



Influence of early dry-off of twin-carrying multiparity Holstein cows on their productive performance in the first 120 days of lactation

**** Preliminary Report ****

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Introduction

The incidence of twin births on commercial dairies has been increasing in recent years. Twinning percentages of 5 to 8% of total births in multiparity cows are commonly reported, and cows bearing twins have been associated with higher levels of metabolic disease and reduced productivity.

Methods

Multiparity Holstein cows on a large commercial dairy in California were manually palpated for the presence of twin fetuses at the first pregnancy check over a 12 mo period. Those judged to have twin fetuses were assigned to either a control (C: herd normal dry-off relative to days carried calf) or early dry-off (ED: target dried 14 d earlier than C). A third group, those cows judged to be carrying single fetuses but actually calving with twins, were assigned to a third group (undetected twins: U) at calving. After calving, use of BSt, movement through production groups, and breeding events were determined by the herd manager.

Results

A total of 71 cows were judged to be carrying twin fetuses based upon manual palpation, although 14 (20%) aborted prior to calving (Table overleaf). Of those cows calving, 9 (16%) calved with single calves. Of the 121 cows calving with twins, only 48 (40%) had been judged to be carrying twins based upon manual palpation, and 18 (15%) were culled or died before 120 d of lactation. Cows that were dried early (ED) only tended to be dry 12 d longer than cows dried normally (C) (68 vs. 56 d; $P=.08$), even though they were actually dried off 15 d earlier (202 vs. 217 days carried calf; $P<.01$). There were no differences in production of milk (avg. = 105.4 lb/cow/d), or its components, among groups C, ED and U in the first 120 d of lactation and milk components were similarly unaffected (avg. fat = 3.74%).

Conclusions

Manual palpation of pregnant cows resulted in a relatively low identification rate of cows carrying twins and a relatively high incidence of false positives.

Early dry-off of cows carrying twin fetuses had no impact on their performance in the first 120 d of lactation.

This project is ongoing.

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**Milk Production of Twin Bearing Cows Through 120 Days in Milk
on a large California Dairy**

	Treatment			SEM	Probability ¹	
	Control	Early Dryoff	Undetected Twins		C vs. E	E vs. U
Number of cows	28	16	66			
% non-survivors	21	25	12			
Non-survivors²						
DIM ³ at cull	35	19	43	24.6	.54	.44
DCC ⁴ at dry-off	217	202	219	1.8	<.01	<.01
Dry period (d)	56	68	55	6.0	.08	.05
Gestation (d)	273	270	274	6.1	.64	.54
Survivors						
number	22	12	58	-	-	-
DCC at dry-off	217	203	218	2.1	<.01	<.01
Dry period (d)	56	71	56	5.4	<.01	<.01
Gestation (d)	273	274	274	4.9	.87	.98
Yield (lb/d)						
Milk	107.2	106.9	102.1	14.3	.97	.46
Fat	3.74	3.72	3.77	.72	.97	.88
SNF	9.03	8.77	8.89	1.20	.68	.82
Composition						
Fat, %	3.56	3.47	3.71	.48	.70	.24
SNF ⁵ , %	8.44	8.39	8.66	.38	.79	.13
SCC ⁶ , (,000)	168	185	248	287	.90	.63

- ¹ - Probability of differences between survivors and non-survivors for:
DCC at dry-off $P = .84$
Dry period length $P = .63$
Gestation length $P = .55$
There were no statistically significant interactions of survivorship*treatment.
- ² - Non-survivors are cows culled or died prior to 120 DIM.
- ³ - Days in milk.
- ⁴ - Days carried calf.
- ⁵ - Solids not fat.
- ⁶ - Somatic cell count.