Looking at past, present and future of AI

LANCASTER - Modern dairy cattle breeding got its start with the introduction of artificial insemination in the early 1940's. Dairy leaders and extension workers were optimistic as to the amount of genetic improvement that would result from the new technology.

The early impact of AI on nondescript herds is not documented but it is thought that AI was responsible for bringing such herds into the same breeding pool with the better herds of the day. It's also suggested that Al did not in its early days help the better bred herd. Sire evaluation techniques were too crude and led dairymen to use bulls that were later found to be inferior.

Fifteen to twenty years passed before scientists began to systematically compare artificially and naturally sired daughters in tested herds. Studies in the late 1950's and early 1960's showed that there was little production difference between the two groups.

In the 1960's a few AI units pioneered the concept of progeny testing their own sires within the AI system. At about the same time the herdmate comparison technique was accepted as a superior method of sire evaluation. As these new procedures were implemented within the dairy cattle breeding industry it became evident that AI herds were improving their production capabilities more rapidly than the non-AI herds.

USDA workers estimated that genetic trend in the Holstein breed between 1968 and 1975 was about 77 pounds per year, as compared to a 39-pound per year gain from 1960 and 1975. Estimates of potential rates of progress that are possible under optimum testing and selection programs are in the range of 200 to 300 pounds per year.

Prospects in the immediate future are for some "fine tuning" of the system. This would include: (a) Adjusting for the quality

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accurate selection of the dams of young sires. In the latter case missed. Preferential treatment of incorporate the female relation-likely to become even more serious ships should help.

(genetic merit) of the mates of the many dams of young sires are young sires, (b) Adjustment for being selected from a limited days carried calf, and (c) More number of herds and outstanding cows in other herds are being adjustment for days carried calf cows that have the potential for would seem important. Use of the contract matings will continue to new Cow Index procedures that be an unsolvable problem. This is as the Embryo Transplant There are some who feel that too program gains in popularity and

the potential rewards for having a "super" cow are multiplied many fold.

The possible improvements just mentioned offer little when compared to the greater use of technology now available. Estimates are that 40 percent of the milking cows and 80 percent of the virgin heifers in the national herd are still bred non-AI. If these

Pa. farm labor force up 6 percent

HARRISBURG - Pennsylvania's farm labor force was estimated at 115,000 workers during the week of April 12-18. This is six percent above last April's 109.000 farm workers, according to the Pennsylvania Crop Reporting Service.

Farm operators and unpaid family members throughout the commonwealth numbered 81,000, up 13 percent, while hired workers decreased eight percent to 34,000.

Pennsylvania farm operators during the survey period was 45.4 hours. Other unpaid family workers averaged 34.9 hours and hired workers averaged 31.9 hours. National averages are 37.8 hours for farm operators and other family members, and 37.9 hours for hired workers.

Family workers include family members who work 15 hours or more without receiving cash

For more information on the pool

itself or the prices contact the

Berks County Extension Service.

Berks Co. to hold wool pool

day.

READING - The Berks County Sheep and Wool Growers wool pool will be held on June 10, from 7:30 a.m. until 3 p.m. at the J. Paul Leid building in the Fairgrounds Square Mall, Rt. 222, 5th Street Highway, Reading, PA.

The buyer for the wool will be Prouvost and Leferbue. Clair Engle and Lester Eurdette, Penn State Animal Extension Scientists will do the grading for the pool.

The prices for this years pool include: medium-\$.93, fine and 1/2 staple \$1.05 and Medium rejects for \$.70.

In order to help keep expenses at a minimum, any wool producers are asked to give free help at the wool pool, at any time during the

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The average workweek for wagws. Hired workers include all persons working one hour or more for cash wages during the survey week.

Farm wage rates, for all methods of pay, converted to an hourly rate, averaged \$3.66 in Pennsylvania. The national average, \$3.92, was up 31 cents from 1980. Commonwealth field workers averaged \$3.58 an hour while livestock workers took home an average of \$3.15 per hour.

Nationally, the total number of workers on farms April 12-18 was 3,662,500, an increase of 221,100 from last April. Family workers and operators totaled 2,402,900, an increase of 147,900. The number of hired workers rose 73,200, compared to last April, to \$1,259,600.

estimates are accurate, the greatest genetic impact on the U.S. dairy cow population will come from efforts to bring all cows into the AI program. This is not likely to happen as some herd owners will always be content to remain a generation or two of cattle breeding behind AI and simply use homebred sons and grandsons of the best AI sires of the day.

A summary of the past, present and future of AI shows:

-The first 20 years of AI were disappointing in that AI sired cattle in tested herds showed little superiority.

-Production levels of AI cattle clearly began to pull ahead of their non-AI counterparts in the 1960's.

-Estimates of genetic progress today are 3 to 4 as great as they were prior to 1965.

-Currently, genetic gain is thought to contribute more to increases in overall production than all other factors combined. This was not true in the past.

-Present systems of sire testing could theoretically give us up to 300 pounds gain per year.

-Greatest potential for immediate gain revolves around the increased use of production testing to identify superior dams and much greater use of AI sires in the national herd.

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TANKS	Capacity	Diameter	Length	Gauge	Weight	Price FOB
TANKS	(Gallons)			(Thickness)	(Pounds)	Quarryville
TANKS	285	3'0''	5'6''	12	278	114.00
TANKS	550	4'0''	6'0''	10	549	210.00
	550	4'0''	6'0''	7	751	262.00
TANKS	1,000	4'0''	10'8''	10	827	310.00
TANKS	1,000	4'0''	10'8''	7	1,129	390.00
TANKS	1,000	5'4"	6'0''	7	1,028	362.00
TANKS	1,500	5'4"	9'0''	7	1,388	486.00
	2,000	5'4''	12'0''	7	1,735	593.00
TANKS	3,000	5'4''	17'11''		2,432	800.00
TANKS	4,000	5'4''	23'10"		3,130	1009.00
TANKS	5,000	8'0''	13'7"	1/4"	4,484	1645.00 [°]
	6,000	8'0''	16'2''	1/4"	5,123	1800.00 2230.00
TANKS	8,000	8'0''	21'6''	1/4"	6,475	2660.00
TANKS	10,000	8'0''	26'10''	1/4" 1/4"	7,825 6,956	2405.00
TANKS	10,000	10'0'' 10'0''	17'0'' 20'6''	1/4"	8,074	2800.00
	12,000	10'6"	20 8 18'7''	1/4"	7,900	2690.00
TANKS	12,000	10'6"	23'2''	5/16"	11,857	4130.00
TANKS	15,000 20,000	10'6''	31'0''	5/16"	15,105	5160.00
TANKS	25,000	10'6''	38'7''	3/8"	22,115	8135.00
TANKS	30,000	10'6''	46'4''	3/8"	25,999	9430.00

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