



Livestock Safety Index Chart

The Livestock Temperature Humidity Index* (THI Table 1) was introduced by American animal scientists to alert producers of potential heat stress periods for livestock. The THI combines the effects of temperature and humidity into one value. The Livestock Safety Index (LSI) contains three stress categories (temperature given in Celsius [°C]):

- **Livestock Alert** - LSI 24-25.5: when the index reaches this range, heat stress will first appear. Precautionary measures should be taken to reduce heat stress conditions in confinement housing or livestock trailers.
- **Livestock Danger** - LSI of 26-28: an index in this category is dangerous for confined animals.
- **Livestock Emergency** - LSI of 29 or higher: These conditions are most likely to occur when air temperature exceeds 32°C (90°F). No cloud cover and little air movement are additional hazards found in such heat stress weather. Livestock should not be worked or shipped when the index reaches this level.

Table 1: Livestock Temperature Humidity Index* (THI) at specific temperatures and relative humidity levels.

Ambient air		Relative Humidity (%)							
Temp. °F	Temp. °C	20	30	40	50	60	70		
100	37.8	26	29	30	31	33	34		
98	36.7	26	28	29	31	32	33		
96	35.6	26	27	28	30	31	32		
94	34.4	26	27	28	29	31	32		
92	33.3	25	26	27	28	29	30		
90	32.2	25	26	26	27	28	29		
88	31.1	24	24	26	27	27	28		
86	30	23	24	25	26	27	27		
84	28.9	22	23	24	25	26	27		
82	27.8	22	23	23	24	25	26		
80	26.7	21	22	23	23	24	24		
78	25.6	20	21	22	23	23	24		
76	24.4	19	21	21	22	22	23		
Livestock Safety Index (°C)		Normal <23		Alert 24-25.5		Danger 26-28		Emergency >29	

* The Livestock THI was adapted from the human Humidex Chart, which can be found at: www.ccohs.ca/oshanswers/phys_agnets/humidex.html