



# Risk and Resilience in Agriculture

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## Managing Stress and Strain on the Farm or Ranch

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Stress is a term often used in engineering. It 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 human 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?

Stress on today's farms and ranches can mean pressure, conflict and uncertainty. As frustration and helplessness build, they 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. According to the National Safety Council, people with primary employment in agriculture and mining have the highest unintentional death rates per 100,000 in the U.S. Currently the death rate in agriculture is 20 per 100,000 which is five times as high as the national average for all industries of 4 per 100,000 (National Safety Council, 1998).

A major study conducted 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 each of 130 occupations (Smith, et al., 1977). The health records of more than 22,000 Tennessee workers were examined. 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 found to be second only to laborers in the rate of death from stress-related diseases.

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).

There is an additional financial stress to farmers because they are 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. When economic and market conditions change constantly, profits are uncertain. Producers must continually adapt to rapid technological advances and consumer expectations. Modern and complex machinery, uncooperative livestock, and toxic chemicals make production 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 their son in the operation is to build a good working relationship with their daughter-in-law. Involving both their sons and daughters-in-law in decision-making responsibilities 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).

The higher the stress rate, the higher the disease and accident rates (Selzer, et al., 1968; Stuart, 1981). Controlling stress is essential for farm and ranch families.

### Solutions to Stress

A Colorado State University and Cooperative Extension study (Fetsch & Jacobsen, 1990) found that the more negative the perception farmers or ranchers had of their situation, the higher their stress and depression levels rose. Previous land-grant university studies found that one important way for farmers to reduce stress levels is to "reframe" the meaning of the situation in more positive terms.

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:

- 1) a quiet environment, such as a quiet room or cool shade tree,
  - 2) a mental device, such as a prayer or a word like "calm" or "one,"
  - 3) a passive attitude about distracting thoughts worries, and concerns, and
  - 4) a comfortable position.
- Practice the technique once or twice daily, but not within two hours after a meal. The relaxation response can bring about calmness, refreshment and enhance well being. For more detailed instructions and personal experiences with the relaxation response, refer to *The Relaxation Response* by Herbert Benson (New York: Avon, 1975), chapter 7. If you suffer from any health problems, consult a physician before practicing this relaxation technique.
  - 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.

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

On the onset of stress there are two responses: the stress response or the relaxation response. The stress response releases powerful hormones into the body. The 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 in), 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 can break down and your health can suffer.

For more research-based information on stress and time management or nutrition and diet, contact your local Cooperative Extension office.

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