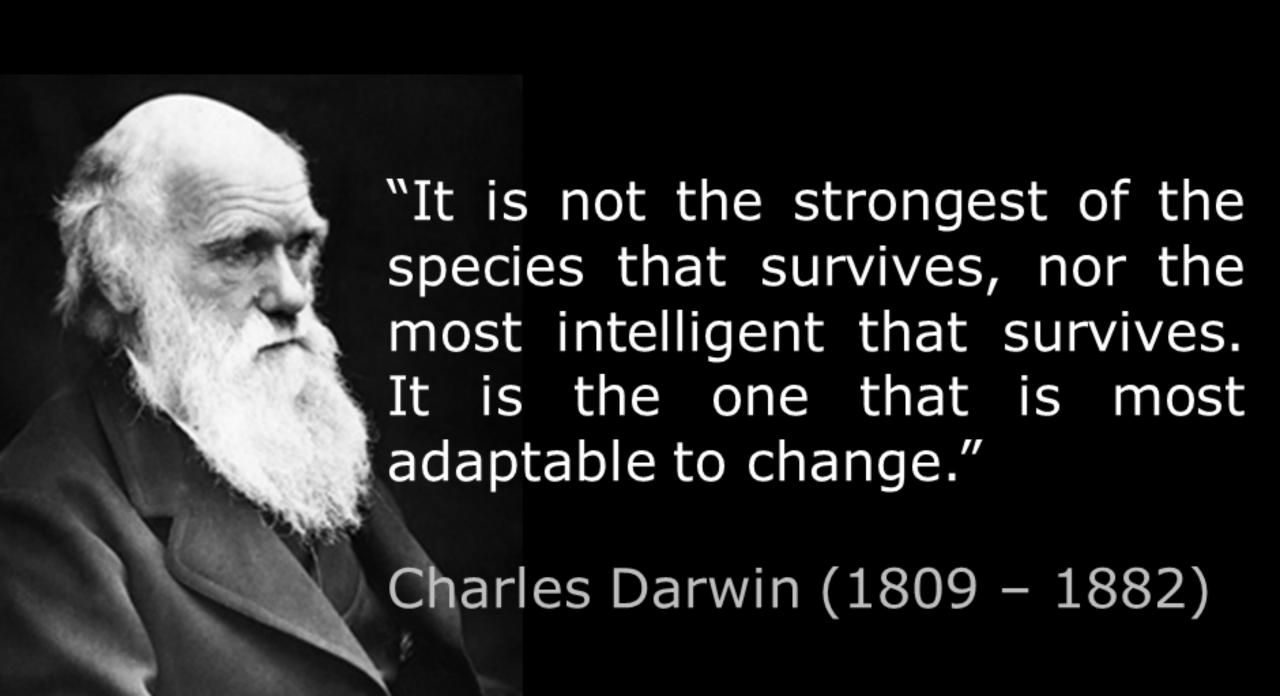


eDHI...

101,000 Robot cows on DHI 850 Robot farms on DHI Averaging 2+ boxes per farm (~16% of cows on DHI)



What is eDHI?

eDHI is an electronic-only DHI service

- Remote data access
- No staff visit to the farm
- No milk sampling
- Available for farms with electronic milking systems and automated animal ID and meters (robots & parlors)



eDHI Service Option #1

<u>eDHI</u>

- Must provide access to marketing board pick up data
- Bulk tank Fat, Protein, SCC and volume used to validate results
- Herd averages for Fat & Protein (bulk tank) and BCA's



eDHI Service Option #2

eDHI with Sensors

- Must provide access to marketing board pick up data
- Bulk tank Fat, Protein, SCC and volume used to validate results
- Herd averages for Fat & Protein (bulk tank) and BCA's

And...

Lactanet

- Fat, Protein & SCC are collected from on-farm sensors
- Individual cow records calculated based on animal sensor data
 - Individual animal BCA's for Fat and Protein

eDHI Service Requirements

- Must have electronic milk system with automated animal ID
- Must use DairyComp or allow installation of Ori-Automate software
- Must sign an eDHI service and guidelines agreement
- Must authorize remote access to on-farm software
- Must provide access authorization to marketing board data
- Must maintain accurate and up-to-date records in the software
- Maintain a good calibration of the milking system

Lactanet

Lactanet reserves the right to interrupt the service

Publishable Records

Previous Requirements:

- ➤ Lactations need a protein rating of 95% or higher (samples needed)
- Minimum of 10 tests per year
- > Three (3) useable tests in a lactation
- Maximum 90 days between tests

Revised Requirements:

- Lactations need a milk rating of 95% or higher (no samples needed)
- > All other criteria remains the same
- Milk Only Records can now be Publishable (without components)



1. Herd History, Herd Trends, Benchmarks

2. Unique DHI metrics

- > BCA's
- Milk Value
- Standard Milk
- Daily Fat & Protein kg/Cow
- Parity & Stage of Lactation Summaries
- Lactation and Lifetime Production (kg milk)
- Calving Interval
- > TCITM



3. Robot Report

Lactanel

- Performance and benchmark report for robot herds
- > Metrics such as box time, kgF/day, % Refusals, etc...

4. Easy Access to Herd Data by Advisors/Classifiers

- Complete data for health, nutrition and repro advisors
- Current electronic herd inventory for classification

5. Annual Reports

- Benchmarking & Ranking:
 - Production: including components & SCC based on Tank
 - Reproduction (preg. rate, conception rate, days open, etc.)
 - Other Herd Metrics (heifer repro & age at 1st calving, days dry, culling, etc.)

6. Herd Management Score

- Ranking Overall & by category (free, tie, robotic, organic)
 - Award/Recognition
 - Identifies management strengths & opportunities

7. Genetic Information & Tools

- Genetic Indexes M/F/P, EBV's, LPI, Pro\$ (publishable or not according to service choice);
- Contributes to GE Milk volume, health traits, repro, etc.;
- Current herd inventory for AI mating programs and COMPASS

8. Registrations

ERA service is available for eDHI customers



9. Publishable Lactations

- for Milk portion of records only
- May contribute to some breed award programs (eg. Lifetime milk).



Introduction Plan...

- 1. Primary Target: customers not using DHI services
- 2. Secondary Target: herds considering leaving
- 3. Offered since November 2019 Soft launch

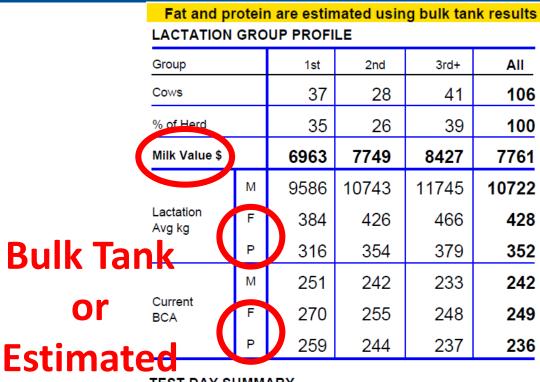


eDHI Related Questions...

- Pricing: ranges from 40-70% of regular service options
- > Breed Awards: eligibility to be determined by breeds
- Lactanet Herd Management Score: eligible to be included
- > Publishable Records: with ICAR approved sensors/meters
- > Genetic Evaluation: with ICAR approved sensors/meters



eDHI - Herd Report

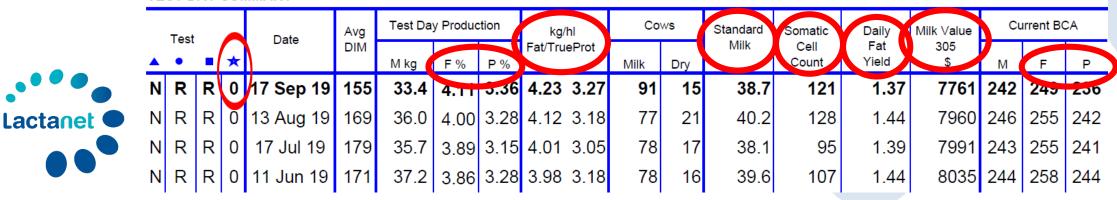


LACTATION	RATING	13-Dec-18
Milk	95	02-Nov-18
Fat	56	10 20 30 40 50 60
Prot	83	Standard kg Adjusted to second lactation; 150 Days in milk;
		4.0% butterfat; 3.3% protein;

PRODUCTION AVERAGES

	Cows	М	F	Р	M	F	Р	Milk ∀alue \$
	Cows	30	05 Days	kg		ВСА		Wilk value y
Current	85	10722	428	352	242	249	236	7761
Rolling Herd	55	11250	449	369	251	260	246	-
		12	Months	kg	Ratio	%	%	
Annual	96	9959	397	327	.82	3.99	3.28	7203

TEST DAY SUMMARY



eDHI – Cow Report

OW MA	NAGE	ΜE	NT RE	POR	T			Col	v Mor	nitor										
AME						H	ERDI	NUME	BER	PAGE	TEST	DATE							Looto	a a k
						0	N		1	of 7	17 Se	p 2019							Lactar	iet
					1						SERV IM12		\wedge							
Chain #	Breed		Test	Day Data	a		La	ctation	Informatio	on		305 Day A	Actual or Proj *		BCA		Days	Test Day	Test Day	Chg f
		Test Code	M kg	F kg %	P kg %	Calv Date Calv Age yy mm	Lact #	Days in Milk	M kg	kg %	P kg %	M kg	F P kg kg	М	F Deviation	Р	Open Days Bred	SCC 000's/r	Fat kg Test Day Prot kg	Prev T BCA Milk
-	НО		38.4		•	29 Jul 03 05	2	50	1825	5		* 9619		214 -28			50			
	НО♦		Dry			03 Oct 02 02	1	296	10599)		10599		256 14			72 277			
	НО		47.6			14 Jun 04 01	3	95	4670)		* 12293		258 16			95			
	НО♦		37.6			08 Oct 02 10	2	344	17967	,		16363		361 119			188 156			
	НО♦		25.7			28 Oct 03 01	2	324	11099			10542		227 -15			137 187			
	НО♦		27.0			14 Jan 03 04	2	246	9715	5		* 11303	\ /	239 -3			58 188			



No test day animal components

eDHI Sensor – Herd Report

Fat and protein are calculated using sensor results

LACTATION GROUP PROFILE

Group		1st	2nd	3rd+	All
Cows		22	20	33	75
% of Herd		29	27	44	100
Milk Value \$		6518	8618	8729	7975
	М	9239	11848	12282	11170
Lactation Avg kg	F	364	485	489	447
	Р	285	371	379	346
	М	248	269	242	252
Current BCA	F	262	295	260	271
	Р	237	262	236	244

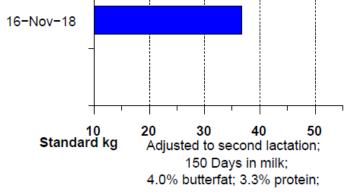
LACTATION RATING

ALL

Milk	85
Fat	83
Prot	84

1.64

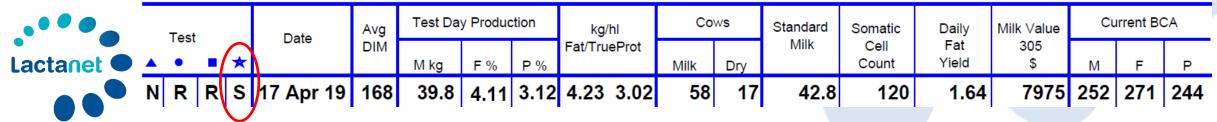
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PRODUCTION AVERAGES

	Cows	М	F	Р	М	F	Р	Milk ∀alue \$
	Cows	30	05 Days	kg		ВСА		wilk value y
Current	68	11170	447	346	252	271	244	7975
Rolling Herd	13	8812	358	274	194	212	188	-
		12	Months	kg	Ratio	%	%	
Annual	76	11341	457	345	.75	4.03	3.04	8098

TEST DAY SUMMARY



eDHI Sensor – Cow Report

COW MANAGEMENT REPORT

Cow Monitor

NAME

HERD NUMBER PAGE

TEST DATE

ON

1 of 5

17 Sep 2019

SERVICE M12 Sensor

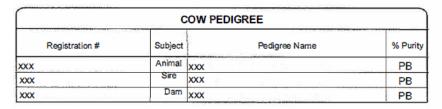


Chain #	Breed		Test	Day Data			La	ctation	Information	1		305 Day A	Actual or F	Proj *		BCA		Days	Test Day	Test Day	Chg fr
		Test Code	M kg	F kg	P kg %	Calv Date Calv Age	Lact #	Days	M kg	F kg	P kg	M kg	F kg	P kg	М	F	Р	Open Days Bred	SCC 000's/ml	Fat kg Test Day Prot kg	Prev Tst BCA Milk
				76		yy mm		Milk		%	%					Deviation					
	но ♦		52.5	2.1 4.0	1.7 3.2	24 Aug 03 09	3	24	1204	50 4.1	37 3.1							24	48	2.10 1.66	
	НО ф		Dry			05 Dec 05 01	4	272	10251	469 4.6	316 3.1	10251	469	316	190 -69	236 -36	187 -62	56 230			
	но ♦		Dry			03 Nov 03 09	3	318	13260	617 4.7	399 3.0	12869	597	387	258 -1	321 49	243 -6	102 216			
	но∳		41.1	2.0 4.8	1.2 2.9	04 Jan 05 02	3	256	11911	524 4.4	339 2.8	* 13737	614	394	258 -1	313 41	237 -12	86 170	58	1.98 1.20	2
	НО∳		36.1	1.5 4.2	1.1 3.2	09 Dec 03 10	3	282	13472	451 3.3	403 3.0	* 14312	485	430	284 25	261 -11	269 20	85 197	58	1.52 1.15	-2
	но♦		40.9	1.6 4.0	1.3 3.3	04 Sep 07 08	7	13	503	21 4.2	16 3.2							13	65	1.62 1.33	
	но∳		Dry			04 Aug 06 01	5	278	12415	486 3.9	388 3.1	12415	486	388	246 -13	259 -13	242 -7	210 199			
	но ♦		46.2	1.8 4.0	1.5 3.2	26 Jun 05 00	4	83	3924	155 4.0	124 3.2	* 11886	489	402	239 -20	266 -6	256 7	75 8	46	1.83 1.46	
	но ♦		52.9	2.1 4.0	1.6 3.0	12 Apr 04 05	3	158	8988	343 3.8	260 2.9	* 15084	601	461	303 44	328 56	294 45	125 33	44	2.14 1.58	5
							-		-												



Changes to the certificate of production

CERTIFICATE OF PRODUCTION





NAME Farm Name Address

R	OLLING	BREED H	IERD AV	ERAGE	
# of		BCA		D	ate
Records	M	F	Р	Year	Month
556	270	274	276	2019	May

	The state of the s	COW IDE	NTIFICATION	V	
Breed	Birth Date	Computer#	Bam Name	VisibleID	Ear Tag/Tatt∞
НО	2016 Oct 14	xxxx	xxxx	xxxx	

co	NF
Class	
Score	

			GEN	ETIC IND	EX			
Г	M	F	Р	% F	%P	CONF	LPI	Date
EBV or PA	406	42	39	.25	.22	2	2669	2019 Apr
Percentile Rank	57	84	90			44	87	2019 Apr

									LAC	NOITAT	N SUMN	MARY												
Lact	Pub	Age at	Date of	Days in		Produc	tion to 30	5 Days				BC					Lac	tationRa	ating		otal La	ctation F	roductio	on
#	Ind	Calving	Calving	Milk	M		F		Р	М	F	P	Devia	ion Fr	om R	BHA	М	F	P	M		F		P
		Yrs Months			kg	kg	%	kg	%				M	F		Р		_ '		kg	kg	%	kg	%
1		1 9	2018 Aug 07	280	7969	354	4.44	277	3.48	219	260	237	- 51	- 1	4 .	- 39	99	100	99	7969	354	4.44	277	3.48
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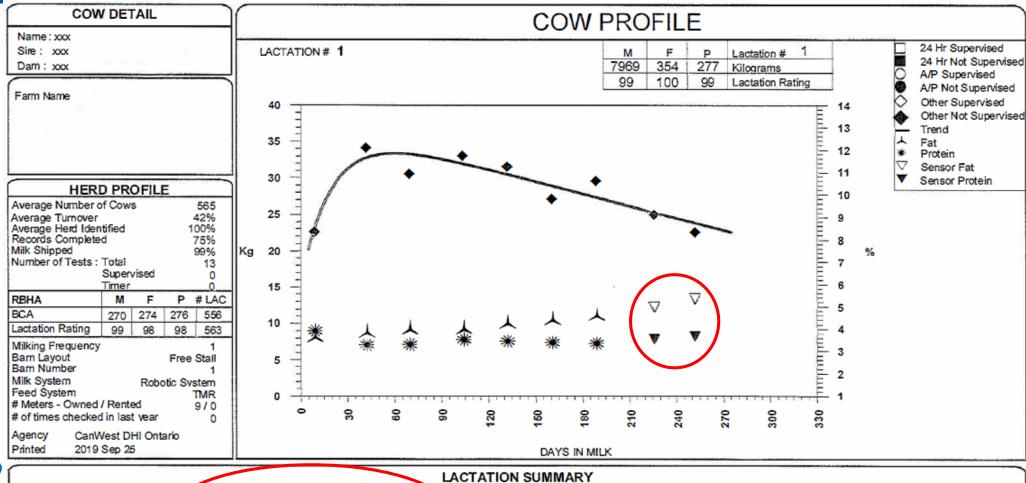
						LIFE	TIME PR	ODUCTI	ON SUMI	MARY				
			(30	day) La	ctation Av	rerage			and the second		То	tal Production		
# of	M	F %	P %	BCA			BCA Deviation From RBHA			Days in	м	F	Р	Average Kg Milk
Lact	kg			М	F	Р	м	F	Р	Milk	kg	kg	kg	per day of
1	7969	4.44	3.48	219	260	237	- 51	- 14	- 39	280	7969	354	277	8.46

1	Herd #	Issue Date
1	xxxx	2019 Sep 25
	LEF	T HERD Date

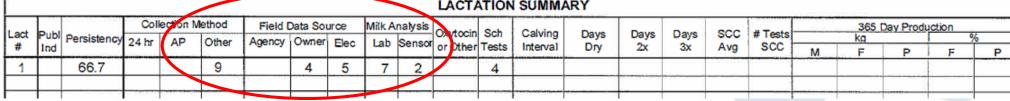
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Changes to the certificate of production









Thank you



