Winter is a challenging task for poultry farmers

The change in weather from warm to cold or from cold to warm requires due considerations and appropriate measures for both humans and animals to withstand these seasonal fluctuations. For effective management of animals to improve the efficiency of production performance in different seasons, one should provide the conducive environment.

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At the start of the winter, household poultry keepers, begin to wonder why their birds quit laying eggs. This is especially true in the tropical region where egg consumption is low in the summer and high in the winter. People require a greater number of eggs in the winter, but contrary to their expectations, birds produce fewer eggs and may stop laying altogether. If not properly managed, natural molt will begin and the birds will take about four months to complete the molting process. During molting, the reproductive system becomes non-functional and no eggs are produced for the entire duration of natural molting.

Provision of appropriate conditions will keep the birds producing. Commercial poultry farmers and household poultry men can enjoy excellent production even in severe winters by following certain guidelines that will stimulate the birds to continue laying at the same pace and keep birds laying for a longer period of time during the year.

Proper housing required
Proper housing is a pre-requisite to keep poultry in lay during the winter. There exists great variation as regards to the provision of housing and shelter from living outside with very little shelter, to those living in the lap of luxury in heated coops. To avoid infiltration of outside cold air in poultry sheds, check curtains, doors, fan louveres, inlets and ventilators very carefully. Evaporative cooling pads and fans require proper sealing with plastic sheets. Ensure that the ceiling is in good condition to prevent heat from escaping through holes or tears in the ceiling material.

Suitable shelter will protect birds from winter winds and rain. It is well documented that cold birds have much lower egg production. Poultry can survive with better production if they are kept dry and warm.

Weather forecasters are very helpful in determining if the winter may be more wet and rainy than normal. It is very important to keep the litter dry. If the litter becomes damp or moist, stirring, mixing and spreading is recommended along with increased ventilation. If the litter is too wet it should be removed and replaced accordingly, otherwise problems like high ammonia production, bumble foot and dirty eggs will be prevalent in the shed.

Deep bedding should be provided as it helps the birds keep warm and in good condition throughout the night. The bedding material used should preferably be soft, such as pine shavings or clean straw.

Pay attention to nutrition
From hatching to the completion of their production cycle, it is essential that the birds are provided with proper nutrition. Balanced poultry rations aid in attaining proper body weight, which in turn allows proper development of the reproductive system. Proper nutrition must then be provided during the laying season by feeding birds a layer ration, either in mash or crumble form, which is specifically formulated to provide the essential ingredients for egg production. Any deviation in the feed nutrients as per requirement of the poultry birds will result in lower production, greater chances of disease prevalence and lower profit margins.

Photoperiod shortens
The reproductive system of most birds respond positively to increased day lengths: at least 14 hours of light is required for a bird to be reproductively active. The daylight hours become shorter as the winter approaches. This acts as a stimulus to the birds to switch out of the reproductive mode. The shortened daylight causes hormonal changes leading to cessation of egg production. The light not only provides illumination, but also heating to the birds.

In the commercial sector, hens are kept laying throughout the winter by providing the appropriate conditions. In backyard birds, artificial lights can also be used to supplement daylight hours to keep the birds in production much longer. Because most backyard flocks are used to perching in the evenings, many people wish to add the additional hours of light in the early morning. By providing extra light in the morning rather than the evening, the birds can still find the perches as the sun begins to set without being exposed to immediate darkness. Adding an hour or
two of light in the morning prior to sunrise and adding an hour or two in the evening after sunsets will work equally well for improving egg laying. To increase daylight hours, a small timer can be used. This can be attached to a power source and will automatically turn the lights on and off at the appropriate times. It is important to use timers to control the lights so that the birds are exposed to a set duration of light that does not vary from day to day. Lights should be set to provide a consistent light schedule between 14 - 16 hours on a daily basis. Lights should be set to come on each morning before sunrise and to turn off at least 30 min after sunrise. If the lights are used in the evenings, set the timer to switch the lights on at least 30 min before sunset and to turn back off at the proper time to obtain the total amount of desired light each day. Birds with the appropriate body weight, correct feeding, proper housing and those which are old enough (18 - 26 weeks of age) can be stimulated into reproduction, or maintain their reproduction through the winter by providing artificial long days.

**Frozen combs**

Birds may suffer from frozen combs in open houses and poorly controlled sheds. This problem is most common in single comb birds kept in free range. Males are more susceptible because females usually sleep with their heads buried under their feathers. Drafts and moisture contribute to the problem of frozen combs and should be avoided. Once combs have been hit the problem can be solved by applying vaseline on the comb and warming up the environment. The effectiveness of this method is dependent on the duration of the massage because more time ensures better blood circulation in the comb and may ultimately save frozen combs. Since the problem is seen mainly in males and in free range or poorly housed birds, the numbers will be small. Affected birds can be separated and kept in a warm shelter to receive the desired extra attention.

**Overall health**

One of the most important things to consider is the general overall health of the birds as winter approaches. Birds with a good health status can survive better and withstand disease attacks. The healthier the birds the more likely they survive the worst of winter. Quality feed, good housing, clean drinking water, medication and vaccination and proper lighting will reduce the chance of losing a bird to bad weather.