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Government of India  
Ministry of Agriculture & Farmers Welfare  
Department of Animal Husbandry & Dairying

Krishi Bhawan, New Delhi  
Dated: 9.11.2020

**Subject: Advisory for taking preparatory action for Cold Wave season**

I am directed to communicate the attached advisory to States / UTs for taking preparatory action for Cold Wave season. The most crucial point of intervention concerns the use of appropriate prevention strategies and knowledge of effective prevention, first-aid and veterinary support. The attached advisory will be helpful for the states to minimize the impact of cold wave on animals

This is for information and necessary action accordingly.

  
(Dr. Vijay Kumar)  
Regional Officer (LH)

To

1. The Principal Secretaries, Department of Animal Husbandry of all States / UTs
2. The Directors, Department of Animal Husbandry of all States / UTs

Copy to:

1. Joint Advisor (RR) NDMA, Govt. of India
2. PPS to JS (LH)

Encl: Advisory (Annexure-I, page 1-4)

**Advisory for taking preparatory action for Cold Wave season**

**Introduction:**

A cold wave takes place when the minimum temperature of a location goes below 4 degree Celsius. Cold waves generally are capable of occurring at any geological location and are formed by large cool air masses that accumulate over certain regions, caused by movements of air streams. North India is mainly devastated by a cold wave during the month of January. The northern parts of India, specially the hilly regions (Jammu & Kashmir, Ladakh, Himachal Pradesh, Uttarakhand) and the adjoining plains spreads in states like Punjab, Haryana, Rajasthan, Delhi, Uttar Pradesh, Bihar and Jharkhand are highly affected by cold wave. The extent of damage caused by cold wave depends on the temperature, the length of exposure, humidity levels, and the winds speed at freezing temperature.

**Prevention and Acclimatization:**

To deal with the cold wave there is a need for multi-sectorial and multi dimensional administrative approach. Early warnings are major elements of cold wave risk reduction activity to minimize the loss of animals and economic impacts. Early warning systems help by warning people in advance and there is also a need of constant state of preparedness. Preventive measures for cold wave include establishment of animal shelters, availability of nutritional feed and fodder and increasing awareness among animal owners/ stakeholders. Further, rescheduling of animal fairs (Pashu Mela) may also be undertaken.

Many cold wave related illness are largely avoidable. The most crucial point of intervention concerns the use of appropriate prevention strategies and knowledge of effective prevention, first-aid and veterinary support.

Animal coming from hot environment / place to a cold climate should not be allowed to move outside in open cold area and lukewarm water should be provided in plenty to the animal. Acclimatization is achieved by slow exposure to the cold environment.

**Animals at High Risk:**

A cold wave can cause death and injury to livestock and wildlife. Exposure to cold mandates greater caloric intake for all animals and if a cold wave is accompanied by heavy and persistent snow, grazing animals may be unable to reach needed food and die of hypothermia or starvation. The animals under the following categories are more at risk during cold wave and need special attention:

1. Newly born and Young animals
2. Sick animals with history of respiratory disease
3. Lactating animals
4. Weak animals

## Identification and first Aid of cold disorders in animals:

Some cold wave illness includes:

- Hypothermia
- Frostbite
- Loss of appetite
- Arthritis in heavy animals
- Kennel cough in pet dogs
- Respiratory illness

Some cold wave disorders with symptoms and first Aid are as under:

<b>Cold Wave Disorder*</b>	<b>Symptoms</b>	<b>First Aid</b>
Hypothermia	Low body temperature (by extended exposure to cold), shivering, lethargy, listlessness and shock	Limit the time spent outside during winter months  Swaddle animal in warm blankets
Frostbite	Pale hard skin, blisters on skin with further darkening of skin and possibility of gangrene	Limit the time spent outside during winter months  Swaddle animal in warm blankets  Applying warm water to the affected areas
Kennel cough	Symptoms of respiratory infection	Vaccination and approach for veterinary care as soon as possible.
Shock	Irregular heart rate, weak pulse, low body temperature, pale gums	Prevent loss of body heat and cover the animal with blankets.  Approach for veterinary care as soon as possible.

\*approach for veterinary care as soon as possible.

## Awareness and Veterinary Care:

During Cold waves animals and livestock require more food for sustenance as the energy requirement goes up. Extreme variations in temperature may affect the fertility rate of animals.

State shall ensure that the animal owners should be made aware of adverse effects of cold wave and wide publicity should be given regarding the preventive measures, **Do's and Dont's** during this period.

**Veterinary infrastructure and expertise need to be arranged / upgraded which may also include:**

- Deployment of adequate number of veterinarians and paravets in cold prone areas
- Arrangement of mineral mixtures, life saving drugs, fluids and other medicines and equipments in veterinary hospitals at all times
- Activation of mobile veterinary units
- Conducting awareness programmes in respect of cold management of animals
- Identifying disposal sites for dead animals
- Liaison with other stakeholders/agencies wherever required

**Do's and Dont's:**

To minimize the impact of cold wave and to prevent serious ailment or death, the following measures are useful:

**Do's**

- Keep update on local weather forecast.
- Heavy snowfall in Kashmir and Himachal Pradesh during January month results in cold breeze and frost in northern India. It is imperative that all necessary steps be taken to protect livestock from this inclement weather.
- Cover the animal shelter from all sides during night in order to avoid direct exposure of animals to cold winds including dry straw as animal bedding.
- Construction of Climate-smart sheds which allow maximum sunlight during winters and low radiation during summers.
- In case of the occurrence of frost, adequate arrangements for artificial lighting and heating should be made.
- Weak and sick animals should be covered with sack cloth to protect them from the cold. At the same time, during the night, all the animals should be kept in a covered shelter.
- Avoid keeping animals in a damp area, as well as protect them from smoke from fires which are lit to provide warmth. The dampness and smoke increases their chances of contracting pneumonia.
- To maintain the body temperature of animals, they should be fed with a mixture of oil cakes and jiggery including covering of body during cold hours (especially young and weak animals).
- Ensure feed and fodder storage along with use of high quality forage and pastures.
- Improving livestock feeding practice and dietary additives
- Deworm the animals.
- To protect the animals from ecto-parasites, their sheds should be kept clean. Bouquets of Nirgundi (*Vitex negundo*), Basil (*Ocimum sanctum*) or Lemon

Grass (*Cymbopogon citrates*) should be hung in the animal sheds, the smell of which keeps ecto-parasites away. To keep the sheds clean, a Neem oil based disinfectant can be sprayed.

- Ensure vaccination against FMD, PPR, Haemorrhagic Septicaemia, Enterotoxemia, Black Quarter etc.
- Ensure mixing of salt mixture / electrolytes with feed and water and provide balance feed especially to dairy animals along with fat supplements.
- The drinking troughs should be kept clean and animals should be provided luke warm water at least four times during the day.
- Pregnant animal (> 6 months) should be given additional feed.
- Bird's shades should have temperature control system.
- The dead animal burials areas should be away from water bodies, public area and must be well protected with appropriate display boards.

#### **Dont's**

- Do not leave animals tied/roam in open area during cold wave
- Avoid animal fares (pashumela) during cold wave
- Avoid giving cold feed and water to the animals
- Avoid dampness and smoke in animal shelter
- Do not keep the animals in open during night and cold hours
- Carcasses of dead animals should not be discarded on the regular grazing routes of the animals.