

Summer Success Depends on Hydration

What is Heat Stress?

Heat stress occurs when the Temperature Humidity Index (THI) reaches levels high enough to overwhelm animals' adaptive mechanisms. (See Back) Under heat stress, cattle may experience elevated body temperature, oxidative stress, increased respiration rate, disrupted feed intake, decreased milk yields, acidosis, and reproductive issues.

Keep Cows Cool with Cool-Aid+

Cool-Aid+ is a proprietary combination of key ingredients that helps cattle better regulate their body temperature during heat stress from the inside out. (Figure 1). Additionally, Cool-Aid+ NOW contains plant based compounds that help maintain antioxidant status, supporting animal health.

FIGURE 1
EFFECT OF COOL-AID
ON BODY TEMPERATURE OF COWS

The elements of Cool-Aid work at the cellular level to help cattle better regulate their body temperature during heat stress.

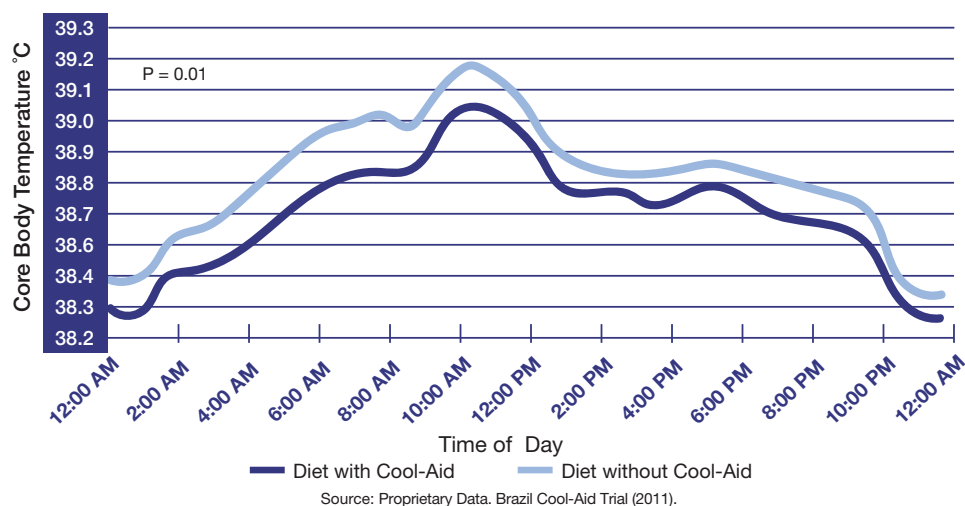
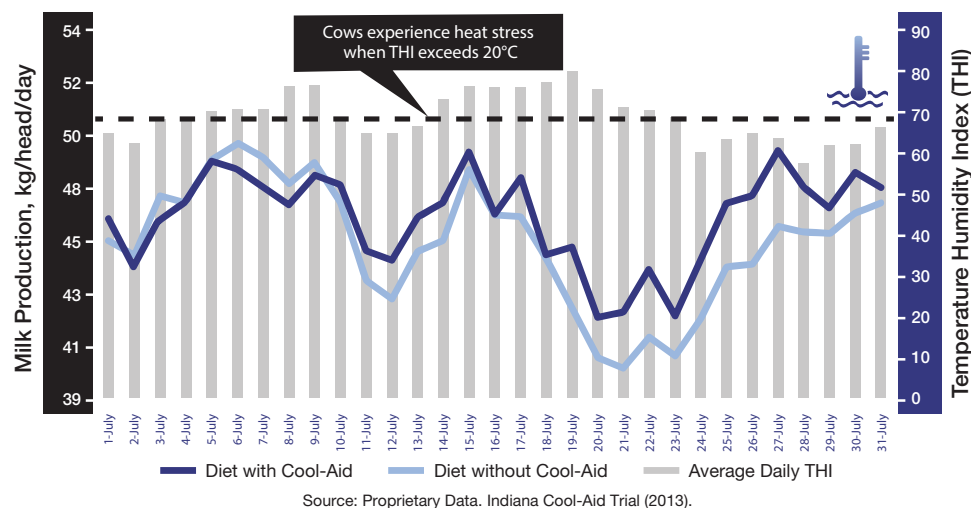


FIGURE 2
MILK PRODUCTION FOR DAIRY COWS
FED DIETS WITH & WITHOUT COOL-AID

It is estimated that, as the THI rises above 20°C, cows begin experiencing heat stress and milk production drops within 48 hours.



Cool-Aid+ should be added to the diet before conditions of heat stress exist and continued through the hot season until nighttime temperatures are consistently below the heat stress threshold.

Temperature Humidity Index ²																										
		<div><div></div>Heat Stress Threshold</div>					<div><div></div>Mild Heat Stress</div>					<div><div></div>Moderate Heat Stress</div>					<div><div></div>Severe Heat Stress</div>					<div><div></div>Extreme Heat Stress</div>				
TEMP		% RELATIVE HUMIDITY																								
°F	°C	0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	95	100				
72	22.0	64	65	65	65	66	66	67	67	67	68	68	69	69	69	70	70	70	71	71	72	72				
73	23.0	65	65	66	66	66	67	67	68	68	68	69	69	70	70	71	71	71	72	72	73	73				
74	23.5	65	66	66	67	67	67	68	68	69	69	70	70	70	71	71	72	72	73	73	74	74				
75	24.0	66	66	67	67	68	68	68	69	69	70	70	71	71	72	72	73	73	74	74	75	75				
76	24.5	66	67	67	68	68	69	69	70	70	71	71	72	72	73	73	74	74	75	75	76	76				
77	25.0	67	67	68	68	69	69	70	70	71	71	72	72	73	73	74	74	75	75	76	76	77				
78	25.5	67	68	68	69	69	70	70	71	71	72	73	73	74	74	75	75	76	76	77	77	78				
79	26.0	67	68	69	69	70	70	71	71	72	73	73	74	74	75	76	76	77	77	78	78	79				
80	26.5	68	69	69	70	70	71	72	72	73	73	74	75	75	76	76	77	78	78	79	79	80				
81	27.0	68	69	70	70	71	72	72	73	73	74	75	75	76	77	77	78	78	79	80	80	81				
82	28.0	69	69	70	71	71	72	73	73	74	75	75	76	77	77	78	79	79	80	81	81	82				
83	28.5	69	70	71	71	72	73	73	74	75	75	76	77	78	78	79	80	80	81	82	82	83				
84	29.0	70	70	71	72	73	73	74	75	75	76	77	78	78	79	80	80	81	82	83	83	84				
85	29.5	70	71	72	72	73	74	75	75	76	77	78	78	79	80	81	81	82	83	84	84	85				
86	30.0	71	71	72	73	74	74	75	76	77	78	78	79	80	81	81	82	83	84	84	85	86				
87	30.5	71	72	73	73	74	75	76	77	77	78	79	80	81	81	82	83	84	85	85	86	87				
88	31.0	72	72	73	74	75	76	76	77	78	79	80	81	81	82	83	84	85	86	86	87	88				
89	31.5	72	73	74	75	75	76	77	78	79	80	80	81	82	83	84	85	86	86	87	88	89				
90	32.0	72	73	74	75	76	77	78	79	79	80	81	82	83	84	85	86	86	87	88	89	90				
91	33.0	73	74	75	76	76	77	78	79	80	81	82	83	84	85	86	86	87	88	89	90	91				
92	33.5	73	74	75	76	77	78	79	80	81	82	83	84	85	85	86	87	88	89	90	91	92				
93	34.0	74	75	76	77	78	79	80	80	81	82	83	85	85	86	87	88	89	90	91	92	93				
94	34.5	74	75	76	77	78	79	80	81	82	83	84	86	86	87	88	89	90	91	92	93	94				
95	35.0	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95				
96	35.5	75	76	77	78	79	80	81	82	83	85	86	87	88	89	90	91	92	93	94	95	96				
97	36.0	76	77	78	79	80	81	82	83	84	85	86	87	88	89	91	92	93	94	95	96	97				
98	36.5	76	77	78	80	80	82	83	83	85	86	87	88	89	90	91	92	93	94	95	96	98				
99	37.0	76	78	79	80	81	82	83	84	85	87	88	89	90	91	92	93	94	95	96	98	99				
100	38.0	77	78	79	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	98	100				
101	38.5	77	79	80	81	82	83	84	86	87	88	89	90	92	93	94	95	96	98	99	100	101				
102	39.0	78	79	80	82	83	84	85	86	87	89	90	91	92	94	95	96	97	98	100	101	102				
103	39.5	78	79	81	82	83	84	86	87	88	89	91	92	93	94	96	97	98	99	101	102	103				
104	40.0	79	80	81	83	84	85	86	88	89	90	91	93	94	95	96	98	99	100	101	103	104				
105	40.5	79	80	82	83	84	86	87	88	89	91	92	93	95	96	97	99	100	101	102	103	105				
106	41.0	80	81	82	84	85	87	88	89	90	91	93	94	95	97	98	99	101	102	103	104	106				
107	41.5	80	81	83	84	85	87	88	89	91	92	94	95	96	98	99	100	102	103	104	106	107				
108	42.0	81	82	83	85	86	88	89	90	92	93	94	96	97	98	100	101	103	104	105	107	108				
109	43.0	81	82	84	85	87	89	89	91	92	94	95	96	98	99	101	102	103	105	106	108	109				
110	43.5	81	83	84	86	87	89	90	91	93	94	96	97	99	100	101	103	104	106	107	109	110				
111	44.0	82	83	85	86	88	90	91	92	94	95	96	98	99	101	102	104	105	107	108	110	111				
112	44.5	82	84	85	87	88	90	91	93	94	96	97	99	100	102	103	105	106	108	109	111	112				
113	45.0	83	84	86	87	89	91	92	93	95	96	98	99	101	102	104	105	107	108	110	111	113				
114	45.5	83	85	86	88	89	92	92	94	96	97	99	100	102	103	105	106	108	109	111	112	114				
115	46.0	84	85	87	88	90	92	93	95	96	98	99	101	102	104	106	107	109	110	112	113	115				
116	46.5	84	86	87	89	90	93	94	95	97	98	100	102	103	105	106	108	110	111	113	114	116				
117	47.0	85	86	88	89	91	93	94	96	98	99	101	102	104	106	107	109	111	112	114	115	117				
118	48.0	85	87	88	90	92	94	95	97	98	100	102	103	105	106	108	110	111	113	115	116	118				
119	48.5	85	87	89	90	92	94	96	97	99	101	102	104	106	107	109	111	112	114	116	117	119				
120	49.0	86	88	89	91	93	95	96	98	100	101	103	105	106	108	110	111	113	115	117	118	120				

²Chart adapted from Collier, et al., A re-evaluation of the impact of temperature humidity index (THI) and black globe temperature humidity index (BGHI) on milk production in high producing dairy cows. (2009).

Contact your local Purina Dairy Farm Consultant to learn more about Cool-Aid+ for heat stress mitigation.

The information and data contained in this technical sheet are presented to the best of our knowledge and belief and are believed to be reliable. The results and performance obtained from the use of this product will vary according to the different conditions of management, environment, health, hygiene and genetic potential.
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