Chicken mortality due to heat is a multifactorial effect resulting from a variety of environmental and management decisions. Shed insulation, ventilation, chicken breed, feed withdrawal, and chicken age, are all important factors, but the primary mortality factor is the differential between temperature and humidity. (Šranková et al. 2019) Above a certain temperature, the chickens are no longer thermoneutral, meaning they pant to cool themselves. Panting loses efficacy dependent on the humidity level, and above a certain temperature, which shifts according to the humidity level, the chickens begin to suffer heat stress, which results in mortality. (Warriss, Pagazaurtundua, and Brown 2005)

Predicting the weather is notoriously difficult, but we know that Europe is experiencing heatwaves at an increasing rate, with 2023 being the hottest year on record, and 2024 “virtually certain” to be hotter still. (Carbon Brief 2024)The UK experienced 12 days of heatwave in 2022, where temperatures rose to 40.3°. Chickens who weren't being actively cooled will have died in the prolonged heat. Data is poor around the exact number, but figures in the “millions” were reported in the mainstream media. (Matthew Chalmers 2022; Isaac and Dalton 2022) Mainland Europe experienced record heatwaves in 2023, which the UK was lucky not to experience.   
  
The literature shows that a single day of high heat can cause 1.2% mortality in broilers of a certain age. (Vale et al. 2010) So what we could say is that for every day the UK is in heatwave, we expect 1.5 million broilers to die. If we have heatwave rates of 2022, this will be 18 million birds. The effects are compounded, and the longer the heatwave, the more birds we expect to die from heat exhaustion. The exact numbers will depend on the conditions in the sheds, and how effective producers are at implementing heat mitigation strategies. However, what we know is that at any given time, there are 126 million broiler chickens in the UK, and while mortality is multifactorial, all of them are at risk of dying due to a heatwave if the heatwave is prolonged or acute enough.

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