

Dietrich Gets Grand On Final Try

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The contest was judged by Richard Crider, who milks 65 head of Holstein cattle in a business he runs with his brother and his parents.

Dietrich got her chance to compete for the grand champion title by winning first place in the senior showing and fitting event for competitors 16 to 21 years old.

By winning that division, she won an opportunity to go back into the show ring to compete against Barbara Reichard of Waynesboro, who was the winner in the junior division for contestants ages 8 to 12, and Curtis Reichard, also of Waynesboro, who was the winner in the intermediate division for competitors who are 13 to 15 years old.

Other winners in the junior division were Becky Corman of Boiling Springs, who won second place; and Michelle Ocker of Shippensburg, who won third.

The second place winner in the intermediate division was Brad Reichert of Waynesboro. Emily Dietrich of Newburg took third



From the left, John Ocker III, trophy sponsor, presents the award for grand champion showman and fitter of the Shippensburg Fair, to Melanie Dietrich.

place.

In the senior division, the second place winner was Richard Martin of Chambersburg. Third place went to Midge Deaven of

Greencastle and fourth was won by Holly Henning of Waynesboro.

All trophies awarded for the competition were presented by John Ocker III and family.

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From Dairy and Animal Science at Penn State

FIFTY YEARS OF TECHNOLOGY IN DAIRY CATTLE BREEDING

Larry W. Specht



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Artificial insemination (AI) of dairy cattle is considered by many as second only to the development of hybrid seed corn in its contribution to U.S. agriculture.

The concept of AI and the development of its procedures represented the first step in an emerging technology that led to increased genetic progress and made this country the world leader in dairy cattle genetics.

Vital to the success of AI was the work of Penn State's John Almquist in the late 1940s and early 1950s. Almquist's work with semen diluents, antibiotics to improve shelf life and control disease, and color coding semen were all part of his pioneering effort to make AI work more effectively.

Fifty years ago last summer, an AI cooperative bred the first cow (for a \$5 fee) in Pennsylvania. James Muffley, a Lewisburg area veterinarian, inseminated that cow on the Harold Benner farm.

At the time, Benner was secretary of First Pennsylvania ABC, the first of five AI cooperatives organized between 1942 and 1945 in the commonwealth. But AI technology in this country actually goes back to 1938 when Enos Perry of Rutgers — and a Penn State graduate — brought the idea back from Denmark to New Jersey. During the next five years, scientists and veterinarians worked diligently to prove that AI would settle cows and not produce monster calves.

The 1950s were a very productive period for AI and helped position the dairy industry for large increases in productivity. There were three major areas of accomplishment. The development of the process to freeze semen by the English workers in the early 1950s was the first. This technology made semen transportable over great distances and allowed dairy farmers a wider choice of sires on any given day.

One oft-cited advantage was that you could preserve the great sires of the past and thaw them out to shore up the genetics of the present if the industry's breed improvement program should falter. It would be similar to bringing Babe Ruth back to play outfield for today's New York Yankees.

However, a second major technological change in the same decade exploded that idea. In 1954, Charles Henderson of Cornell University, along with two English scientists, proposed that AI conduct its own progeny testing of sires rather than depend on the purchase of breeder proven bulls. The idea met stiff opposition from people who sold bulls to AI studs and from breed association personnel. AI was criti-

zized for not having sires that would produce cattle with outstanding physical characteristics when raised in ordinary herd situations. No mention was ever made of the fact that these same bulls had been purchased a few years earlier from the elite breeding herds of the industry.

It was obvious by the mid-'60s that all major AI units had to adopt a progeny test program if they wanted to stay in business. Still, one unit continued buying old show-ring bulls and sons of fancy cows with rather ordinary production credentials — they went out of business about 1980.

The third major technological development in the 1950s to affect the dairy breeding industry was the use of electronic data processing equipment to calculate DHIA production records. The first steps were taken in 1952 by extension workers in Utah. By March 1957, Penn State's dairy science extension group, under the leadership of Joe Taylor, Herb Gilmore, and Dexter Putnam, started the transfer from on-farm, hand-calculated records to centralized processing.

It was a tough year or two with many problems before the program began to run routinely. But the process made it possible to gather and analyze large amounts of data, giving increased reliability to the information on individual animals, especially sires.

Today, with the help of mainframe computers, on-farm personal computers, and laptops used by DHIA technicians, collecting, editing, storing, processing, and distributing information about the national dairy herd is easier and faster than ever.

The period from the 1950s to 1970s was dominated by research on production traits. Starting in the early 1970s with embryo transfer (ET) technology, the physiological side of genetics came to the forefront. ET technology developed

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Dorset ram (reg.) \$150, 79 Lincoln towncar 73K garage kept \$2495, 81 Southwind mth 25' sleep 6 ex. cond., 28K new insp., \$12,500 OBO, must sell. Berks Co. 215-367-5888 or 679-5637.

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2 row Gehl head-off profile-off 1060 harvester, excel. cond., no Sunday calls. Bedford Co. 814-766-2754.

White Rhea's, Emu's, all types fancy pheasants, quinnies & silkies, fallow deer 3 fawn & one breeder doe. Pike Co. 717-686-3480.

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Pair of 6 yr. old greys, Reg. mare due to fold 17 + hands gelding 18 hands both are good broke. Tioga Co. 717-835-5407.

3/4 Arab-dappled grey mare, 17h. TB mare, bay QH gelding, QH type mare, all ride. Chester Co Frank 215-932-0455.

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4 HP NH Hit & Miss engine, \$2350. York Co. 717-741-2740.

Sale or trade 300 gal. skid tank w/hand pump \$250, 5 yd. Gallion dump body w/hoist \$350. N.J. 609-561-9107.

Two IH 234 mounted corn pickers w/extra parts, stored inside \$1,000 for both. Centre Co. 814-422-8527 eves.

3/4 pure Pug puppies \$50 ea. very cute, home raised, no Sunday calls. Snyder Co. 717-374-5076 leave message.

Cocker Spaniel AKC, male, 15 mths. tri-color, black, white & tan, champion bloodlines, excel. pedigree, \$175. 703-337-7277 can deliver.

Used mobile home \$250 or best offer. Lanc. Co. 717-354-7142.

White molly mule 3 yr. 15 hand rides, drives, also used for pack trips \$1200. Lanc. Co. 215-445-6181.

NH 269 T bales \$950, IH 710 4B plow \$1200, Case 14' T. disc \$850, MF 35 diesel tractor \$3500, 40'x8" B conveyor. Blair Co. 814-944-0818.

Jeep CJ7 body tub orig. factory new in crate. Lehigh Co. 215-395-3562.

Rheas 2 yr. male, 1 yr. male, 1 yr. female. North Co. 215-588-6335 9 a.m.-6 p.m. 215-588-7019 after 7 p.m.

Ford 4500 backhoe 15' ideal for parts backhoe attachment only \$1500, JD 400 tractor 60" mower 20 HP hydrostatic. Del. Co. 215-358-0725.

3 PTH IH 2 row cult. has 2 wheels & center disc, doubled-up spring teeth 7 1/2 wide, \$150. Pottstown. 215-469-9094.

Ryobi radial arm saw 10", \$300, Tradesman 1 1/2 HP table saw 10" \$75, ex. cond. York Co. 717-244-3924.

Horned Dorset ewe lambs top bloodlines twice a year lambing \$100 ea. York Co. 717-938-5385 after dark.

Metal roofing & siding, over stock, odd lots, seconds, etc. must sell! Lanc. Co. 717-354-2728.

Cub sickle bar mower \$150, 18 HP Cub Cadet 50" mower, 3 1/2 HP compressor \$300, potato peeler \$300, rototiller \$120. 717-442-4279.

Oliver No. 5 1 row corn picker, NH 707 3 pt. corn chopper 200' Cornell cleaner chain 14" p. CCW. 717-226-3474 eves.

MF #10 baler w/thrower shed kept good cond., asking \$850. North'd. Co. 717-286-9380.

Polled hereford cow due Aug. w/3rd calf, polled hereford bull 10 mth. old, purebred stock. Juniata Co. 717-463-2737.

32H Robbins incubators & hatches redwood vintage 48" floor feeders ft. stapler, gas commercial heater. 215-932-8286.

Water lilies- red, white, blue, purple, pink, & yellow, corn snakes, 4 color phases. Lanc. Co. 717-738-2755.

2X transplanter, tobacco ladder wagon, hay rake on steel, teds. Wanted Oliver 60, 70 parts & equip., wood-coal stove. Lanc. Co. 717-684-5352.

6- 10x20 tires & rims 80%, \$350, GD 100 CFM gas air comp., needs work \$250, lg. assort. wood working tools & boxes of nails, HD5 & HD6 parts. Cecil Co. Md. 410-378-2785.

JD 2RN corn head for harvester, Pennco barley from certified seed 1.80/bu. ear corn, Grove side unloading chute. Berks Co. 215-367-7256.

Case 1530 uni loader works good, \$2500 OBO. Lanc. Co. 215-445-5985.

Baker steam roller 16 HP good cond. needs piping & grates \$8500 or trade OBO. Darke Co. Ohio. 513-692-8215.

rapidly in the 1980s, and as the industry entered the 1990s, techniques such as splitting embryos and other even more complex cloning procedures emerged.

Then, too, sexing of embryos and of semen seems closer to reality than ever before. Gene transfer is under research and work with genetic markers already has a number of practical applications in the animal breeding industry.

With the sale of semen and embryos internationally and the emergence of important dairy populations in the Netherlands, Germany, France, and other European countries, U.S. dairy producers face global competition in dairy genetics.

Our breeding industry must be prepared to meet that competition by implementing the newest technology available if we are to have the best chance of remaining a major player in the dairy cattle breeding world of tomorrow.