

2016 Virginia FFA Dairy Cattle Evaluation and Management Career Development Event

Team Activity

Scenario: Bea Hokie is a dairy producer in Southside Virginia. She asks you for assistance in evaluating her records because she is concerned about the current state of reproduction and genetics management in her herd. She has provided you with a DHI-202 Herd Summary to help troubleshoot herd issues related to her reproduction and genetics program. She also supplied the following background information.

- The herd consists of 153 milking and dry cows plus 137 replacement heifers.
- The milking herd is housed in a stall freestall barn with a low roof and metal sidewalls on the long sides. Cattle have access to outside loafing areas from April through October.
- The herd is milked two times a day in a double-8 herringbone parlor.
- One hundred percent of the herd is bred artificially. The herd does not use sexed semen.
- The herd works closely with a bull stud field representative on sire selection. The herd participates in a corrective mating program through the bull stud.
- The voluntary waiting period for the herd is 70 days.
- Cows have adequate body condition when they calve, but appear thin around 100 days in milk until mid lactation.
- The milking herd is fed a total mixed ration twice a day.
- Dry cows are housed on pasture near the dairy. They are brought up to the main barn area prior to calving and fed a pre-fresh ration.
- The herd has a strong relationship with a local veterinarian who specializes in dairy. The veterinarian works closely with the herd on reproduction and udder health, develops the herd's vaccination program, and provides emergency care.

Assignment: Briefly discuss the strengths and weaknesses you detect in management related to reproduction and genetics. Support this by citing specific items to support your conclusions. List problems in order of priority (influence on potential herd profit) along with your recommendations for management approaches to correct these problems. In addition, Ms. Hokie has a few specific questions for you:

- Is reproductive culling a concern in the herd?
- Should there be more or less services to A.I. progeny tested sires? Why?
- Should he be concerned with heat stress in the herd? Are there any signs of heat stress evident in the records?

HERD SUMMARY

DHI-202

Test Date Samples at Lab Processed
06-13-2016 06-15-2016 06-15-2016

Breed HO Type Test DHI-AP Assoc. Supv. String

Production, Income & Feed Cost Summary

Total Cows	Daily Average per Cow on Test Day		Rolling Yearly Herd Averages			
	Number	%	Number	%		
Total Cows	153		157.4			
Cows in Milk	131	86	138.5	88		
Milk Lbs (All Cows)	54.1		21071			
Fat Lbs (All Cows)	1.93		754			
Fat %	3.6		3.6			
Protein Lbs (All Cows)	1.65		665			
Protein %	3.1		3.2			
Milk Lbs (Milking Cows)	63.3					
	Milking Cows	All Cows				
Silage	Lbs Consumed		Lbs Consumed	%ENE		
Other Succulents or Blended Rations	Lbs Consumed		Lbs Consumed	%ENE		
Dry Forage	Lbs Consumed		Lbs Consumed	%ENE		
Other Feeds	Lbs Consumed		Lbs Consumed	%ENE		
Pasture			Days	%ENE		
Concentrates	Lbs Consumed		Lbs Consumed	%ENE		
Value of Product \$	10.09	8.50	3831			
Cost of Concentrates \$						
Total Feed Cost \$						
Income Over Feed Cost \$						
Feed Cost per CWT Milk \$						
Milk Blend Price	Per CWT	% Fat	% Pro	Per CWT	% Fat	% Pro
	16.00	3.6		18.24	3.6	

Reproductive Summary Of Current Breeding Herd

Total Cows Breeding Herd	Voluntary Waiting Period (VWP)	Days to 1st Service	Cows With No Service Dates or Diag. Open			Cows Bred But Not Diag. Preg.				
			Open VWP to 100 Days	Open Over 100 Days	Number Diag. Open	Days Open at Last Service				
67	70	99				Under VWP	VWP to 100 Days	101 to 130 Days	Over 130 Days	
			3	18	2	Number Cows	3	10	14	20
			4	27	3	% of Breeding Herd	4	15	21	30

Reproductive Summary Of Total Herd

	Days Open at 1st Service			Avg. Days to 1st Service	Services per Pregnancy		Projected Minimum		Service or Heat Interval		Services for Past 12 Months			
	Number Under VWP	Number VWP to 100	Number Over 100		Preg. Cows	All Cows	Calving Interval	Days Open	Interval Length	Number Intervals	Service Number	Number Services	Conception Rate	Service Sire Merit \$
1st Lact	8	27	16	92	2.7	3.3	14.2	151	< 18	10	1st	119	39	+448
2nd Lact	8	18	9	87	2.3	2.9	13.9	143	18 - 24	59	2nd	72	29	+434
3+ Lacts	9	10	12	94	2.2	3.3	15.2	181	36 - 48	33	3rd +	120	28	+432
All Lacts	25	55	37	91	2.4	3.2	14.4	158	Other	55	Total	311	32	+438
% of All 1st Services	21	47	32		Current Actual Calving Interval		13.8				Abortions	This Test	Past Year	
										Actual				
										Apparent		1		

Birth Summary

Dam's Lact Num	Offspring Born								
	Males		Females		Calving Difficulty Score				
	Alive	Dead	Alive	Dead	1	2	3	4-5	%4-5
1	29	3	29	2					
2+	45	7	49	5					
Total	74	10	78	7					

Cows To Be Milking, Dry, Calving By Month

	Jul	Aug	Sep	Oct	Nov	Dec
* Milking	123	138	131	139	139	114
Dry	27	20	22	19	14	34
Cows to Calve	13	16	11	9	12	6
Heifers to Calve	5	13		10		

* Assumes 3.3% per month culling rate.

Yearly Reproductive Summary

Test Date	% Heats Obs.	Conception Rate	Preg Rate	Number Services	Number Confirm Preg	Number Calving	Total Preg Cows
Test Dropped	51	27	14	26	8	7	77
7-13-15	47	4	2	23	13	16	81
8-17-15	47	0	0	23	8	18	72
9-14-15	49	27	13	26	5	25	62
10-16-15	57	45	24	33	1	14	52
11-12-15	58	31	24	42	6	9	49
12-10-15	51	38	20	34	10	19	47
1-11-16	47	46	23	28	10	14	50
2-08-16	24	77	21	13	19	21	55
3-22-16	28	39	12	23	28	10	71
4-14-16	14	13	2	8			67
5-13-16	47			33	7		73
6-13-16	28			16	3	19	68
Averages	41	32	15	25	9	14	62
Totals				302		165	

Miscellaneous Herd Information

	Shipped-Test Day Comparison		Milking Times	Wgh	Spl	
	Test Day	Yearly Avg.				
Sum of Test Day Wts	8141	8783	1st	12:01am	N	N
Reported Avg. Daily Bulk Tank Wts	7869	8361	2nd	12:30pm	Y	Y
% Deviation	+3.5	+5.0	3rd			

Remarks:

Herd Code	Test Date	06-13-2016	Breed	HO	String
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Identification And Genetics (Genetic Data Source: CDCB)

Stage Of Lactation Profile

		Stage of Lactation (Days)						Total or Average
		1 - 40	41 - 100	101 - 199	200 - 305	306 +		
Number Milking	1st Lact	12		20	17	9	58	
	2nd Lact	4	4	10	13	8	39	
	3+ Lacts	1	1	12	16	4	34	
	All Lacts	17	5	42	46	21	131	
Average Daily Milk	1st Lact	55		70	58	52	61	
	2nd Lact	69	81	78	62	49	66	
	3+ Lacts		101	80	56	53	64	
	All Lacts	55	85	75	58	51	63	
% Fat & Pro	1st Lact	% Fat	3.6		3.3	3.7	4.0	3.6
		% Pro	2.8		3.1	3.2	3.4	3.1
	2nd Lact	% Fat	3.5	3.3	3.4	3.6	3.9	3.6
		% Pro	3.1	3.0	2.8	3.1	3.5	3.1
	3+ Lacts	% Fat		3.4	3.7	3.7	3.7	3.6
		% Pro		2.4	3.0	3.2	3.1	3.0
All Lacts	% Fat	3.4	3.3	3.4	3.7	3.9	3.6	
	% Pro	2.7	2.9	3.0	3.2	3.4	3.1	
SCC SCR	1st Lact	3.1		1.5	2.2	2.6	2.2	
	2nd Lact	1.6	2.5	2.3	1.6	2.2	2.0	
	3+ Lacts		1.5	3.4	3.1	2.0	2.9	
	All Lacts	2.6	2.3	2.2	2.3	2.3	2.3	
SCC Score >= 4.0	Number	3	1	8	7	1	20	
	Percent	18	20	19	15	5	15	

Age Group	Number Animals	Avg. Age (Yr-Mo)	Num. Ident. By		Number ID Changes	No. Animals with Merit \$	Average Merit \$		Herd Merit \$ Option	Genetic Profile of Service Sires			
			Sire	Dam			Animal	Sire		A.I. Progeny Tested	A.I. Genomic Tested	All Other A.I. Bulls	Non A.I. Bulls
0 - 12	78	0-07	78	78		77	+140	+337	NM				
13+	59	1-08	59	59		59	+95	+276					
Replacements	137	1-00	137	137		136	+120	+310					
1st Lact	68	2-02	68	68	1	39	+62	+221	% of Herd Bred to	69	31		
2nd Lact	44	3-05	41	44		34	+25	+160	Number of Bulls Used	9	5		
3+ Lacts	41	5-10	36	41		37	+0	+30	Average Merit \$	+442	+601	+0	DCR Milk
All Lacts	153	3-06	145	153	1	110	+30	+154	Avg. Percentile Rank (Net Merit)	70	93		94
% Identified (Producing Females)			95	100	No. Heifers Age Over 30 Months			1					

Production By Lactation Summary

Lactation	Number of Cows	Avg. Age (Mo)	Peak Milk	Summit Milk	Proj 305 Day ME			Difference From Herdmates			Avg. Body Wt.
					Milk	Fat	Pro	Milk	Fat	Pro	
1st Lact	68	26	76	68	23612	832	717	+1363	+60	+38	1210
2nd Lact	44	41	92	84	23529	805	708	+1072	+25	+24	1330
3+ Lacts	41	70	93	86	21997	799	685	-434	+24	+5	1450
All Lacts	153	42	86	78	23112	815	705	+749	+39	+24	1310

Somatic Cell Summary

Herd Production Lost From SCC This Test Period	% Cows SCC Score				
	0,1,2,3	4	5	6	7,8,9
	Below 142,000	142,000 283,000	284,000 565,000	566,000 1.13 M	Over 1.13 M
Milk	75	16	2	2	5
	87	8			5
	58	15	18	6	3
	74	13	5	2	5
Milk	1827				292

Dry Cow Profile

Lact.	Number Dry Periods	Avg. Days Dry	Number Dry by Days		
			< 40	40-70	> 70
1					
2	44	61	8	29	7
3+	41	61	9	23	9
All	85	61	17	52	16

Yearly Summary Of Cows Entered And Left The Herd

Lact.	Cows Entered	Cows Left	Number of Cows Left the Herd																
			Num.	%	Num.	%	Dairy	Low Prod	Repro	Mast	Udder	Feet & Legs	Injury Other	Disease	Died	Not Rptd			
1	65	41	11	7															
2		18	11		1	10	1	1	1	1								3	1
3+	1	41	26		3	8	12	1	3	3	1	1	7	3					
All	66	42	70	44	4	19	15	4	4	5	1	13	5						

42 % Left Herd For Involuntary Reasons

Yearly Production And Mastitis Summary

Test Date	Days In Test Period	Number Cows In Herd On Test Day	Test Day Averages (Milking Cows)		150 Day Milk	Test Period Persist. Index	Test Day Averages (All Cows)				Rolling Yearly Herd Average			Somatic Cell Count Summary					MUN	Number Left Herd			
			DIM	Milk			% In Milk	Milk	%Fat	%Pro	Milk	Fat	Pro	% Cows SCC Score						Avg. SCC Linear Score	Wt. Avg. Actual SCC	Died	Sold
			Below 142,000	142,000 283,000			284,000 565,000	566,000 1.13 M	Over 1.13 M														
Test Dropped	28	157	206	64.9	72.1	95	83	53.9	3.7	3.0	22179	779	668	79	11	5	1	5	2.3	187	18.2	1	2
7-13-15	31	159	200	65.8	74.8	104	81	52.7	3.6	3.1	22139	783	669	69	13	7	5	7	3.0	330	13.3	2	5
8-17-15	35	158	195	69.0	77.9	113	82	56.2	3.3	3.0	22129	786	670	69	6	11	8	6	2.9	319	4.9	3	1
9-14-15	28	165	186	60.4	66.8	89	89	53.6	2.9	3.1	22056	785	669	62	16	11	4	7	3.2	331	6.1	1	2
10-16-15	32	161	181	65.1	71.9	112	88	57.4	3.7	3.3	21940	786	668	63	12	9	6	11	3.2	405	9.5	1	8
11-12-15	27	152	177	65.0	69.8	100	87	56.4	3.8	3.3	21793	786	667	71	11	10	2	6	2.7	226			9
12-10-15	28	156	159	70.2	74.2	105	85	59.6	3.8	3.2	21717	784	668	80	8	6	4	2	2.4	153	10.2		5
1-11-16	32	159	165	63.9	67.8	95	87	55.3	3.9	3.2	21514	775	664	74	11	5	4	6	2.6	249	10.5	1	3
2-08-16	28	163	159	65.4	67.8	103	93	60.5	3.8	3.2	21288	770	659	78	9	5	4	3	2.4	240	9.2		5
3-22-16	43	156	192	65.8	69.3	105	99	65.0	3.5	3.0	21155	766	658	82	9	4	4	1	2.2	123	9.7	1	7
4-14-16	23	148	202	69.1	72.6	105	93	64.0	3.5	3.2	21172	764	661	86	7	5	1	2	2.1	101	9.6	1	7
5-13-16	29	146	232	68.7	75.9	105	92	63.5	3.3	3.2	21121	759	664	81	9	7	2	2	2.1	112	10.3	1	1
6-13-16	31	153	213	63.3	72.6	97	86	54.1	3.6	3.1	21071	754	665	74	13	5	2	5	2.3	176	10.9	2	4
Averages	31	156	188	66.0	71.8	103	89	58.2	3.6	3.2				74	10	7	4	5	2.6	230	8.7	13	57

Test Period Avg. Milk Lbs Added 56.2 Dropped 58.0