

# CROWSHALL VETERINARY SERVICES LLP

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## **Heat Stress Bulletin Risk Period from 24<sup>th</sup> June 2020 PREPARE NOW**

Meteorological forecasting for the East of England indicates a moderate risk for the development of heat stress in poultry from **24<sup>th</sup> June 2020**. The main at risk group includes conventionally managed broilers in excess of 25 days and terminal turkey stags. The risk can be assessed as below.

The following basic equation can be used as a guide to the probability of heat stress in your birds.

The equation uses a combination of relative humidity (RH%) and temperature (°F).

**Heat stress index:= Temperature (°F) + relative humidity (RH%)**

|                                   |
|-----------------------------------|
| <b>Below 135</b>                  |
| <b>Slight risk of heat stress</b> |

|   |
|---|
| <b>135 to 145</b>                                       |
| <b>Moderate risk of heat stress, mortality unlikely</b> |

|   |
|---|
| <b>145 +</b>                                  |
| <b>High risk of Heat stress and mortality</b> |

Forecast meteorological values in the Eastern Counties of the UK away from the coast are expected to be as follows (based on current weather data available 8.00am 22<sup>nd</sup> June 2020)

| Date                                 | Temp (F) | RH (%) | Heat Stress Index | RISK     |
|--------------------------------------|----------|--------|-------------------|----------|
| Wednesday 24 <sup>th</sup> June 2020 | 83       | 54     | 137               | MODERATE |
| Thursday 25 <sup>th</sup> June 2020  | 83       | 54     | 137               | MODERATE |
| Friday 26 <sup>th</sup> June 2020    | 88       | 52     | 140               | MODERATE |

### **Signs of heat stress:**

- 1) Stage one- Open mouth breathing and guler flutter (skin on either side of neck below the beak showing movement with breathing. Wings held away from body, decreased activity, increased water consumption, decreased feed consumption.
- 2) Stage two- severe panting, breast muscles moving with breathing rhythm, severe feed intake reduction, poor activity and movement.
- 3) Stage 3- severe lethargy, death.

### **Action to reduce risk in at risk broilers:**

- 1) Where a significant heat stress risk is likely in broilers at high stocking and close to slaughter age, liaison with the processing plant should take place to allow for targeting thinning in advance of the high risk period. All departments should be aware of risk and minimise number of birds planned to minimise holding times.
- 2) Use electrolytes via the drinking water in advance of the high risk period and during the high risk period. This will help to provide the birds with the necessary salts that they need to correct any imbalances caused by the birds trying to control their high body temperatures.
- 3) Ensure birds have access to water at all times and that pressures and flow rates are adequate to cope with demand.
- 4) Ensure all fans are working properly and that adequate airspeeds can be achieved over the birds. Removing humidity from the houses during this period is essential. Operate tunnel ventilation to maximise airspeed over birds.
- 5) Ensure back up alarms and generators are functional.
- 6) Ensure that following the hottest part of the day and during a period of hot weather that ventilation is used to the maximum benefit during the night time period to help birds cool down and prepare for the hot weather if predicted again for the following day.
- 7) Consider raising feeders during the hottest part of the day to create more floor space to reduce stocking pressure.
- 8) Withdrawing feed can reduce metabolic heat production but be aware that birds growing rapidly have high metabolic needs and will require multivitamins in addition to electrolytes if feed withdrawal is considered necessary.
- 9) Reduce the stocking of birds in crates being transported for processing.
- 10) ONLY catch birds during the coolest part of the day- ie early morning
- 11) Minimise time birds are without water during catching- lift only at the last possible point and where split drinker lines change catching pattern to allow maximum number of birds to have access to drinker lines.
- 12) Minimise time modules are on the vehicle whilst catching is taking place, park lorry in cool area and in shade where possible.
- 13) Keep lorries on road to maintain airspeeds over birds and only take in the lairage at the latest possible point to minimise standing time in the lairage.

### **REMOVING HUMIDITY FROM HOUSES AND MAXIMISING AIR SPEEDS ARE CRITICAL TO REDUCING HEAT STRESS LOSSES**

To discuss heat stress risk and control further please feel free to contact Crowshall Veterinary Services LLP to discuss further.

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**P Hammond**