



FAMILY

Farming, Ranching: Health Hazard or Opportunity? no. 10.201

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Quick Facts...

Farm owners were among the top 12 occupations with a significant incidence of stress-related illnesses, according to a National Institute for Occupational Safety and Health study.

Stress is a personal response to a perceived threat.

Failure to recognize early warning stress symptoms can lead to illness, increased accidents, and serious marital and family problems.

People with primary employment in agriculture have the highest risk for disabling injuries and fatalities.

Practice relaxation techniques once or twice daily.

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In engineering, stress means the capacity to withstand strain. Structures have a measurable strength and resistance to strain according to the type and size of material. If overload occurs, the structure distorts and breaks.

When applied to people, stress is more complex. Stress is a personal response to a perceived threat. When farmers or ranchers see a situation more as a threat than an opportunity -- working as fast as they can to bale hay before a storm comes -- they experience stress symptoms. Waiting an extra day for a part to come in can be seen as a potential loss of thousands of dollars, or an opportunity to spend needed time with the family. What is gained by getting tied up in knots, breathing short breaths, and tensing your stomach, shoulders or neck?

A Stressful and Dangerous Occupation

Stress on today's farms and ranches can mean pressure, conflict and uncertainty. As frustration and helplessness build, these can lead to problems between spouses, children, parents and relatives. If left unresolved, these feelings can lead to costly accidents and deaths.

Farming has become one of the most stressful and dangerous occupations. A major study by the National Institute for Occupational Safety and Health examined the incidence of stress-related diseases (coronary heart and artery disease, hypertension, ulcers and nervous disorders) for 130 occupations (Smith et al., 1977). The health records of more than 22,000 Tennessee workers were examined from January 1972 to June 1974. When the records of death certificates, hospital admissions and mental health center admissions were combined, farm owners were among 12 categories of workers that displayed high incidence of stress-related illnesses. When the death certificates were analyzed alone, farm owners were second only to laborers in the rate of death from stress-related diseases.

Agriculture is one of the most hazardous industries in the United States. On average, 22 Coloradoans die each year on farms and ranches as a result of an agricultural-related accident (Daniels, 2000). Every year, approximately 1,667 farm injuries occur in Colorado; 50 result in permanent disabilities (James, 1997). A 1983 survey of 2,000 Kentucky farmers found that each year one out of every eight farm families experienced an accident that required medical attention (Piercy, 1983).

In 2003, 730 people died and 150,000 people were permanently disabled by injuries sustained on farms and ranches in the United States. Agriculture has a death rate of 21 per 100,000 workers, second only to the mining industry. In 2003, farmers' and ranchers' accidental death rate was more than five times the national average. (3.6 per 100,000) (National Safety Council, 2003).

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the most underinsured group of workers, especially with regard to health and disability insurance (Wilensky et al., 1981).

Farming and ranching are highly stressful for a variety of reasons. Economic and market conditions change regularly, so profits are uncertain. Producers must continually adapt to rapid technological advances and Consumer expectations. Modern and complex machinery, uncooperative livestock, toxic chemicals, and dangerous pesticides make agriculture a dangerous occupation with a high risk of accidents.

Different family members have been found to experience higher stress levels. Russell and colleagues (1985) found that the younger generation is more stressed than the older generation, especially daughters-in-law. Marotz-Baden and Mattheis (1994) found that an important step the older generation can take to reduce stress levels and to keep a son in the operation is to build a good working relationship with the daughter-in-law. Involving both sons and daughters-in-law in decision making lowers the family's stress level. Coping strategies that help reduce marital and intergenerational stress levels are open communication, shared decision making, and early planning for transferring the family farm to the next generation (Anderson & Rosenblatt, 1985; Hedlund & Berkowitz, 1979).

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Solutions to Stress

A Colorado State University Cooperative Extension study (Fetsch & Jacobsen, 2005) found that the more negative the perception farmers or ranchers had of their overall financial situation, the higher their stress and depression levels. A study of 623 Nebraska women 55 years of age and older found that perception of financial status predicted signs of depression while age and whether they lived in rural farm or urban settings did not (Craft et al., 1998). A study of 595 North Carolina farmers found that as they increased their negative view of their economic hardships, this increased their depression and decreased their feelings of personal control (Armstrong & Schulman, 1990). Previous studies found that one important way for farmers to reduce stress levels and depression is to "reframe" the meaning of the situation in more positive terms. The more that farm and ranch families find positive aspects of their financial condition, the more they will decrease their stress and depression.

Back off when you recognize harmful stress symptoms in yourself or a family member. Take a short break! Whether you are meeting with a loan officer in three hours or greasing the combine for another day of harvest, you can reap high personal yields from the relaxation response.

A technique that evokes the relaxation response, developed at Harvard's Thorndike Memorial Laboratory and Boston's Beth Israel Hospital, was found to aid and possibly prevent diseases such as hypertension. Four components in the technique are necessary to evoke relaxation:

- a quiet environment, such as a quiet room or shade tree;
- a mental device, such as a prayer or a word like "calm" or "one";
- a passive attitude about distracting thoughts, worries and concerns; and
- a comfortable position.

Practice the technique once or twice daily, but not within two hours after a meal. This relaxation technique can bring about calmness, refreshment and enhanced well-being. For more detailed instructions and personal experiences with the relaxation response, refer to *The Relaxation Response*, Herbert Benson (New York: Avon, 1975), chapter 7. If you suffer from any health problems, consult a physician before practicing this relaxation technique.

At the first warning signs of stress, take a short break to relax and breathe deeply. This can increase energy, improve concentration and allow you to get more work done in less time.

At the onset of stress there are two responses: the stress response or the relaxation response. The stress response releases powerful hormones into the body. Blood pressure rises, breathing and pulse rate speed up, and the heart rate quickens. If you remain flexible and adapt to the stressful event by using all the relaxation resources available, your blood pressure can fall to a normal, healthy rate. If you allow a crisis (getting the hay harvest in before a storm comes), or a chronic problem (caring for a disabled relative or facing terminal illness), or too many stressful events to affect you at one time, your body will break down and your health can suffer.

For more research-based information on stress and time management or nutrition and diet, contact your local Colorado State Cooperative Extension family and consumer sciences agent.

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