

HUMAN, ANIMAL AND ENVIRONMENTAL HEALTH INTERCONNECT IN ONE WELFARE

By Dr. Mike Rosmann

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In late September the first *International One Welfare Conference* convened in Winnipeg, Canada. About 250 farmers, veterinarians, psychologists, social workers, physicians, scientists and academicians in these and related disciplines, government officials, students, and reporters from several countries gathered to consider how humans, animals, and sometimes other organisms interconnect behaviorally.

The conference took a comprehensive look at how humans and animals in particular mutually influence the behavioral well-being of one another. The conference featured ways that veterinarians and human behavioral healthcare professionals can assist each other.

Why One Welfare? Well, humans, animals and sometimes other inhabitants of our environments not only share in some 1,400 zoonotic illnesses (biological infections that can be exchanged among humans and other species, like swine and bird influenza), we also affect each other's behavioral well-being.

For example, hoarding of animals, such as cats by a well-intentioned but obsessive-compulsive person, affects the health and behavioral well-being of both the cats and their caretaker. Filth such as feces can accumulate; both the cats and their hoarder often experience physical health issues and behavior distresses.

To illustrate further, research findings by scientists in several countries indicate that dairy cows have lower somatic cell counts and produce more milk, and feedlot animals have fewer diseases and grow faster, when their caretakers report feeling well emotionally. Moreover, as livestock producers and pet owners know, when the animals they care for are happy, the caretakers enjoy satisfaction.

The opposite is also true. Swedish researchers reported in several recently published studies that mastitis in dairy cows and illnesses in feedlot cattle occurred more frequently and necessitated more veterinary care, according to farm records, when the livestock caretakers reported feeling anxious, depressed, or were experiencing family relationship problems, or work issues, such as not feeling valued by coworkers and employers.

That this conference focused on inter-species behavioral health made it a "first-of-its-kind" event. As I prepared my plenary talk on the psychosocial health of the agricultural population, I began to rethink the definition of agricultural behavioral health, which I often write about in *Farm and Ranch Life* articles.

Previously I had thought about agricultural behavioral health as the interconnections of agriculture and behavioral healthcare in the psychological well-being of agricultural producers. I realized that the definition of agricultural behavioral health, like the concept of *One Welfare*, is broader and should include the behaviors of humans and animals, such as farm livestock and pets, and how we influence one another.

The behavior sciences, like psychology and behavioral epigenetics, look at behaviors both macroscopically and microscopically. In physics and chemistry, physical particles are measured by their size, weight, electrical charge and so forth; in the behavioral sciences, behaviors also are measured by their effects, frequency, intensity, and so forth.

One Welfare is a broad new horizon of theoretical science and applications.

What was learned? Besides grappling with the theoretical conceptualization of *One Welfare*, there were learnings for farmers, ranchers, and agency administrators, as well as specialists like veterinarians, behavioral healthcare professionals, and scientists in these areas.

Here are some of the main conclusions of the conference:

- Humans and animals suffer similar behavioral health maladjustments, like anxiety, depression, and post-traumatic stress disorder (PTSD); treatments may be similar, but with species-specific medications and behavioral therapies; bomb-sniffing dogs and starving animals, for example, also experience PTSD as well as physical health problems;
- Hoarding of animals by humans is common and requires both human and animal interventions and treatments; therapists treating obsessive compulsions and veterinarians caring for hoarded animals have common objectives in helping both humans and animals;
- Disasters, such as floods, disease outbreaks and farm economic crises harm people and animals; this raises the question about how can veterinarians, behavioral health counselors, other professionals, and the public best provide assistance to all?
- Compassion fatigue of animal caretakers occurs just like it occurs for human healthcare providers; what can be done to assist all caregivers?
- Veterinarians are increasingly undertaking advanced training in public health and counseling so they can better assist clients with biological and behavioral health epidemics, offer support to clients who lose pets and farm animals, and to cope with animal euthanasia to stem disease outbreaks;
- Agricultural production, actually almost everything, is now globally linked and consumers care how their food is produced;
- Humans have much to learn about how animals sense the moods of their caretakers and such matters as cancer and diabetic crises;
- Research is needed that examines the behaviors of flora and other inanimate life in our agricultural environment;
- The term *mental health* is obsolete; the term *behavioral health* is more appropriate in both human and veterinary medicine; and
- Many conference participants recommended that the sponsors (the Veterinary Science Department of the University of Manitoba and the Manitoba Food and Rural Development Agency) plan follow-up conferences.

This conference was definitely an invigorating experience for me that I wanted to share with *Farm and Ranch Life* readers. There is a bright future for agricultural behavioral health and the understanding of how we all have a stake in *One Welfare*.

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FARMERS' BEHAVIORAL HEALTH IMPACTS HERD HEALTH

By Dr. Mike Rosmann

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Farmers' behavioral health affects the animals they raise. Dog owners are well aware their pets sense how they feel.

Practitioners of artificial insemination of livestock have long known their stress levels affect the conception rate of the animals they are breeding. Animals detect the tension of the people working with them. Reproductive success diminishes when the AI technician is stressed out.

Animals can sense when their handler is upset or relaxed and calm. I know from my own experiences when I raised cattle that if I felt the need to hurry as I artificially inseminated a cow, she usually didn't cooperate. If I took my time, the cow relaxed and the job usually went faster and was more likely to lead to a pregnancy.

Stress increases the risk of farming-related injuries. An analysis of injuries to North Dakota farmers during the Farm Crisis of the 1980s by Jack Geller, Richard Ludtke and Terry Stratton, published in 1990 in the Journal of Rural Health, indicated that stress, especially financial difficulties, increased their chances of injury.

Using data from the Iowa Farm Family Health and Hazard Survey (1994) and the Iowa Farm Poll (1989), Kendall Thu, Paul Lasley and other colleagues determined that stress was a risk factor for agricultural injuries. Their research was reported in the Journal of Agromedicine in 1997.

Farmers' stress levels also can affect the health of their animals. Christina Lunner Kolstrup and Jan Hultgren examined the relationship of symptoms reported by 41 owners or managers and 20 employed workers on Swedish dairy farms to the physical health of their cows. Their study was published in the Journal of Agricultural Safety and Health in 2011.

The study confirmed that stressful working conditions and behavioral health symptoms "are not uncommon" among owners/managers and employed workers. The owners/managers and dairy farm workers reported their perceived stressors and symptoms on questionnaires. Generally, the workers reported more symptoms than the owners/managers.

Reported stressors included these: having to work very fast, having little influence over decisions and workloads, low sense of meaningfulness of the work and low sense of staff coherence. These stressors were associated with the following symptoms: feelings of irritation, fatigue, insomnia, headaches, nervousness and abdominal pain. Workers who felt their contributions to the dairy farm operation were valued by the owners/managers reported fewer symptoms and greater pleasure from their work.

The study found that the incidence of behavioral health symptoms of the owners/managers and employed workers was positively correlated with the incidence of mastitis in cows and the total number

of cow diseases that were reported in the dairy veterinary records. It should be emphasized that, by design, the study yielded findings that are correlations, not cause-effect outcomes.

Happy cows are likely to have happy handlers. How their caretakers feel and treat their cows are more important. It is probably also the case that healthy animals make their caretakers feel better too.

The health of farm animals and the condition of farm buildings, machinery and fences may be indicators of the stress level of the persons who work on the farm. A veterinarian friend mentioned to me that the somatic cell count in milk samples from dairy cows and the body condition scores of beef cattle often reflect how stressed their owners are.

It helps if supervisors promote regular communication with their workers and demonstrate leadership in maintaining a behaviorally healthy working environment. Regularly scheduled meetings of the owners, managers and the farm workers helps the employees to feel their perceptions are valued.

Some supervisors reward valuable suggestions of employees with bonuses. Another beneficial management practice is to make sure all employees, including the owners, have sufficient time to sleep, recreate, exercise, and associate with family and friends. These are investments in employees that improve production and safety.

Fatigue is a common problem of farm workers. We accumulate sleep debt whenever we obtain less than our bodies need. Most persons require about eight hours of sleep daily but the normal range varies from six to ten hours.

If we accumulate ten hours of sleep debt, we behave similarly to when we have .08 percent alcohol in our blood, which is the legal minimum for inebriation in most states and provinces. Ten hours of sleep debt slows our reaction time, reduces the accuracy of motor movements and memory, makes us more emotionally impulsive and compromises judgment. In short, insufficient sleep increases the risk of injuries.

When we are tired we are more likely to incur injuries when working with animals. Livestock can detect when “we aren’t our usual selves.” The annual reports by the National Institute of Occupational Safety and Health, entitled Injuries among Farm Workers in the United States, routinely indicate animals are the leading cause of nonfatal farming-related injuries.

It is important that farmers who work with livestock recognize healthy working conditions and good behavioral health of the workers increase productivity.

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PEOPLE WHO SERVE FARMERS, OTHERS, NEED EMOTIONAL SUPPORT TOO

By Dr. Mike Rosmann

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“Compassion fatigue” describes how providers of services to people going through disasters feel when they become weary of assisting the persons affected by traumas of any type. Although this year is not a disaster for many agricultural producers, it is shaping up to be more challenging than for several years for some farmers, and for the people who provide support services to distressed farmers and disaster victims.

Drought, too much rain, hurricanes, volatile commodity prices, and uncertain financial outcomes this growing year are major concerns. I’ve been hearing from agency officials who serve farmers and storm victims in one way or another that their staff members are getting tired, but they don’t want to relinquish their important service roles.

Some of the worries shared with me are from USDA Farm Service Agency (FSA) personnel, agricultural mediation specialists, and lenders, who report that farmers are contacting them for assistance more frequently than usual. The providers want to know how to deal with their own stress.

FSA office staff have to have superb capacity to understand the worries of the people they interact with on the other side of the office counter. I enjoy and appreciate the persons that I interact with in my county FSA. We share humor, informative discussions, and they look out for me (somebody has to!).

These competent FSA employees are gracious, helpful, careful to protect confidentiality, careful also to not draw unwarranted conclusions, and they are emotionally intuitive about the concerns of the farmers they deal with. They are “good psychologists,” which is why many farmers vent their concerns to them.

Emotional intelligence is required to work with uptight agricultural producers who want to know about requirements and options for their farming operations. Whether at FSA premises, veterinary medicine offices, and other agricultural businesses, the people who work with farmers mostly care much about their clients and they want them to succeed.

Perhaps that helps explain why a growing number of veterinarians, mediators, farm lenders, and farmers seek advanced training, such as several graduate courses, and sometimes masters and doctoral degrees in behavioral health professions. I learned this from personal experience mentoring emerging professionals and from participating last fall in the International One Welfare Conference at Winnipeg, Canada, attended largely by veterinarians, behavioral health professionals, administrators of farming-related agencies, scientists, professors and students in these fields, and agricultural producers.

All dedicated professionals wear out emotionally, including physicians, nurses, counselors, crisis responders and anyone who helps people struggling with stress. They, and the persons they work with, need to understand compassion fatigue.

Compassion fatigue is not an indicator of dislike for one’s job or for the persons being served. It’s a sign that respite and recovery are needed by the service providers.

Guilt sometimes accompanies caregivers’ loss of enthusiasm for their work, but it shouldn’t. Caregivers want to continue serving but their personal “compassion fuel tanks” are empty.

Family members can experience similar compassion fatigue, such as when caring for loved ones with debilitating illnesses like Alzheimer's Disease, or when dealing with any overwhelming complaints that wear them out.

All caregivers should adhere to the guiding principles: 1st, do no harm; and 2nd, heal thyself--that is--take care of oneself to better serve others.

Signs of compassion fatigue usually include the following:

- Feeling irritable and annoyed by more requests for help and sometimes even by little things
- Trouble sleeping and enjoying things that have been fun in the past
- Wanting to avoid coworkers and clients even though that is not a typical feeling
- Occasional atypical outbursts of anger, trouble concentrating, and diminished planning capacity
- Feeling more tired than usual, without a clear explanation except for previous hard work

Although these are not the only signs of being emotionally drained, and sometimes physically drained as well, they are key indicators of compassion fatigue. What can caregivers do to restore themselves?

Useful tips and resources to help caregivers include these:

- Respite, recreation, times away when not thinking (on purpose) about feelings of obligation, sleeping soundly, talking with others about subjects unrelated to service concerns, laughing, and just plain "goofing off" are therapeutic
- Drinking alcohol or using medications may help temporarily, but their benefits quickly play out, rendering them ineffective until conscious efforts to change behaviors like those noted above are implemented; then, longer-term adjustment can be achieved
- The SAMHSA DTAC (Substance Abuse and Mental Health Services Disaster Technical Assistance Center <http://www.samhsa.gov/dtac>) has literature and tips for dealing with emotional overload and grief
- Other sources for understanding and dealing with compassion fatigue include: www.goodtherapy.org/blog/the-cost-of-caring-10-ways-to-prevent-compassion-fatigue-0209167, and <http://www.compassionfatigue.org/pages/symptoms.html>
- Compassion fatigue dissipates gradually and we can return to work, but keep an eye on wearing out again

It's a sign of healthy management of caregiving when we take time to recuperate, and not a weakness. The people we work with can learn this from us as caregivers.

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UNDERSTANDING MENTAL HEALTH IS IMPORTANT TO FARMERS, SURVEY REPORTS

By Dr. Mike Rosmann

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Findings from a “Morning Consult” nation-wide poll of 2,004 adult rural and farming persons that was authorized by the American Farm Bureau Federation about mental health issues deserves more attention than it received earlier this year. The poll was conducted from April 4-10, 2019; it includes 81 farmers/farmworkers.

The poll results suggest that rural residents and persons involved in farming view mental health issues as important to understand; however, negative stigma and access to necessary services continue as impediments to obtaining necessary help. Rural and farm people manage their behavioral health with more knowledge than in the 1980s and '90s.

Major specific findings (with a margin of error of plus or minus 2 percentage points) include these:

- Most rural respondents (91%) and farmers/farmworkers (82%) say mental health is important to them and/or their family
- Rural residents are somewhat more likely to say mental health is a major problem (38%) than farmers/farm workers (30%)
- Rural respondents (58%) and farmers/farmworkers (53%) say that media attach at least a fair amount of stigma to mental health
- A majority of farmers/farmworkers (66%) and rural respondents (75%) feel it is important to reduce stigma about mental health
- About two of every three farmers/farmworkers (66%) and rural adults (65%) know where to find mental health resources in their community
- More farmers/farmworkers (46%) say it is difficult to access necessary therapy or substance abuse counseling in their community than rural adults (28%)
- A significant majority of rural adults (73%) are confident they could spot the warning signs of a mental health condition in an immediate family member or close friend, but fewer farmers/farmworkers (55%) said they could spot the warning signs of a mental health condition
- A majority of rural respondents say that cost (70%), embarrassment (65%), and stigma (63%) are obstacles to seeking mental health assistance; even more farmers/farmworkers say cost (87%), embarrassment (70%) and stigma (65%) are obstacles to seeking mental health assistance
- Primary care doctors are trusted sources for information about mental health by both rural residents ((78%) and farmers/farmworkers (81%), followed by family members (67% and 60%), close friends (55% and 65%), and faith-based counselors (55% and 60%)
- A majority of rural respondents and farmers/farmworkers (72% for both samples) would be comfortable talking with a therapist
- Most rural respondents (81%) think financial issues and fear of losing the farm impact the mental health of farmers; even more farmers/farmworkers think financial issues (91%), fear of losing the farm (87%) and farm business problems (89%) impact their mental health

- Most survey participants (78% of rural respondents and 77% of farmers/farmworkers) think mental health training for doctors and mental health caregivers would be effective in addressing stress and mental health in their local communities
- Farmers/farmworkers (73%) and rural respondents (83%) agree that their mental health caregivers should have mental health training and that their primary care physicians should have specialized training about mental health
- Stress and mental health have become more problematic in rural areas over the past 5 years, according to the survey; nearly half (48%) of rural residents are personally experiencing more mental health challenges than a year ago; younger respondents indicated higher likelihoods of mental health challenges than older rural adults
- Only 31% of rural respondents have sought assistance, despite a growing incidence of mental health problems and even fewer farmers/farmworkers (21%) have sought assistance

The survey results show that rural residents, and farmers and farmworkers in particular, are more informed than in any survey I have seen previously; they view mental health as important and necessary. This finding suggests that knowledge of behavioral health has penetrated these populations.

Although the survey used the term, mental health, I prefer the term, behavioral health, which is broader in its scope of personal problems and solutions and less stigmatizing. This doesn't change the results of the poll.

Rural town residents differ somewhat from their neighbors who live on farms and ranches: the people involved in agriculture appear to cling more closely to the land and resources they need than rural people in general. I wonder if, and perhaps how, urban residents differ from rural residents and agricultural producers on the matters.

Farmers are emotionally tied to their land to produce food and other essentials for life such as their farmland, livestock and other resources necessary to achieve their life objectives. The survey results suggest the respondents dignify farming as an essential and noble occupation.

In general, people seem better informed than ever before in the U.S. about managing their behavioral health, and that includes farmer and rural residents. I remember past eras when rural and farm people sought mental health assistance only as a last resort.

However, the agricultural population needs more culturally astute professionals to better serve them. The creation of four regional centers to improve agricultural behavioral health authorized by the Farm Bill will help to partially address this deficiency.

I thank Chuck Jones, a contributor at Forbes.com, for his assistance.

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THE BEHAVIORAL WELL-BEING OF U.S. FARMERS IS IMPROVING, EVIDENCE SUGGESTS

By Dr. Mike Rosmann

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The suicide rate of the general population of the U.S. declined during both 2019 and 2020, according to preliminary analyses by the Centers for Disease Control and Prevention (CDC) in an April 13, 2021 article in the Journal of the American Medical Association (JAMA). The decline in suicide occurred during the 2020 COVID epidemic in the U.S., which surprised many experts who follow these matters.

Data about the overall rate of suicide in the U.S. were collected by the National Center for Health Statistics of the CDC. The JAMA article indicates that there were 44,834 suicides in the U.S. in 2020, which is 2,677 fewer than in 2019. This follows a smaller decline in deaths by suicide in 2019.

Early evidence from farm crisis hotline administrators and services suggests that suicide also appears to be declining among the agricultural population, which would be welcome news. Here's why.

Farmers have the one of the highest rates of suicide of any group, according to a November 2018 CDC report, which corrected errors from an earlier report in July, 2016 about suicide by farmers. A study by Dr. Wendy Ringgenberg (Journal of Rural Health, May 2018) using U.S. Department of Labor data concluded that suicide occurred more frequently in the agricultural workplace than in any other occupational workplace.

Recent reports from administrators of farm hotlines and support services suggest that suicide by the agricultural population may be declining and that farm people are reaching out for professional advice to improve their farming success.

Administrators and statewide leaders of farmer behavioral health supports in four Upper Midwestern states indicated in an April 15, 2021 conference call that the number of farmers and farm families who have contacted their services increased during the past six months, but the number of callers indicating suicide consideration declined gradually during the past two years.

Administrators of two other farm hotlines and support services in the Midwest, who couldn't participate in the earlier meeting, said the number of farmers and families seeking counseling increased considerably over the past 2-3 years. There was less desperation in callers' reasons for seeking assistance.

The number of callers worried about suicide dropped prior to improved crop prices recently, all six service providers said. While some callers had questions about mental health, more wanted information about behavioral health as a factor in farming efficiently.

Four of the six hotline managers said women initiated contacts with the hotlines more often than men, but one hotline had more males than females contact them. The remaining program administrator reported having an equal number of males and females contact the state farm crisis hotline.

Administrators said the farm people who contacted the hotlines are increasingly younger. The young agricultural producers mostly wanted to obtain behavioral health management skills; a few sought help with troubling family issues, personal problems, or those of another family member.

The young farm contacts were primarily with operators of smaller than average farms. Only a tiny portion of all callers were from very large enterprises; those in between both sizes of operations requested assistance nearly as frequently as the operators of small farms.

In a press release from the American Association of Suicidology, its CEO, Colleen Creighton, said “We have evidence showing the positive impact of crisis lines, training healthcare professionals, and maintained contact with people experiencing thoughts of suicide have on decreasing suicide rates.”

Besides the reports of farm crisis hotline administrators, there is additional evidence to bolster Ms. Creighton’s statement. A poll of 2,004 rural Americans, including 81 farm residents, conducted by Morning Consult for the American Farm Bureau Federation in April 2019 indicated that 82 percent of the farm respondents said their mental health is important to them. A December 2020 poll of the same sample yielded slightly more positive results.

The media deserve much credit for making information about the importance of positive behavioral health available to the agricultural population. Weekly or monthly agricultural newspapers, farm magazines and online websites regularly publish articles about stress management and the importance of farmers’ behavioral health to their overall success.

Broadcast media such as radio, television, and smart phones provide useful information to people involved in agriculture. The newly established USDA Farm and Ranch Stress Assistance Network facilitates the development of crisis hotlines, referral for follow-up counseling if desired and needed, and can be a resource for training farm families and USDA personnel who serve the agricultural population.

The signs of a probable lower rate of suicide by farmers and all agricultural producers, as well as their improved understanding of behavioral health and openness to counseling and educational services, are likely here to stay. Ever fewer farmers are being left out of the movement to understand the importance of maintaining positive behavioral health.

It’s even likely that farmers are contributing to reduced suicide by all Americans and increased knowledge about the importance of managing behavioral health.

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