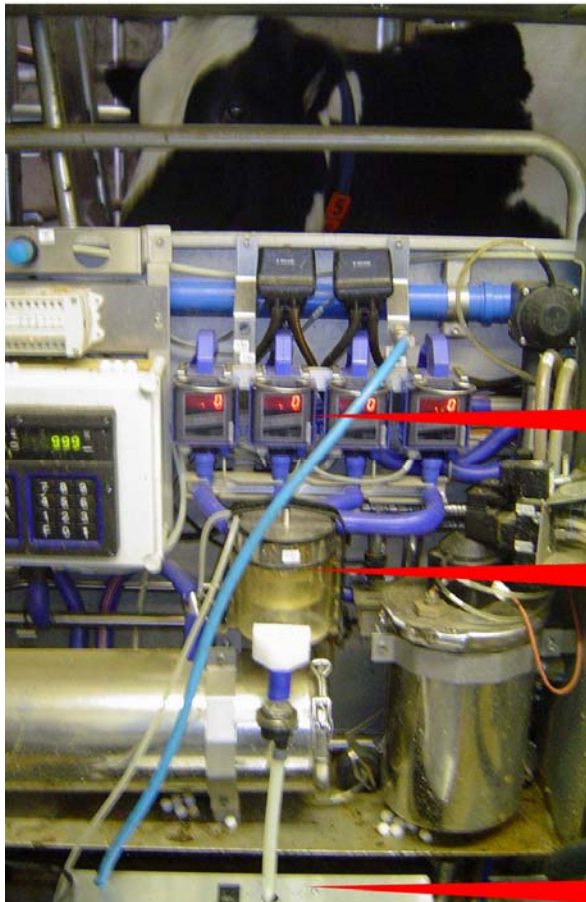


DeLaval Robot - VMS

Voluntary Milking System

The MM 25 meter is being used to measure each quarter and adds them up for a total weight. (see the 4 MM25 meters below) .DeLaval milk samplers (autosamplers), are attached on test day to collect the samples. DHI's responsibilities begin with initiating the test, providing the bottles, delivering the sampler (if renting), processing and handling of the samples.



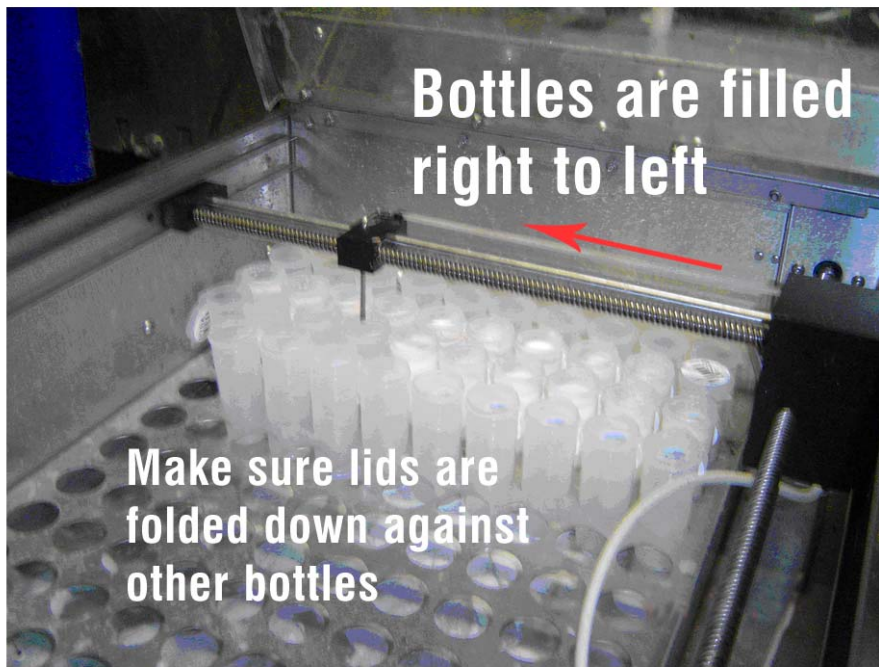
Four MM25
Meters

Flow Master
Meter

Milk Shuttle

Milk Sampler Unit

- Rack holds 130 bottles and is filled in a 'right-to-left' format that should last the entire test period.
- The first bottle is labelled with the cow number for future reference
- **Lids are not cut off** but are folded to the side as shown in photo below



Test Day Procedures

- Make arrangements with the farmer to test the cows beginning in early morning.
- Ensure sufficient numbers of bottles have been left at the farm (130/robot)
- Farmer or CSR can fill the rack with empty bottles, with lids folded back
- Best practise is to remove bottles from the shuttle periodically during the test, capping them, inverting them 3 times, and transferring them to a DHI box in the same order. This will minimize the risk of sour samples.
- Farmer to monitor the test, ensuring all cows are sampled by late afternoon
- Once the test is ended, the CSR must properly label the filled sample bottles with a cow # using the milk sampling reports
- See DeLaval VMS milk sampler instruction book for more instructions on hooking up, disconnecting, and maintaining the DeLaval shuttle.

Instruction how to resample a cow that was missed

- Use the VMS Mgmt software to locate the desired cow in the Animal tree. Open her Animal Info/VMS Cow settings and change 'Milk sampling mode' to '**Sample all milkings**'.
- Move her into the robot to be sampled again. Remember to change the setting back after you're finished for next time.

The screenshot shows the 'Animal Info - 105' window with the 'VMS Cow' tab selected. The 'General and milking' sub-tab is active. The 'Milk sampling mode' dropdown menu is highlighted with a red box and set to 'Sample all milkings'. Other settings include 'Active VMS Cow' checked, 'Action' set to 'Milk normally', 'System level milk permission settings' checked, 'Allow action' set to 300 min, 'Allow action when expected milk yield exceeds' set to 10.0 kg, 'Allow action' set to 1 min after an incomplete milking, but at most 2 consecutive times, 'Mark as overdue in milking queue' set to 720 min, 'Milk Type' set to 'Tank milk', and 'Milk Destination' set to 'Tank'.

Animal Info - 105

General | Breeding Events | Pedigree Tree | Offspring | VMS Cow

General and milking | Teats and miscellaneous | Automatic diversion | Teaching positions | Last positions

General

Active VMS Cow

Milking conditions

Action: Milk normally

System level milk permission settings:

Allow action: 300 min after previous action.

Allow action when expected milk yield exceeds: 10.0 kg.

Allow action: 1 min after an incomplete milking, but at most 2 consecutive times.

Milking Queue

Mark as overdue in milking queue: 720 min after last complete or incomplete milking.

Milk type and destination

Milk Type: Tank milk | Milk Destination: Tank | This type is valid until:

Cow with low milk flow

Extend premilking time

Use lower flow limit for take-off decision

Milk sampling mode: Sample all milkings

OK | Cancel | Apply | Restore | Default

Delaval Robot File Reports

Go to reports Tab Choose MY REPORTS

The screenshot displays the VMSClient software interface. The 'Reports' tab is selected in the top navigation bar. The main window shows a table of milking data for various cows. Below this, there are three smaller tables: 'Devices', 'Deviations', and 'Sessions'.

Cow #	PenName	Last Activity	Time Since Last Milking	Overdue For Milking	Past 7 days avg/day	Expected Yield	Latest % of Expected Yield	Milk Type	Cow mode	Comments	Desc
680	VMS Pen #1		16:43	10:13	9.80	6.12	86	Milk normal	Milk normally		
687	VMS Pen #1		16:06	09:36	25.67	15.49	78	Milk normal	Milk normally		
713	VMS Pen #1		15:48	09:19	14.20	7.73	103	Milk normal	Milk normally		
637	VMS Pen #1		14:38	08:08	6.99	6.63	---	Milk normal	Milk normally		75%
454	VMS Pen #1		14:32	08:02	8.12	5.52	102	Milk normal	Milk normally		
676	VMS Pen #1		13:57	07:27	1.32	1.13	14	Feed only	Milk normally		
507	VMS Pen #1		12:27	05:57	8.05	5.51	47	Milk normal	Milk normally	Incomplete (LF)	
683	VMS Pen #1		11:49	06:19	8.19	5.10	52	Milk normal	Milk normally		
739	VMS Pen #1		11:34	05:04	35.96	17.26	78	Milk normal	Milk normally		
689	VMS Pen #1		11:26	04:56	22.05	10.36	94	Milk normal	Milk normally		
597	VMS Pen #1		10:45	04:15	21.03	12.03	67	Milk normal	Milk normally		
708	VMS Pen #1		10:16	03:46	25.26	12.56	75	Milk normal	Milk normally		
630	VMS Pen #1		09:56	03:26	19.46	9.05	59	Milk normal	Milk normally	Incomplete (RR)	
737	VMS Pen #1		09:47	03:17	16.34	7.08	93	Milk normal	Milk normally		
731	VMS Pen #1		09:17	02:47	22.52	10.49	63	Milk normal	Milk normally		

Device	Activity	Day, Time	Cow	Deviations	De...
Alpro	Online	03/19/07 11:19	576	Cup reattached to test. LF. no. 4.	MS2
MS1	UNKNOWN	03/19/07 11:19	576	Cup reattached to test. RF. no. 3.	MS2
MS2	Milking cow 576	03/19/07 11:19	576	Cup reattached to test. LR. no. 2.	MS2
		03/19/07 11:18	576	Cup reattached to test. RR. no. 1.	MS2
		03/19/07 11:17	576	Test not found for milking. LR. no. 2.	MS2
		03/19/07 11:17	576	Kick off (Exp Yield 2143 g, Yield 950 g). RR. no. 1.	MS2
		03/19/07 11:15	576	Test not found for cleaning. RR.	MS2
		03/19/07 11:12	Sys	Alcornio board reset node 88 bus 0.	MS1
		03/19/07 11:12	606	Unexpected low yield. RR. no. 1.	MS2
		03/19/07 11:10	606	Cup reattached to test. LF. no. 4.	MS2
		03/19/07 11:09	606	Test not found at reattach. RR. no. 1.	MS2
		03/19/07 11:09	606	Kick off (Exp Yield 1850 g, Yield 1120 g). LF. no. 4.	MS2
		03/19/07 11:08	606	Test not found at reattach. RR. no. 1.	MS2
		03/19/07 11:06	606	Test not found for milking. RR. no. 1.	MS2
		03/19/07 11:04	606	Test not found for cleaning. LF.	MS2
		03/19/07 11:03	606	Test not found for cleaning. RR.	MS2
		03/19/07 11:02	Sys	Test cleaner not detected in gripper. RR.	MS2
		03/19/07 10:57	649	Robot operation aborted. LR. no. 1.	MS1
		03/19/07 10:44	571	Kick off (Exp Yield 4671 g, Yield 4020 g). LR. no. 2.	MS2
		03/19/07 10:44	571	Kick off (Exp Yield 4965 g, Yield 5130 g). RR. no. 1.	MS2

Sessions	Day, Time	Cow	Action	Device
	03/19/07 11:12	606	Milked Yield = 4.63	MS2
	03/19/07 11:02	649	Milked Yield = 6.71	MS1
	03/19/07 11:00	652	Released	MS2
	03/19/07 10:52	716	Released	MS1
	03/19/07 10:51	671	Milked Yield = 8.08	MS2
	03/19/07 10:50	552	Milked Yield = 4.54	MS1
	03/19/07 10:46	694	Milked Yield = 10.05	MS1
	03/19/07 10:44	571	Milked Yield = 15.26	MS2
	03/19/07 10:38	724	Released	MS1
	03/19/07 10:35	642	Milked Yield = 19.73	MS1
	03/19/07 10:33	620	Released	MS2
	03/19/07 10:31	769	Released	MS2
	03/19/07 10:30	660	Milked Yield = 7.51	MS2
	03/19/07 10:26	398	Milked Yield = 1.03	MS1
	03/19/07 10:25	554	Released	MS2
	03/19/07 10:23	740	Milked Yield = 13.06	MS2
	03/19/07 10:17	747	Milked Yield = 7.34	MS2
	03/19/07 10:10	672	Milked Yield = 6.95	MS2
	03/19/07 10:05	591	Milked Yield = 6.78	MS2
	03/19/07 09:58	633	Milked Yield = 10.28	MS1

Notes: Choose/create a sample report once robot sampling routine is shut down

Select Delavel VMS DHIA Canada Sampler Report

Table 1: Main Report Data

Cow No	PenName	Last Activity	Time Since Last Milking	Overdue For Milking	Past 7 days avg/day	Expected Yield	Latest % of Expected Yield	Milk Type	Cow mode	Comments	Desc
680	VMS Pen #1		16.44	10.14	9.80	6.12	86	Milk normal	Milk normally		
687	VMS Pen #1		16.07	09.37	25.67	15.49	78	Milk normal	Milk normally		
713	VMS Pen #1		15.49	09.19	14.20	7.73	103	Milk normal	Milk normally		
637	VMS Pen #1		14.40	08.10	6.99	6.63	---	Milk normal	Milk normally		75%
454	VMS Pen #1		14.34	08.04	8.12	5.52	102	Milk normal	Milk normally		
676	VMS Pen #1		13.59	07.29	1.32	1.13	14	Feed only	Milk normally		
507	VMS Pen #1		12.29	05.59	8.05	5.51	47	Milk normal	Milk normally	Incomplete (LF),	
683	VMS Pen #1		11.50	05.20	8.19	5.11	52	Milk normal	Milk normally		
739	VMS Pen #1		11.36	05.06	35.96	17.26	78	Milk normal	Milk normally		
599	VMS Pen #1		11.27	04.57	22.05	10.38	94	Milk normal	Milk normally		
708	VMS Pen #1		10.17	03.47	25.26	12.57	75	Milk normal	Milk normally		
630	VMS Pen #1		09.57	03.27	10.46	6.06	59	Milk normal	Milk normally	Incomplete (RR),	
737	VMS Pen #1		09.48	03.18	16.34	7.09	93	Milk normal	Milk normally		
731	VMS Pen #1		09.19	02.49	22.52	10.50	83	Milk normal	Milk normally		
777	VMS Pen #1		09.05	02.35	19.59	8.20	84	Milk normal	Milk normally		

Table 2: Deviations

Day, Time	Cow	Deviation	De...
03/19/07 11:19	576	Cup reattached to test. LF. no. 4.	MS2
03/19/07 11:19	576	Cup reattached to test. RF. no. 3.	MS2
03/19/07 11:19	576	Cup reattached to test. LR. no. 2.	MS2
03/19/07 11:18	576	Cup reattached to test. RR. no. 1.	MS2
03/19/07 11:17	576	Test not found for milking. LR. no. 2.	MS2
03/19/07 11:17	576	Kick off (Exp Yield 2143 g, Yield 950 g). RR. no. 1.	MS2
03/19/07 11:15	576	Test not found for cleaning. RR.	MS2
03/19/07 11:12	Sys	Alcombo board reset node 88 bus 0.	MS1
03/19/07 11:12	606	Unexpected low yield. RR. no. 1.	MS2
03/19/07 11:10	606	Cup reattached to test. LF. no. 4.	MS2
03/19/07 11:09	606	Test not found at reattach. RR. no. 1.	MS2
03/19/07 11:09	606	Kick off (Exp Yield 1850 g, Yield 1120 g). LF. no. 4.	MS2
03/19/07 11:08	606	Test not found at reattach. RR. no. 1.	MS2
03/19/07 11:06	606	Test not found for milking. RR. no. 1.	MS2
03/19/07 11:04	606	Test not found for cleaning. LF.	MS2
03/19/07 11:03	606	Test not found for cleaning. RR.	MS2
03/19/07 11:02	Sys	Test cleaner not detected in gripper. RR.	MS2
03/19/07 10:57	649	Robot operation aborted. LR. no. 1.	MS1
03/19/07 10:44	571	Kick off (Exp Yield 4671 g, Yield 4020 g). LR. no. 2.	MS2
03/19/07 10:44	571	Kick off (Exp Yield 4865 g, Yield 5130 g). RR. no. 1.	MS2

Table 3: Sessions

Day, Time	Cow	Action	Device
03/19/07 11:22	597	Released	MS1
03/19/07 11:21	597	Milked Yield = 6.96	MS1
03/19/07 11:12	606	Milked Yield = 4.63	MS2
03/19/07 11:02	649	Milked Yield = 6.71	MS1
03/19/07 11:00	652	Released	MS2
03/19/07 10:52	716	Released	MS1
03/19/07 10:51	671	Milked Yield = 8.08	MS2
03/19/07 10:50	552	Milked Yield = 4.54	MS1
03/19/07 10:46	694	Milked Yield = 10.05	MS1
03/19/07 10:44	571	Milked Yield = 15.26	MS2
03/19/07 10:38	724	Released	MS1
03/19/07 10:35	642	Milked Yield = 19.73	MS1
03/19/07 10:33	620	Released	MS2
03/19/07 10:31	769	Released	MS2
03/19/07 10:30	660	Milked Yield = 7.51	MS2
03/19/07 10:26	398	Milked Yield = 1.03	MS1
03/19/07 10:25	554	Released	MS2
03/19/07 10:23	740	Milked Yield = 13.06	MS2
03/19/07 10:17	747	Milked Yield = 7.34	MS2
03/19/07 10:10	672	Milked Yield = 6.95	MS2

Select Date Range

Once date/time is selected, click on refresh to generate new report

You will see a pop-up window. Be sure to select either 'day of' or 'prior to the test' from the pop-up window

Milk Weights

Animal Number	Milking Unit Number	Rack	Position	Total Yield	Milking End	Milking End	Avg. Daily Yield Last 7 Days
564	2	1	112	5.2	03/18/2007	00:07:26	12.1
553	2	1	113	5.7	03/18/2007	00:16:38	17.1
784	2	1	114	9.3	03/18/2007	00:32:37	22.1
768	2	1	115	10.5	03/18/2007	00:39:20	24.6
775	2	1	116	8.0	03/18/2007	00:50:36	32.4
516	2	1	117	7.6	03/18/2007	00:58:44	26.8
740	2	1	118	8.5	03/18/2007		26.7
576	2	1	119	5.3	03/18/2007		9.9
652	2	1	120	6.9	03/18/2007		21.1
758	2	1	121	8.4	03/18/2007		31.9
591	2	1	122	3.6	03/18/2007		13.8
577	2	1	123	14.2	03/18/2007		23.6
417	2	1	124	4.9	03/18/2007		9.9
671	2	1	125	7.0	03/18/2007		18.7
535	2	1	126	10.3	03/18/2007		25.3
752	2	1	127	4.0	03/18/2007		18.2
709	2	1	128	7.9	03/18/2007		18.8
769	2	1	129	11.1	03/18/2007		29.4
773	2	1	130	11.9	03/18/2007	05:56:01	21.6
742	2	2	1	5.5	03/18/2007	06:05:16	20.6
682	2	2	2	10.9	03/18/2007	06:13:03	20.6
629	2	2	3	14.9	03/18/2007	06:22:36	28.3
664	2	2	4	4.7	03/18/2007	06:29:50	9.2
618	2	2	5	14.1	03/18/2007	06:36:54	23.3
342	2	2	6	15.2	03/18/2007	06:43:31	21.9
668	2	2	7	10.7	03/18/2007	06:53:20	24.9
735	2	2	8	10.3	03/18/2007	06:59:25	28.5
776	2	2	9	5.9	03/18/2007	07:09:07	7.5
639	2	2	10	5.9	03/18/2007	07:14:45	20.1
768	2	2	11	8.6	03/18/2007	07:22:33	24.6
749	2	2	12	7.4	03/18/2007	07:28:53	18.3
749	1	1	1	13.3	03/18/2007	07:56:47	22.1
614	1	1	2	6.8	03/18/2007	08:01:37	21.1
663	1	1	3	12.8	03/18/2007	08:09:37	23.0
662	1	1	4	9.1	03/18/2007	08:21:21	20.6
179							

The sample report assigns a 5 digit bottle # to each cow sampled

Eg.. 2-11102 2 = robot # 1 = rack # 102 = bottle #

Processing the Bottles

- Scroll up & down to ensure report contains all cows/samples from start to finish
- Referencing the sample report assign a cow # to each bottle
- Key in the random barcode into for each cow
- Send in the regular lab sheets, writing a note that this is a DeLaval Robotic herd.