


PROTECTING LIVESTOCK FROM EXTREME HEAT


Extreme heat can worsen and cause other natural disasters like droughts and wildfires. Extreme heat can also cause significant problems for livestock. Extreme heat is also known as heat waves. Heat waves can worsen drought. A heat wave is a period of very hot and humid weather that lasts for more than a couple of days. It's not only about how hot it gets, but also how long it stays hot. Temperatures do not cool overnight. It's important to protect your livestock and plan ahead for extreme heat.


Heat waves, drought and wildfire conditions reduce forage growth for livestock to graze. Heat waves also cause little or no water supply, and heat exhaustion in animals. Planning for extreme heat is very important to make sure your livestock has enough water. Especially during consecutive extreme nighttime temperatures.


Extreme heat causes significant stress for all animals. Managing animals in high temperatures requires good forward planning.

Check livestock for signs of heat stress. Heat stress causes many clinical signs. It can cause rapid, shallow breathing, weight loss, weakness, dry eyes, nose, and mouth. An animal will raise its head to make it easier to breathe. Contact your veterinarian for immediate livestock medical assistance. 

Monitor weather and drought conditions.

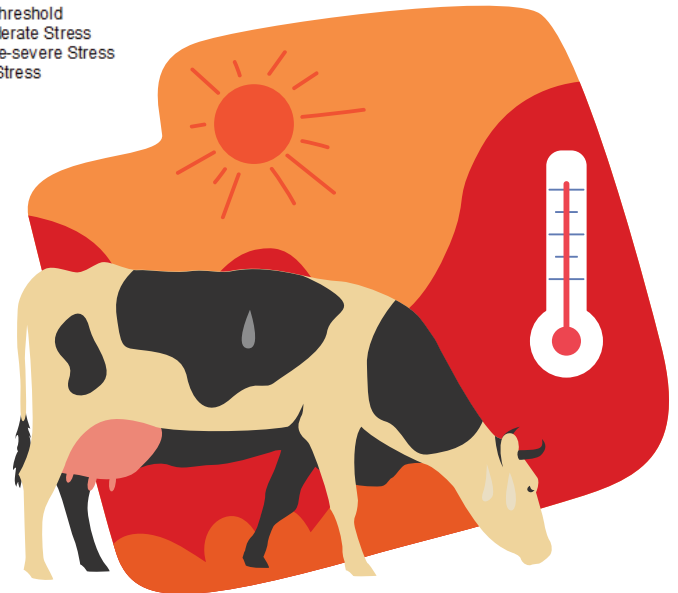
- National Oceanic and Atmospheric Administration (NOAA) Climate Prediction Center, National Weather Services (NWS) for your area. 
- U.S. Drought Monitor.

Develop a plan for consecutive days of high to extreme temperatures. 

Check for heat stress and/or heat load. Temperature affects how severe heat stress and heat load can be. Make use of the Temperature Humidity Index (THI). 

Temperature		% Relative Humidity																		
°F	°C	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90
72	22.0	64	65	65	66	66	67	67	67	68	68	68	69	69	69	70	70	70	71	71
73	23.0	65	65	66	66	66	67	67	68	68	68	69	69	70	70	71	71	71	72	72
74	23.5	65	66	66	67	67	67	68	68	68	69	69	70	70	71	71	72	72	73	73
75	24.0	66	66	67	67	68	68	68	69	69	70	70	71	71	72	72	73	73	74	74
76	24.5	66	67	67	68	68	68	69	69	70	70	71	71	72	72	73	73	74	74	75
77	25.0	67	67	68	68	69	69	70	70	71	71	72	72	73	73	74	74	75	75	76
78	25.5	67	68	68	69	69	70	70	71	71	72	73	73	74	74	75	75	76	76	77
79	26.0	67	68	69	69	70	70	71	71	72	73	73	74	74	75	76	76	77	77	78
80	26.5	68	69	69	70	70	71	72	72	73	73	74	75	75	76	76	77	78	78	79
81	27.0	68	69	70	70	71	72	72	73	73	74	75	75	76	77	77	78	79	80	80
82	28.0	69	69	70	71	71	72	73	73	74	75	75	76	77	77	78	79	79	80	81
83	28.5	69	70	71	71	72	73	73	74	75	75	76	77	78	78	79	80	80	81	82
84	29.0	70	70	71	72	73	73	74	75	75	76	77	78	78	79	80	80	81	82	83
85	29.5	70	71	72	72	73	74	75	75	76	77	78	78	79	80	81	81	82	83	84
86	30.0	71	71	72	73	74	74	75	76	77	78	78	79	80	81	81	82	83	84	84
87	30.5	71	72	73	73	74	75	76	77	77	78	79	80	81	81	82	83	84	85	85
88	31.0	72	72	73	74	75	76	76	77	78	79	80	81	81	82	83	84	85	86	86
89	31.5	72	73	74	75	75	76	77	78	79	80	80	81	82	83	84	85	86	86	87
90	32.0	72	73	74	75	76	77	78	79	79	80	81	82	83	84	85	86	86	87	88
91	33.0	73	74	75	76	76	77	78	79	80	81	82	83	84	85	86	86	87	88	89
92	33.5	73	74	75	76	77	78	79	80	81	82	83	84	85	85	86	87	88	89	90
93	34.0	74	75	76	77	78	79	80	80	81	82	83	85	85	86	87	88	89	90	91
94	34.5	74	75	76	77	78	79	80	81	82	83	84	86	86	87	88	89	90	91	92
95	35.0	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93
96	35.5	75	76	77	78	79	80	81	82	83	85	86	87	88	89	90	91	92	93	94
97	36.0	76	77	78	79	80	81	82	83	84	85	86	87	88	89	91	92	93	94	95
98	36.5	76	77	78	80	80	82	83	83	85	86	87	88	89	90	91	92	93	94	95
99	37.0	76	78	79	80	81	82	83	84	85	87	88	89	90	91	92	93	94	95	96
100	38.0	77	78	79	81	82	83	84	85	86	87	88	90	91	92	93	94	95	96	98
101	38.5	77	79	80	81	82	83	84	86	87	88	89	90	92	93	94	95	96	98	99
102	39.0	78	79	80	82	83	84	85	86	87	89	90	91	92	94	95	96	97	98	100
103	39.5	78	79	81	82	83	84	86	87	88	89	91	92	93	94	96	97	98	99	101
104	40.0	79	80	81	83	84	85	86	88	89	90	91	93	94	95	96	98	99	100	101
105	40.5	80	82	83	84	86	87	88	89	91	92	93	95	96	97	99	100	101	102	
106	41.0	80	81	82	84	85	87	88	89	90	91	93	94	95	97	98	99	101	102	103
107	41.5	80	81	83	84	85	87	88	89	91	92	94	95	96	98	99	100	102	103	104

- Stress Threshold
- Mid-moderate Stress
- Moderate-severe Stress
- Severe Stress



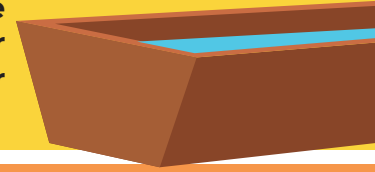
THI Table Source: Burgos & Collier

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Animal owners are responsible for their animals. They need to prepare for heat events to ensure the welfare of their animals. Providing plenty of clean, cool water and shade is essential. It's important to plan ahead.

Size:

Water troughs need to be large enough and accessible to animals. Make sure there is enough space for the number and size of the livestock in the pen or group. If a large number of animals are together, increase the number of water points and flow.



Secure:

Secure water troughs or containers so they don't overturn. Large concrete troughs are usually immovable and help keep drinking water cool.



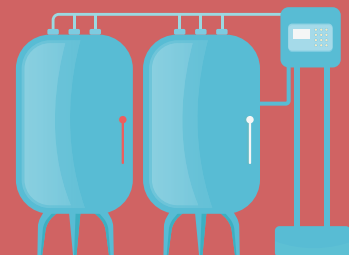
Safety:

Water troughs and containers should be kept clean. Make sure they are safe and maintained to prevent injuries.



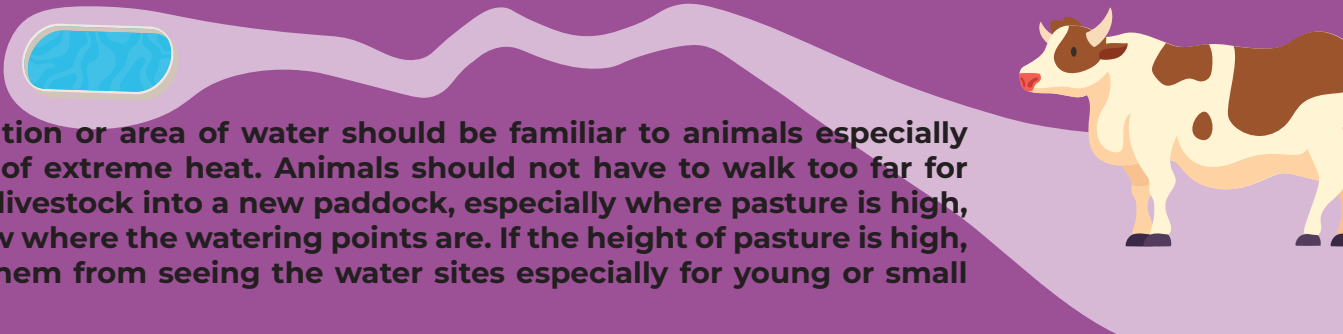
System:

Regular checks of the water delivery systems is important. Check for water flow and pressure issues, and leaks and damages. Electrical and mechanical malfunctions could affect automatic/heated systems. A system failure could cause water quality issues, and water availability and access.



Site:

The specific location or area of water should be familiar to animals especially during the days of extreme heat. Animals should not have to walk too far for water. If putting livestock into a new paddock, especially where pasture is high, ensure they know where the watering points are. If the height of pasture is high, it may prevent them from seeing the water sites especially for young or small stock.



Hydration is key. Provide consistent ample fresh drinking water. Water is vital to animals during hot and humid conditions. Providing enough water will prevent dehydration, a significant contributor to heat stress.

Ensure this is part of your animal emergency plan.