

Holstein Benchmarks By Production Level, Revised January 1, 2018

Averages									
Rolling Herd Average Milk	21-25000			25-30000			> 30000		
	855			792			138		
	80th		20th	80th		20th	80th		20th
	Percentile	Average	Percentile	Percentile	Average	Percentile	Percentile	Average	Percentile
Cows/Herd	136.6	136.6	136.6	455.9	455.9	455.9	547.8	547.8	547.8
Production Measures									
RHA Milk	24283	23146	22013	28468	27109	25732	32494	31955	30436
RHA Fat	943	894	834	1085	1024	959	1262	1197	1117
RHA Protein	753	717	680	882	837	792	1003	980	930
RHA Cheese Yield	2503	2384	2264	2906	2766	2624	3382	3237	3066
Management Level Milk (MLM)	82	76.8	71	93	87.6	82	107	101.1	95
Daily Milk	77.5	72.2	66.9	88.5	83.6	78.5	99.6	96.6	91.1
RHA Fat %	4	3.9	3.7	3.9	3.8	3.6	3.9	3.8	3.6
RHA Protein %	3.2	3.1	3	3.2	3.1	3	3.1	3.1	3
Mature Equivalent Production Measures									
1st Lactation ME Milk	26927	25311	23731	30760	29101	27609	34885	33704	32138
1st Lactation ME Fat	1062	991	910	1198	1123	1046	1341	1280	1208
1st Lactation ME Protein	818	766	716	935	883	835	1061	1014	958
2nd Lactation ME Milk	26536	25038	23574	30738	29140	27621	34722	33766	32253
2nd Lactation ME Fat	1033	965	884	1170	1098	1019	1338	1266	1199
2nd Lactation ME Protein	797	753	708	926	876	829	1046	1012	963
3+ Lactation ME Milk	25803	24498	23190	29760	28214	26676	33709	32592	30955
3+ Lactation ME Fat	1005	943	867	1136	1066	985	1309	1229	1155
3+ Lactation ME Protein	772	734	692	897	844	795	1008	973	920
Stage of Lactation Production Measures									
1st Lactation Peak Milk	82	77.6	73	91	86.8	82	102	97.7	93
2nd Lactation Peak Milk	105	98.8	93	119	112.7	107	134	127.8	121
3+ Lactation Peak Milk	111	105.4	99	127	120.5	114	142	137	130
1st Lact 1-100 Days Milk	75.4	69.2	62.9	81.6	76.5	70.9	89.9	85.3	79.9
1st Lact 101-240 Days Milk	72.5	66.8	61	83	77.7	72.1	95.3	90.1	83.6
1st Lact 241+ Days Milk	63.9	57.9	51.7	74.7	68.6	62.7	87.5	81.8	74.6
2nd Lact 1-100 Days Milk	96	88.2	80	107.2	99.9	92.3	119.5	112.7	104.5
2nd Lact 101-240 Days Milk	82.9	76	69	95.8	88.8	82	111.1	103.9	96.5
2nd Lact 241+ Days Milk	64.5	56.1	47.7	73.8	66.4	59.1	87.7	79.4	70.9
3+ Lact 1-100 Days Milk	103	94.3	85.5	114.8	107	99.1	127.2	120.1	111.6
3+ Lact 101-240 Days Milk	86.7	79.7	72.8	101.3	93.5	86.1	116	109.4	101.4
3+ Lact 241+ Days Milk	65.2	57	48.8	73.6	66.2	58.7	89.6	80.4	71.9

Days In Milk Measures									
Herd Average Days In Milk (DIM)	155	175.2	193	155	170.1	184	157	171.1	181
Lactation Days In Milk (LDIM)	327	319	311	327	321.1	316	328	323.6	318
% Days In Milk (%LACD)	89	86.9	85	89	87.5	86	89	88.1	87
Accuracy Measure									
% of Bulk (DHI Wt / Bulk Tank Wt)	(+ or -) 1	102	(+ or -) 7	(+ or -) 1	102	(+ or -) 6	(+ or -) 1	103	(+ or -) 6
Herd Age Measure									
1st Lact Age at Calving	23.9	25.7	27	22.8	24.4	25.5	22.5	23.6	24.5
Herd Avg Age at Calving (Months)	46.8	43	39.1	43.6	40.6	37.1	42.5	40	37.4
Reproductive Analysis - Cows									
Annual Pregnancy Rate %	21	15.5	10	27	21.3	15	28	23.3	19
Annual Service Rate %	50	38.4	28	60	49.1	39	60	54	47
Annual Pregnancy Loss %	1	3.8	6	2	4.7	7	3	5.4	8
Calculated Voluntary Waiting Period	45	52.7	61	52	59.3	68	55	63.1	72
Average DIM at 1st Breeding	71	83.8	94	70	78.9	85	72	77.7	83
Calving Interval Projected	12.8	13.5	14.1	12.6	13.1	13.6	12.6	13.1	13.5
Calving Interval Historic	13	13.7	14.3	12.7	13.3	13.8	12.8	13.2	13.6
Days Open PG	111	133.2	150	106	121.8	134	108	121.1	132
Services Per Conception (SPC PG)	1.6	1.8	1.9	1.6	1.8	1.9	1.6	1.8	1.9
Conception Rate % 1st Lactation	64	57.6	51	63	57.2	51	63	57	51
Conception Rate % 2nd Lactation	65	56.6	48	62	55.7	49	61	55.2	50
Conception Rate % 3+ Lactation	63	55.3	47	61	54.9	48	60	53.3	47
% Total Repeats 3-17 Days	1	3.9	6	2	4.8	7	3	4.4	6
% Total Repeats 18-24 Days	11	17.8	24	14	20.4	27	15	20.3	26
Conception Rate % 3-17 Days	37	24.1	0	35	24.6	13	32	24.1	13
Conception Rate % 18-24 Days	40	28.7	17	40	32.2	24	38	32.6	26
Reproductive Analysis - Heifers									
Conception Rate % Heifers	67	61.2	56	66	61.2	57	65	60.6	57
Services Per Conception	1.5	1.7	1.8	1.5	1.7	1.8	1.5	1.7	1.8
% < 23 Months at Calving	0	11.1	22	1	25.7	53	6	37.1	64
% > 25 Months at Calving	13	39.1	66	4	24.5	41	3	15.6	25
Yearly Herd Turnover									
% Turnover (-) Sales for Dairy	26.7	35.9	44.3	30.1	36.6	43.3	31	36.9	42.8
% Total Herd Left/Died	28.8	41.1	50.3	31	40.9	48.6	32.7	41.2	49
% Total Herd Died	1.8	5.2	8.2	2.4	5.5	8	2.8	5	7.1
% Cows Leaving the Herd < 60 DIM	4	7.2	10	5	7.4	10	5	7.1	10
% Total Herd Sold for Dairy	6	4.9	0	6.2	4.3	0	7.3	4.3	0
% 1st Lact Left/Died	5.5	11.4	14.9	6	10.7	13.6	6.7	11	14.5
% 2nd Lact Left/Died	5.8	9.9	13.4	6.8	10.2	13.5	7.3	9.8	11.9
% 3+ Lact Left/Died	14.9	19.9	24.5	16.2	20.1	24.1	17	20.3	23.3

Udder Health									
Weighted Average SCC	140	209	271	109	171	221	113	162	212
Bulk Tank Weighted Average SCC	137	205	265	109	166	214	108	155	198
% of herd >= 200000 SCC	13	19.4	25	10	15.4	20	11	14.7	19
% of Herd New Infections	7	10.2	13	6	8.3	10	6	7.7	9
% Infected Cows That are Chronic	49	56.1	64	46	53.1	60	49	54.5	61
Herd Linear Score	2	2.4	2.8	1.8	2.2	2.5	1.8	2.1	2.4
1st Lact Linear Score	1.8	2.1	2.5	1.5	1.9	2.2	1.4	1.7	2
2nd & >Lact Linear Score	2.2	2.6	3.1	1.9	2.4	2.8	1.9	2.3	2.7
% Heifers Infected at First Test	8	18.1	28	8	15	21	7	11.9	17
% Fresh Cows - New Infections	10	19.5	28	8	14.7	20	7	11.7	15
1st Lact Weighted Average SCC	93	149	199	75	114	146	73	104	129
2nd & >Lact Weighted Average SCC	155	242	325	124	203	268	123	193	251
% Dry Cows Cured	81	66.1	51	84	73.1	62	87	77.3	70
% Dry Period Failure to Cure	19	33.9	49	16	27	38	13	22.8	30
Distribution of Herd by SCC on 1									
% of Herd < 100000 SCC	75	66.9	59	80	72.6	66	80	74.1	68
% of Herd 100000-199000 SCC	16	13.2	10	14	11.7	9	13	11.1	9
% of Herd 200000-399000 SCC	5	7.8	10	5	6.5	8	5	6.2	8
% of Herd 400000-799000 SCC	3	5.1	7	3	4.1	5	3	3.9	5
% of Herd >= 800000 SCC	3	5.9	8	2	4.6	6	3	4.4	6
Transition Cow Management									
Transition Cow Index	836	277	-313	1269	566	-65	1816	1038	313
% 1st Lact Fat/Protien Ratio > 1.4	22	40.5	59	26	40.7	54	24	38.2	51
% 2nd & >Lact Fat/Protien Ratio > 1.4	25	39.6	53	26	39.3	51	25	37.5	52
Dry Period									
Average Days Dry	52	60.7	68	52	58	64	50	56.2	61
% 0-39 Days	3	13.6	23	2	9.2	15	1	8.6	12
% 40-70 Days	82	65.7	51	90	76.5	65	91	80.9	73
% >70 Days	8	20.7	32	4	14.4	23	4	10.5	16
Alternative Dry Period Length Measures									
% <30 Days	0	5.4	8	1	3.3	4	0	3.1	3
% 70-90 Days	5	13.1	20	4	10.2	15	4	8.2	11
% > 90 Days	3	10.3	16	1	6.7	11	1	4.5	8
Genetics (Net Merit Values Adjusted for Unidentified Sires)									
Service Sires Net Merit \$	686	491	252	763	620	524	806	675	601
Heifer Sires Net Merit \$	498	349	190	620	475	348	659	554	477
1st Lact Sires Net Merit \$	353	242	111	494	354	220	538	416	309
2nd Lact Sires Net Merit \$	287	188	73	389	278	170	427	328	249
3+ Lact Sires Net Merit \$	197	121	58	269	181	94	296	217	133
All Cows Sire Net Merit \$	272	182	75	387	274	169	425	325	239

Functional Trait Measures									
Service Sires DPR	2.1	1.3	0.1	2.5	1.7	0.9	2.7	1.9	1.2
All Cows Sire DPR	0.8	0.2	-0.4	1.7	0.7	-0.1	1.8	1	0.2
Service Sires SCS	2.79	2.85	2.92	2.78	2.83	2.88	2.78	2.82	2.87
All Cows Sire SCS	2.88	2.92	2.97	2.84	2.89	2.94	2.83	2.87	2.92
Service Sires Prod Life	6.3	4.4	2.1	7.2	5.6	4.3	7.4	6.1	4.8
All Cows Sire Prod Life	2.3	1.5	0.7	3.7	2.4	1	4	2.9	1.7
Identification Measures									
% Cow Sires Identified	99	74.4	51	100	86.2	79	100	92.4	90
Service Sires % AI	100	82.5	80	100	92.1	94	100	93.7	94
All Cows Sire % AI	99	77.1	61	100	88.3	85	100	94	92
Calving									
% Female Calves	54	47.8	42	56	51.2	46	57	51.6	47
1st Lact % Female Live	100	91.4	85	99	91.7	87	98	93.3	90
2nd Lact % Female Live	100	94.6	89	100	95.6	92	100	96.4	94
3+ Lact % Female Live	100	93.1	88	100	94.6	91	98	94.3	92
Management MUN Values									
	<10 Mg/Dl	10-14 Mg/Dl	>14 Mg/Dl	<10 Mg/Dl	10-14 Mg/Dl	>14 Mg/Dl	<10 Mg/Dl	10-14 Mg/Dl	>14 Mg/Dl
All Herds %	34.2	55.8	20.3	24.8	61.9	17.3	25.8	63.9	12.4
1st Lactation %	36.2	59	25.9	24.1	63.9	21.5	22.8	65.1	17.5
2nd & >Lactation %	36.7	55.2	21.1	27.9	61	16.7	28.7	63.6	10.7
Average MUN Values									
All Herds		11.2			11.6			11.2	
1st Lactation		11.4			11.9			11.6	
2nd & >Lactation		11.1			11.4			11	