



Checklist for Limiting the Negative Effects of a Long Dry Period

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We have proposed a number of possible solutions to help producers to meet the challenge of production limits in the context of the Covid-19 pandemic. One of the main strategies adopted by many producers was drying off cows early at the end of lactation.



With the approach of calving for these cows that have been on an extended vacation, some worry that there could be negative effects. In this unusual situation, how can we offer the best possible conditions for calving and a successful lactation?

We have drawn up a list of the key elements to consider at each step:

1- At Drying Off

<p>Selecting cows to dry off early or cull</p>	<ul style="list-style-type: none"> • Perform milk production planning • Dry off or cull cows that are lame, have high SCC or that are disease carriers (e.g.: leukosis) • Confirm pregnancy before drying off • Aim for a body condition score between 2.75 and 3.2
<p>Recommendations for drying off early</p>	<ul style="list-style-type: none"> • Limit protein and energy intake • Provide hay or grass silage that is low in protein and withdraw concentrates • Provide an adequate mineral supply • Relocate the cow • Maintain water access • Use abrupt dry off for cows producing 15 kg of milk/day or less. • Use intermittent milking if all of the other options fail to decrease milk production to 15 kg/day or less. Limit intermittent milking to 2-3 days. • Consider using a teat sealant. The use of a teat sealant is strongly recommended when there will be a long dry period. • Hoof trimming
<p>Health Monitoring</p>	<ul style="list-style-type: none"> • Consult your veterinarian about adjusting the vaccination protocol if the cows are vaccinated at drying off. • Verify the Dry Off & Fresh Monitoring report. If there are a lot of fresh cows with high SCC, discuss dry cow management with your veterinarian because infections observed during the first 50 days of lactation have often been acquired during the dry period.

2- During the Dry Period

<p>Housing</p> <p>Minimize stress, avoid overcrowding, provide a clean, dry and well ventilated environment</p>	<ul style="list-style-type: none"> • Ensure that there is adequate ventilation to minimize heat stress <ul style="list-style-type: none"> - Aim for a respiration rate below 60 breaths/minute. - Ensure that the dry cows are cooled in the summer (wind speed 300 to 400 ft. /min) across the backs of resting animals. <ul style="list-style-type: none"> - Provide good air quality (40 to 60-air changes/hour in summer, 15 in the spring and fall, and 4 in the winter) • Limit overcrowding in pens <ul style="list-style-type: none"> - Aim for a minimum of 120 ft²/head resting area - Provide a minimum of 30 in./head space at the feed bunk - If overcrowding is unavoidable: <ul style="list-style-type: none"> ■ If possible, increase the space at the feed bunk by adding more mangers ■ Increase the number of waterers or watering points ■ Add bedding more often ■ Increase feeding frequency and push in the feed more often ■ Evaluate the number of replacement animals you will need and cull if necessary to free up some space. • Disinfect calving areas and the sick cow pen • Ideally, never calve cows in the sick cow pen. • Provide sufficient water flow (15 l/min) for tie stalls or a minimum of two waterers for free stalls (3.5 in. /head). The water should be clean at all times. • Provide adequate comfort for dry cows that are housed outside: <ul style="list-style-type: none"> - Provide shade (45 ft²/cow) - Provide a minimum of 30 in. /head of space at the feed bunk. For example, a round hay feeder with an 8-foot diameter and 18 sections will allow 15 cows to eat at the same time. - Control flies and parasites - Provide fresh water and clean waterers
<p>Daily Observation</p> <p>Prevent health problems</p>	<ul style="list-style-type: none"> • Designate someone to be responsible for evaluating: <ul style="list-style-type: none"> - Lameness - Udder engorgement - General behaviour (standing, lying down) - Rumen fill, rumination - Manure texture

<p>Body Condition Score</p> <p>Production</p>	<ul style="list-style-type: none"> • Body condition score should ideally be maintained between 2.75 and 3.25. Monitor body condition once a month. • Prepare cows 25 days before calving and heifers 32 days before calving. <ul style="list-style-type: none"> - The average duration of a pregnancy is 280 days (Valacta, 2020). <p>Validate the pregnancy duration used by your software.</p> <ul style="list-style-type: none"> • Group cow relocations to only take place once a week. <ul style="list-style-type: none"> - Relocate cows at least 21 days before their predicted calving date or right before labour begins. - Ensure that the alleys are not slippery when moving cows. • Evaluate the option of using the Rumensin bolus with your veterinarian. • Clip and wash the udder before calving.
<p>Feeding</p> <p>Prevent metabolic problems through adequate feeding.</p>	<ul style="list-style-type: none"> • Limit energy intake during the first phase of the dry period (16-17 MCal/day) <ul style="list-style-type: none"> - Validate forage intake - Analyze the forage that is fed to dry cows - Add fibre or straw to the ration to dilute the energy • Meet mineral and vitamin needs <ul style="list-style-type: none"> - If the minerals are offered in the form of a mineral lick block, validate the true intake from the block and complement if necessary • Provide comparable feeds in the dry ration and the close-up ration • Evaluate the use of choline • Monitor urine pH when using anions in the ration

3- Fresh Cows

<p>Fresh Cow Monitoring</p>	<ul style="list-style-type: none"> • Designate someone to be responsible for observing the fresh cows <ul style="list-style-type: none"> - Rumination - Rumen fill - Milk production - Temperature - Odours - Appetite • Take milk cultures in the first 30 DIM after calving for bacteriological analysis. • Monitor for ketosis (Ketolab, Precision Extra, Ketotest)
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Feeding

- Use a specific ration for fresh cows if possible
- Provide access to the ration 23 hours out of 24.
- Avoid ration sorting. Validate with Penn State.
- Provide comparable feeds in the close-up ration and the fresh cow/early lactation ration
- With conventional feeding, increase concentrates by around 350 g per day.
- Transfer cows from the fresh cow group, to group 1 after approximately 7 DIM, when the intake, production and health are satisfactory.



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Article written in collaboration with strategic advisors and Lactanet's Innovation and Development team.