

## Livestock care during summer heat

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Livestock may suffer from heat stress or hyperthermia if the right conditions occur. Animals differ considerably from humans in their ability to cope with environmental factors. What may feel like a great day to us may be dangerous for your livestock. Many areas of the high plains have seen high temperatures and high relative humidity. These conditions combined with low wind speeds and solar radiation can increase the heat load on livestock. A reduction in performance, generally associated with decreased feed consumption, may be a symptom of heat stress. If conditions persist or the heat load is too extreme livestock may die. It is important to be aware of weather predictions and have a plan if these conditions arise.

Livestock weather indices are commonly used to assign index numbers to the ambient temperature and relative humidity conditions. These index numbers can then be used as a livestock warning system for severe weather. An index number less than 75 means that there are no heat stress concerns. Index numbers from 75 to 78 are a heat stress alert, where it is advisable to closely watch your livestock. Index numbers from 79 to 83 are heat stress danger, where animal losses may be increased. An index number of 84 or greater is a heat stress emergency. Under these conditions, immediate action should be taken to aid livestock. These charts can be found online and sometimes are broadcast by weather stations.

### Temperature Humidity Index

		Dry Bulb Temperature (°F)																					
		74	76	78	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110	112	114	116
Relative Humidity (%)	0	65	66	67	68	69	70	70	71	72	73	74	75	76	77	78	78	79	80	81	82	83	84
	10	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87
	20	67	68	69	70	71	72	74	75	76	77	78	79	80	81	82	84	85	86	87	88	89	90
	30	68	69	70	71	73	74	75	76	78	79	80	81	82	84	85	86	87	89	90	91	92	93
	40	69	70	71	73	74	75	77	78	79	81	82	83	85	86	87	89	90	91	93	94	95	97
	50	70	71	72	74	75	77	78	80	81	83	84	85	87	88	90	91	93	94	96	97	98	100
	60	70	72	74	75	77	78	80	81	83	84	86	88	89	91	92	94	95	97	98	100	102	103
	70	71	73	75	76	78	80	81	83	85	86	88	90	91	93	95	96	98	100	101	103	105	106
	80	72	74	76	78	79	81	83	85	87	88	90	92	94	95	97	99	101	103	104	106	108	110
	90	73	75	77	79	81	83	85	86	88	90	92	94	96	98	100	102	103	105	107	109	111	113
100	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110	112	114	116	

< 75

No Heat Stress

75-78

Heat Stress Alert

79-83

Heat Stress Danger

≥ 84

Heat Stress Emergency

There are several methods to check animals for heat stress. The most accurate is to measure internal body temperature. Anything above normal body temperature may be an indication that the animal is suffering from some form of heat stress. Another symptom of heat stress is an increased respiration rate. Animals may begin to pant or breathe rapidly under heat stress. This can also be accompanied by slobbering and extended head and legs.

Adequate cool clean water is critical year round, but is the most important part in decreasing heat stress. Animals will use the water to cool their body temperature, but lose much of it through evaporation. Be mindful that they may drink more during very hot weather. Above 80 degrees, cattle generally will drink 2 gallons for every 100 pounds of body weight. A 1,000 pound steer can drink 20 gallons of water on a hot day.

Shade, sprinklers, and fans can also be very helpful to keep livestock cool but can be very expensive. Installation of these tools may be beneficial if emergency heat stress situations are common or if installation and operation costs are less than losses in production costs. Quick installation during emergencies is not always possible and planning should be done before the hot season.

A few additional factors may make some livestock at higher risk of heat stress. Sick animals may be more susceptible to the heat and may need frequent monitoring. All animals are susceptible to heat stress, although animals with darker coats may absorb more solar radiation. Physical activity will increase the heat load on an animal. If animal activity is necessary, try to limit it to before eight o'clock in the morning.

If you would like more information on keeping your livestock comfortable, call Chris Shelley at 970-332-4151 or contact your local Extension office