

Jack Frost Nipping At Your Beak



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When cold weather sets in, poultry need diet modifications, appropriate water access, and properly maintained litter to stay healthy, warm and productive. “Cold Stress” is a phrase not spoken enough

in the poultry industry. For the backyard flocks, adding heat lamps as supplemental heat is often considered the end of the story. When it comes to managing cold stress in birds, there is more to consider. Cold impacts animals differently. For example, a cow’s rumen is a heating vat that assists in keeping her warm. Poultry do not have the same type of digestion as a cow and rely on increased calories from feed to keep warm.

Cold stress starts when the temperature begins dropping below 70° F. At this temperature a chicken’s feed intake will start to increase. An average mature layer will eat approximately 114 g/day as a baseline, and as the temperature changes you will find this intake also changes. Predictably, the intake during cold weather will increase by 1 gram of feed per bird for each degree C (1.8° F) below 70° F. In the Midwest, we can easily find several -10°F days which means a mature layer will be eating an additional 8.2 grams of feed per day. This equates to an increased feed intake of 7%. With this increase in feed intake comes an increase in dietary protein, calcium and sodium. A 10% increase in sodium, calcium and protein can impact the bird’s GI tract. Too much sodium and protein will make the bird’s manure very loose. Couple this with the additional stress on the kidneys from calcium and a perfect storm is created for



Frostbite

Chart 1

Increased Feed Intake Required Due to Cold Stress <i>(For Mature Commercial Layers in Pounds per Day)</i>			
Temperature (° F)	Flock of 25	Flock of 50	Flock of 100
70°	6.28 lbs.	12.57 lbs.	25.13 lbs.
60°	6.83 lbs.	13.69 lbs.	27.34 lbs.
50°	7.11 lbs.	14.22 lbs.	28.44 lbs.
40°	7.39 lbs.	14.77 lbs.	29.54 lbs.

wet litter and kidney failure. This cascades into a domino effect. The birds will be consuming and excreting more water, potentially causing an increase in frostbite, Bumblefoot and pneumonia.

Water access is a tricky topic when it freezes over. You want to provide your birds with plenty of water to ease the pressure on the kidneys caused by extra calcium from the increased feed intake. The wrong kind of waterer can increase the likelihood of frostbite on the wattles of your birds. Single comb breeds are already susceptible to frostbite because of the smaller surface area of their combs and wattles. To conserve heat the birds will reduce blood flow to the exterior tissues of the comb and wattle. Add water exposure to this situation



and the tissue damage can intensify. Selecting waterers that minimize spillage to the litter and minimize exposure of the combs and wattles of your birds, will make birds more comfortable when the temperature drops. This means adjusting water pressure of nipple drinkers and selecting bell waterers with smaller dishes to minimize the space available for the wattles to dip into the water.

Managing bedding material is crucial in the winter because of its contribution to various health concerns. Wet bedding under a heat lamp, along with the increased ammonia present in chicken waste, creates perfect conditions for respiratory distress. Damp conditions contribute to foot issues such as Bumblefoot. Similar to how an oyster makes a pearl, a bird will surround any material that breaks through the pad of their feet with keratin. This defensive mechanism causes a painful sore making the birds limp. The only way to treat Bumblefoot is to surgically remove the keratin “kernel” from the foot. Preventing

Bumblefoot by maintaining dry, comfortable bedding is less invasive and healthier for your birds.



Bumblefoot

Crystal Creek® has the products and knowledge to help you with the added management challenges of raising poultry in winter. The high nutrient quality of Poultry-Pro® Mineral and Family Flock® Complete Feed will help maintain production even when the temperature drops below zero. The addition of Crystal Pellets™ to feed during subzero temps will help support the immune system and reduce the negative impacts of “cold stress.” Adding a moisture barrier to the combs and wattles can minimize the impact of frostbite especially on the wattles. Udder Fancy™ is a product that has been used in the dairy industry to minimize the propensity of frostbite on teats and will work just as effectively on wattles. If you do find that your birds have raspy breathing and mucous secretions on the beak, Power Powder™ and Pul-Mate™ have been used to effectively reduce coughing and sneezing in birds.

Utilizing diet modifications, ensuring access to an appropriate winter water source and providing clean, dry litter will minimize stress on your birds this winter. The knowledgeable staff at Crystal Creek® is here to help you adjust your ration for subzero temperatures and assist in other recommendations that will help keep Jack Frost from nipping at your feathered friend’s beak this winter.

Source: Frostbite- <http://www.backyardchickens.com/t/942359/comb-frostbite-please-help>

Source: Bumblefoot-<http://www.backyardchickens.com/a/bumblefoot-how-to-treat-your-chickens-with-surgery-graphic-pics>