

**2021 State Fair of Virginia Junior Dairymen's Contest**  
**Class 8: DHI Questions**

**Instructions:** Use the DHI-202 Herd Summary to answer these 10 multiple-choice questions. Answers must be recorded on your Scantron sheet in the "Exam 2/Team" section. Each question is worth five (5) points for a total of 50 possible points.

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- 1 How many total cows were in the herd on test day?**
- A. 206                      B. 729                      C. 865                      D. 869
- 
- 2 What is the date of the current DHI test day?**
- A. October 5, 2020      B. August 2, 2021      C. September 6, 2021      D. September 10, 2021
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- 3 What is the projected minimum days open for all cows?**
- A. 111 days                B. 115 days                C. 117 days                D. 125 days
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- 4 How many heifer calves were born dead in the past year?**
- A. 12                        B. 17                        C. 19                        D. 31
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- 5 During which month was the average SCC linear score lowest?**
- A. February                B. April                      C. October                D. November
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- 6 How many first lactation cows are 1 to 40 days in milk?**
- A. 43                        B. 63                        C. 134                      D. 295
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- 7 How many cows were sold in the past year for low production?**
- A. 5                         B. 14                        C. 40                        D. 50
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- 8 What is the average age at first calving in the herd?**
- A. 13 months              B. 24 months              C. 38 months              D. 60 months
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- 9 What was the herd's average fat percent on the June test day?**
- A. 3.5                      B. 3.6                      C. 3.7                      D. 4.0
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- 10 How many replacements in the herd are 0 to 12 months of age?**
- A. 470                      B. 500                      C. 508                      D. 1008

# HERD SUMMARY

DHI-202

Test Date      Samples at Lab      Processed  
09-06-2021      09-10-2021      09-10-2021

Non-Traditional      Breed      HO      Type Test      DHI-AP      Assoc.      Supv.

## Production, Income & Feed Cost Summary

Total Cows	Daily Average per Cow on Test Day		Rolling Yearly Herd Averages			
	Number	%	Number	%		
	865		869			
Cows in Milk	729	84	769	88		
Milk Lbs (All Cows)	61.9		24547			
Fat Lbs (All Cows)	2.29		911			
Fat %	3.7		3.7			
Protein Lbs (All Cows)	1.92		767			
Protein %	3.1		3.1			
Milk Lbs (Milking Cows)	73.4					
	Milking Cows	All Cows				
Silage	Lbs Consumed					
Other Succulents or Blended Rations	Lbs Consumed					
Dry Forage	Lbs Consumed					
Other Feeds	Lbs Consumed					
Pasture						
Concentrates	Lbs Consumed					
Cost of Concentrates \$						
Total Feed Cost \$						
Income Over Feed Cost \$						
Feed Cost per CWT Milk \$						
Value of Product \$	12.38	10.43	2838			
Milk Blend Price	Per CWT	% Fat	% Pro	Per CWT	% Fat	% Pro
	17.00	3.5		17.00	3.5	

## 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			
						Under VWP	VWP to 100 Days	101 to 130 Days	Over 130 Days
206	60	61	12	12	13	13	70	35	64
			6	6	6	6	34	17	31

## 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	44	241		62	2.4	3.2	13.0	115	< 18	50	1st	954	34	+770
2nd Lact	30	139	2	62	2.3	2.9	12.9	111	18 - 24	235	2nd	619	33	+766
3+ Lacts	31	145		62	2.6	3.8	13.3	125	36 - 48	461	3rd +	920	36	+791
All Lacts	105	525	2	62	2.4	3.3	13.0	117	Other	204	<b>Total</b>	<b>2493</b>	<b>35</b>	<b>+778</b>
% of All 1st Services	17	83			Current Actual Calving Interval		13.2				Abortions	This Test	Past Year	
											Actual		4	
											Apparent	7	208	

## 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	129	5	213	12	327	4	22	1	
2+	310	12	271	19	555	7	21	2	
<b>Total</b>	<b>439</b>	<b>17</b>	<b>484</b>	<b>31</b>	<b>882</b>	<b>11</b>	<b>43</b>	<b>3</b>	

## Cows To Be Milking, Dry, Calving By Month

	Oct	Nov	Dec	Jan	Feb	Mar
* Milking	757	756	777	805	857	828
Dry	133	134	101	79	70	138
Cows to Calve	61	64	71	63	38	41
Heifers to Calve	41	29	17	35	72	70

\* Assumes 3.4% 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	76	16	11	151	27	76	422
10-05-20	78	25	13	233	28	93	374
11-02-20	74	41	23	231	67	100	368
12-09-20	71	44	28	267	123	116	395
1-04-21	86	46	30	205	97	80	446
2-10-21	91	40	30	245	116	102	473
3-08-21	100	39	26	200	77	54	504
4-05-21	86	39	26	189	87	43	526
5-03-21	81	44	27	167	78	42	562
6-07-21	75	36	23	151	94	60	603
7-12-21	84	24	15	159	57	94	565
8-02-21	74	20	15	90	25	81	510
9-06-21	85			192	34	120	439
<b>Averages</b>	<b>80</b>	<b>35</b>	<b>24</b>	<b>194</b>	<b>74</b>	<b>82</b>	<b>480</b>
<b>Totals</b>				<b>2329</b>		<b>985</b>	

## Miscellaneous Herd Information

	Shipped-Test Day Comparison		Milking Times	Wgh	Spl	
	Test Day	Yearly Avg.				
Sum of Test Day Wts	49454	55697	1st	04:00 PM	N	N
Reported Avg. Daily Bulk Tank Wts	50141	55970	2nd	11:00 PM	N	N
% Deviation	-1.4	-.5	3rd	08:00 AM	Y	Y

## Remarks:

Cows milked 3 times daily for all or part of this yearly period.

Herd Code		Test Date	09-06-2021	Breed	HO	String	
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Identification And Genetics (Genetic Data Source: CDCB)

Stage Of Lactation Profile

		Stage of Lactation (Days)						
		Stage of Lactation (Days)						Total or Average
		1 - 40	41 - 100	101 - 199	200 - 305	306 +		
Number Milking	1st Lact	43	58	64	98	32	295	
	2nd Lact	35	52	23	59	23	192	
	3+ Lacts	56	48	39	68	31	242	
	All Lacts	134	158	126	225	86	729	
Average Daily Milk	1st Lact	63	72	70	62	59	65	
	2nd Lact	90	93	87	68	59	80	
	3+ Lacts	83	91	92	69	54	78	
	All Lacts	78	85	79	66	57	74	
% Fat & Pro	1st Lact	% Fat	3.4	3.4	4.0	4.1	4.3	3.9
		% Pro	3.1	2.9	3.2	3.3	3.4	3.2
	2nd Lact	% Fat	3.6	3.4	3.4	4.0	4.2	3.7
		% Pro	2.8	2.9	3.0	3.3	3.4	3.1
	3+ Lacts	% Fat	3.9	3.3	3.4	3.8	4.1	3.7
		% Pro	3.0	2.8	3.0	3.2	3.4	3.1
	All Lacts	% Fat	3.7	3.4	3.7	4.0	4.2	3.8
		% Pro	3.0	2.9	3.1	3.3	3.4	3.1
SCC SCR	1st Lact	2.9	2.8	3.4	3.4	2.9	3.2	
	2nd Lact	3.1	2.7	2.9	3.0	3.0	2.9	
	3+ Lacts	3.5	3.2	2.3	3.2	3.2	3.1	
	All Lacts	3.2	2.9	3.0	3.2	3.0	3.1	
SCC Score >= 4.0	Number	44	46	36	82	23	231	
	Percent	33	29	29	36	27	32	

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	500			0-06	497						498
13+	508	1-07	507	507		502	+324	+588						
Replacements	1008	1-01	1004	1005		972	+377	+678	% of Herd Bred to	39	54		6	
1st Lact	354	2-00	336	350		213	+197	+443	Number of Bulls Used	7	28		DCR Milk	
2nd Lact	234	3-02	206	234	1	160	+211	+454	Average Merit \$	+692	+895	+0	94	
3+ Lacts	277	5-00	255	275	3	226	+63	+189	Avg. Percentile Rank (Net Merit)	76	97			
All Lacts	865	3-03	797	859	4	599	+150	+370						
% Identified (Producing Females)			92	99	No. Heifers Age Over 30 Months									

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	354	24	82	73	22483	
2nd Lact	234	38	109	99	24269	894	740	+1754	+46	+45	1363
3+ Lacts	277	60	117	106	22595	832	704	+236	-11	+11	1376
All Lacts	865	39	99	89	23000	867	711	+555	+20	+17	1321

Somatic Cell Summary

% 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	
59	12	11	8	10	
61	12	13	8	7	
59	13	13	8	6	
60	12	12	8	8	
30-Day Herd Production Lost From High SCC					
Milk	52623	Dollars (\$)	9419		

Dry Cow Profile

Lact.	Number Dry Periods	Avg. Days Dry	Number Dry by Days		
			< 40	40-70	> 70
			1		
2	232	57	1	216	15
3+	277	59	7	247	23
All	509	58	8	463	38

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	374	43	101	12		6	24	20	19	1	9	10	12
2			84	10		3	17	33	4		7	8	12	
3+			165	19		5	23	71	3	3	8	26	26	
All	374	43	350	40		14	64	124	26	4	24	44	50	
39 % 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						Number Left Herd				
			DIM	Milk			% In Milk	Milk	%Fat	%Pro	Milk	Fat	Pro	% Cows SCC Score					Avg. SCC Linear Score	Wt. Avg. Actual SCC	MUN	Died	Sold	
													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							
Test Dropped	27	841	176	70.8	78.2	103	85	60.4	3.7	3.1	24927	925	762	51	19	12	9	9	3.4	363		1	20	
10-05-20	28	841	163	75.5	81.2	108	85	64.2	3.9	3.2	25003	930	767	53	16	11	10	10	3.4	396		7	28	
11-02-20	28	860	158	72.1	76.8	99	88	63.1	4.0	3.2	24933	928	766	58	15	12	8	7	3.1	288		3	16	
12-09-20	37	867	153	75.1	78.4	108	90	67.5	3.7	3.2	24834	924	765	59	14	10	10	8	3.2	325		3	31	
1-04-21	26	879	153	79.3	81.5	110	89	70.4	3.7	3.1	24736	920	764	59	13	11	9	8	3.2	342		5	16	
2-10-21	37	883	161	77.0	80.2	99	94	72.1	3.7	3.1	24351	903	751	66	13	10	6	5	2.7	223		3	29	
3-08-21	26	879	164	80.8	83.6	104	94	75.9	3.7	3.1	24143	896	746	64	14	10	6	6	2.9	245		2	30	
4-05-21	28	875	179	77.2	81.0	100	95	73.0	3.6	3.1	24359	904	754	64	14	11	7	4	2.9	237		3	27	
5-03-21	28	874	193	75.3	80.8	101	94	70.5	3.7	3.1	24360	905	758	57	14	14	8	7	3.2	289		2	17	
6-07-21	35	871	195	73.9	80.7	105	85	62.6	3.5	3.1	24471	906	761	58	17	11	7	7	3.1	278		2	28	
7-12-21	35	867	187	72.6	79.9	102	83	60.1	3.7	3.1	24714	919	774	58	16	10	8	7	3.2	323		7	30	
8-02-21	21	862	177	73.3	81.2	104	84	61.2	3.6	3.0	24562	912	768	58	14	11	9	8	3.1	323		8	18	
9-06-21	35	865	162	73.4	80.0	100	84	61.9	3.7	3.1	24547	911	767	60	12	12	8	8	3.1	311		5	30	
Averages	30	869	170	75.6	80.4	102	89	66.9	3.7	3.1				60	14	11	8	7	3.1	298		50	300	

