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Contact: Rob Eirich, UNL Extension, 4502 Avenue I, Scottsbluff, NE 69361, 308-632-1230

Nebraska BQA: Nebraska Extension Offers Updated Publication on Managing Cattle Through High Heat Humidity Indexes

As cattlemen plan for the summer months, they need to understand and develop plans to deal with heat and humidity. They may need to consider some guidelines to help them reduce additional stress on cattle during these events and incorporate some of the following practices into our management practices. Nebraska Extension has updated the “Feedlot Heat Stress Information and Management Guide” which can be found at: <http://extensionpubs.unl.edu/publication/9000016792087/feedlot-heat-stress-information-and-management-guide/>

It is first important to understand the relationship between temperature and humidity in respects to the Temperature Humidity Index (THI) or Heat Index. Figure 1: Cattle THI Chart, will help to determine the risk level in planning cattle handling during the summer months. Cattlemen need to be aware of the risk based on weather forecast of the heat stress.

Handling cattle early in the mornings before temperatures get too high is always recommended. Plan to handle cattle before 8:00 a.m. and never after 10:00 a.m. during summer months. Remember that the animal’s core temperature peaks approximately two hours after the environmental temperature peaks and takes four to six hours to lower back to normal temperature. With this in mind you shouldn’t believe that handling cattle in the evening will reduce the risk of heat stress.

When processing cattle during high heat seasons, work cattle in smaller groups, so cattle are not standing in the holding area much longer than 30 minutes. Cattlemen should consider facilities that are shaded with good air flow to help reduce the heat. A sprinkler system may assist in cooling the area, if the water droplet size is large. Never over-crowd working facilities, work cattle slowly, and use low-stress handling techniques. Remember that processing cattle in any temperature elevates the animal’s core temperature.

Cattle movements should be short distances during hot seasons. Strategic planning on pen movements can assist in reducing unnecessary movements and potential heat stress. Moving heavier cattle closer to loading facilities throughout the feeding period can benefit in managing heat effects.

When planning or improving cattle handling and feeding facilities, cattlemen need to take into consideration air flow, shade, and sprinkler systems for cooling livestock. These considerations can help the danger of heat stress on livestock and improve feeding efficiencies during hot temperature periods. Summer can be challenging for many cattle producers. By implementing some handling guidelines, cattlemen can reduce the risk level of heat stress and improve cattle performance.

For more information about Nebraska Beef Quality Assurance or to get BQA certification, contact Rob Eirich, UNL Extension Educator and Nebraska Director of BQA at the UNL Panhandle Research and Extension Center 308.632.1230 or reirich2@unl.edu .

Figure 1, Cattle Temperature Humidity Index Chart

Beef Cattle Temperature Humidity Chart														
		Relative Humidity (%)												
		30	35	40	45	50	55	60	65	70	75	80	85	
Temperature (°F)	100	84	85	86	87	88	90	91	92	93	94	95	97	
	98	83	84	85	86	87	88	89	90	91	93	94	95	
	96	81	82	83	85	86	87	88	89	90	91	92	93	
	94	80	81	82	83	84	85	86	87	88	89	90	91	
	92	79	80	81	82	83	84	85	85	86	87	88	89	
	90	78	79	79	80	81	82	83	84	85	86	86	87	
	88	76	77	78	79	80	81	81	82	83	84	85	86	
	86	75	76	77	78	78	79	80	81	81	82	83	84	
	84	74	75	75	76	77	78	78	79	80	80	81	82	
	82	73	73	74	75	75	76	77	77	78	79	79	80	
	80	72	72	73	73	74	75	75	76	76	77	78	78	
	78	70	71	71	72	73	73	74	74	75	78	76	76	
76	69	70	70	71	71	72	72	73	73	74	72	75		
Temperature Humidity Index (THI)														
		Normal <75		Alert 75-78			Danger 79-83			Emergency >84				

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