



HEAT KILLS



Three agricultural workers in North Carolina died from heat stress in 2006.

Step 1: Assign supervisory responsibility for heat stress problems to ensure a qualified person monitors danger to employees.

Step 2: Train workers and supervisors.

- Train workers and supervisors in the control of heat stress and the recognition, prevention and treatment of heat illnesses.
- Conduct safety meetings during heat spells.

Step 3: Acclimatize workers when they begin to work under hot conditions.

- Assign a lighter workload for five days to seven.
- Allow longer rest periods for five days to seven.
- Assign work in the heat for at least 100 minutes each day.
- Gradually increase the time of work in the heat each day.
- Watch workers' response to working in the heat closely for five days to seven.

Step 4: Account for the conditions of work and of the workers.

- Check weather conditions.
- Consider how heavy the work is.
- Consider whether the worker is to wear protective garments and equipment.
- Check if the worker is or has recently been sick or has had a sharp loss in weight.
- Check whether the worker is rested, is taking any medications or appears to have consumed alcohol that day.

Step 5: Manage work activities.

- Set up rest breaks.
- Rotate tasks among workers.
- Schedule heavy work for cooler hours.
- Postpone nonessential tasks during heat spells.
- Monitor environmental conditions and workers.

Step 6: Establish a water drinking program.

- On hot days, have workers drink water before work.
- During work hours, remind workers often to drink water.
- In the heat, workers should drink at least a cup of water every 20 minutes.
- Soft drinks are not recommended. Diluted ice tea or lemonade are alternatives if sugar content is low.
- Alcohol increases the risk of heat illness and injuries.

Step 7: Take additional measures, as appropriate.

- Provide special cooling garments.
- Select lightest weight or "breathable" protective garments and cooler respirators that give adequate protection.
- Provide shade.
- Use air-conditioned mobile equipment.
- Modify pesticide usage and handling to reduce need for protective garments and equipment.

Step 8: Give first aid when workers become ill.

- Set up a first aid program.
- Take heat stroke victims to nearest medical facility.
- Follow up incidents of heat illness.



Juan F. 45 years old
Died: Aug. 1, 2006, after working in a tobacco field.



José E. 41 years old
Died: Aug. 1, 2006, heat stress.



Samuel B. 62 years old
Died: Aug. 4, 2006, heat stroke.

Recommendations to Control/Prevent Heat Illness

CAUTION: The employer should establish, implement and maintain procedures to prevent heat illness. Water must be provided, be accessible and sufficient. Rest periods should be provided.

EXTREME CAUTION: Encourage workers to drink 1 cup of water every 20 minutes under such conditions. Rest periods, not less than 15 minutes every hour, should be given. Rest areas should be shaded outdoors and cooled indoors.

DANGER: Work should be scheduled before 10 a.m. and/or after 4 p.m.

EXTREME DANGER: Stop work.

FACT: Many migrant workers use the metric system of temperature measurement.
To convert, use this formula:
 $C^{\circ} = (5/9) * (F^{\circ} - 32)$

Heat Index Response Plan

		Temperature (F°)												
		80	82	84	86	88	90	92	94	96	98	100	102	104
Relative Humidity (%)	40	80	81	83	85	88	91	94	97	101	105	109	114	119
	45	80	82	84	87	89	93	96	100	104	109	114	119	124
	50	81	83	85	88	91	95	99	103	108	113	118	124	131
	55	81	84	86	89	93	97	101	106	112	117	124	130	137
	60	82	84	88	91	95	100	105	110	116	123	129	137	
	65	82	85	89	93	98	103	108	114	121	128	136		
	70	83	86	90	95	100	105	112	119	126	134			
	75	84	88	92	97	103	109	116	124	132				
	80	84	89	94	100	106	113	121	129					
	85	85	90	96	102	110	117	126	135					
	90	86	91	98	105	113	122	131						
95	86	93	100	108	117	127								
100	87	95	103	112	121	132								

Exposure to full sunshine can increase the heat index values by up to 15°F.



Cherie Berry, Commissioner
Agricultural Safety and Health Bureau

1101 Mail Service Center
Raleigh, NC 27699-1101

1-800-625-2267 • www.nclabor.com

Stay in touch with today's workplace issues. Sign up to receive a free subscription to the NC Labor Ledger at www.nclabor.com/news/ledgersubs.htm

Printed 3/07. 2,000 copies of this public document were printed at a cost of \$230.90 or \$.12 each.