No. 94	305 days	14,850 milk	568 fat
No. 13	305 days	16,450 milk	538 fat
No. 78	305 days	15,050 milk	511 fat
No. 9	305 days	17,280 milk	434 fat
No. 50	305 days	16,000 milk	493 fat
No. 47	305 days	16,510 milk	511 fat

DAIRY EQUIPMENT: (To be sold at 11:00 a. m.) Complete DeLaval 36 stall pipe line milking system, Majonnier 535 gal. bulk tank, 5 DeLaval milkers and washing system, new DeLaval vacuum pump with 2 HP motor, 4 cow mats 45 x 65, 9 ton feed tank with auger and motor for unloader.

TERMS: CASH

Not responsible for accidents day of sale. Lunch will be served.

Mr. and Mrs. George MacDonald

Rising Sun, Maryland Owners
Phone: 301-658-5023

ABERDEEN SALES COMPANY
Sale Managers
P. O. Box 371, Aberdeen, Md. 21001
Phone: 301-734-6050

PUBLIC SALE

of REGISTERED & GRADE HOLSTEIN DAIRY CATTLE

SATURDAY, AUGUST 14, 1971

12 Noon

Sale at the farm, 6 miles S.E. of Quarryville at Kings Bridge. Follow sale sign from Pa. 472 near Kirkwood.

SELLING

80 COWS AND HEIFERS 80

50 cows and springing heifers, 30 younger animals. Cattle mostly Sired by and bred to Atlantic Sires. Many daughters of Performer, Milk and Honey Ivanhoe, Bonus, Ivanhoe Jack and others.

Health charts on all animals.

Lots of fall milk. DHIA records on the herd.

Sale by M. RAYMOND CAMPBELL

Owner

Pedigrees by Ira Welk
Leroy C. Sensenig, Auct. and Sale Mgr.

QUEAMEADE FARM REGISTERED

HOLSTEIN SALE

Saturday, Aug. 21, 1971 - 12:30 P.M.

Location: 7 miles North of Gap (Rt. #30) 6 miles South-east of New Holland, just off Rt. #897, 13 miles from Morgan-town Interchange.

40 HEAD — Mostly fresh or due early Fall

Certified, Accredited, tested for Interstate, Vacc.

D.H.I.A. tested — Classified August 1970

Selection of IVANHOE PROGENY throughout this Sale!!

Record Cows Included In The Sale!!

Jessie-Ivanhoe dtr. (G.P. 84) 6 yr. 365 da. 20,990 - 765 - 3.64%

Viola (Ivanhoe) - (V.G. 89) 6 yr. 323 da. 16,627 - 615 - 3.70%

Audry (Ivanhoe) - (V.G. 85) 5 yr. 6 mo. 362 da. 15,989 - 709 - 4.4%

Robin (Ivanhoe) - (V.G. 86) 5 yr. 365 da. 16,468 - 652 - 3.95%

Marian (Ivanhoe) - (V.G. 84) 5 yr. 10 mo. 365 da. 18,044 - 693 - 3.84%

Elaine (Ivanhoe) - (V.G. 87) 5 yr. 9 mo. 356 da. 15,297 - 575 - 3.75%. Elaine Milked 100 pounds this lactation.

Bonita (Gr. dtr. Ivanhoe) - (G.P. 82) 2 yr. 8 mo. 364 da. 15,963 - 565 - 3.5%

Many of the dams and grandams were Lauxmont Admiral Lucifer daughters.

Service Sires include — Hilltop Apollo Ivanhoe, Ivanhoe Jack, Bonus, Romandale Dividend Performer, Kilinsdale Whittier Elfac, Etc.

"QUEAMEADE HOLSTEINS during the past years have gone to buyers in other states including California and many have done well for Penna. breeders."

Be Sure To See This Group Sell!!!

CATALOGS UPON REQUEST.

Aucts. & Sales Mgrs.

Diller and Kreider

Sale by R. JOHN YOST

#2 New Holland, Pa. 17557

Phone 717-354-9634

LUNCH AVAILABLE

PUBLIC SALE REGISTER

SAT. AUG. 7 — 10 A.M. Sharp Linden Hurst Farms Complete Dispersal located 10 miles North of Meshoppen, Pa., Susquehanna Co., 5 miles South of Lawton, Pa. (just off Rt. 267), 10 miles northeast of Laceyville, Pa. Sale by Harland E. Carter & Roy R. Darling, owners. Carl Diller and Everett Kreider, Auctioneers. D. O. Rockwell, Sale mgr.

SAT. AUG. 7 — 11 A.M. Sharp EDST Public Auction of Complete Herd Dispersal of 90 Registered and High Grade Holstein Dairy Cattle and Dairy Equipment on their farm located on U. S. Rt. 1, 2 mi. south of Rising Sun at the south end of the Rising Sun By-Pass, in Cecil Co., Md Terms by Mr. & Mrs. George MacDonald, Owners, Aberdeen Sales Company, sale managers.

WED. AUG. 11—9 A.M. Equipment Sale at Martin's, Blue Ball, Pa. Terms by Paul Z. Martin, Martin Auctioneers and Associates

FRI. AUG 13 — 8 P.M. EDST Sharp Public Auction of 100 head Registered and Grade Holstein Dairy Cattle to be held in the dairy barn arena at the Aberdeen Sales Co., in Churchville, Harford Co., Md., located on Md. Rt. 22, 6 mi. east of Bel Air, Md., (Via U.S. Rt. 1) and 6 mi west of Aberdeen, Md., (via U.S. Rt. 40 or I-95) Sale by Aberdeen Sales Co., Sale Managers.

SAT. AUG 14—12 Noon. Public Sale of Registered & Grade Holstein Dairy Cattle at the farm, 6 miles S.E. of Quarryville at

(Continued on Page 25)