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# **Farm and Farm Family Risk and Resilience: A Guide for Extension Educational Programming**

First Edition



**Bonnie Braun, PhD and Maria Pippidis, AFC©**

January, 2020

## Authors Background

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An electronic copy of the *Farm and Farm Family Risk and Resilience Guide* is located at <https://www.udel.edu/academics/colleges/canr/cooperative-extension/personal-economic-development/agribusiness/>

**Cover Photo:** Hank Herrera, W.K. Kellogg Class 6 Leadership Fellow, took this photo after a storm on the Wind River Indian Reservation in Wyoming. The building and light pole appear tilted serving as a reminder that just as some stressors are out of our control, so too are phenomena that bring hope. Hope, associated with resilience, can get us through tough times when life on the farm is tilted and unpredictable.

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**Recommended Citation:** Braun, B. & Pippidis, M. (2020, January). *Farm and farm family risk and resilience guide for Extension educational programming*. University of Maryland Extension and University of Delaware Cooperative Extension.



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## Acknowledgements

### Need for Guide

The need for this Guide grew out of several Extension and Research projects including the *Smart Choice-Smart Use Health Insurance* program. These projects, involving the authors, were underway at a time when the health and well-being of farms and farm families were becoming headlines in the media and topics of angst for professionals servicing the farming population. The impact of stressors on both people and farm enterprises, sometimes resulting in suicides, was pushing Extension and health and finance professionals to address stress.

### Authors' Experiences

As two seasoned professionals who have lived through at least two other eras of farm crises, we believed that stress management was a necessary but insufficient approach for Extension and partners. Our training and programming experiences pointed to the need for additional approaches that addressed underlying problems as well as symptoms of those problems not just from an individual perspective but from multiple perspectives.

We believed that a socio-ecological approach would not only teach individuals how to prevent and manage stress but look at the role of families, the community and public policies in positioning the farm and family to be resilient and at times to engage in the public policy

arena. And, very importantly, the approach would be research-based and theoretically-sound resulting in a multi-disciplinary, integrated approach to both farm and farm family health and well-being.

### Literature Review

Our search for such an approach led us to examine concepts of risk management in use by the agricultural field and of resilience used in agriculture, community development, health, including mental and financial health and well-being and human development and family science. Our literature review examined seminal writings and research in the past 15 years in both the United States and other countries.

From this review, we created what has become the new *Farm and Farm Family Risk and Resilience Guide for Extension Educational Programming*. The Guide lays out a framework for exploring risk and resilience concepts as they relate to farms and farm families. It is based on a socio-ecological model for programming.

### Vision

Our modified conceptual framework is grounded in the 2014 Cooperative Extension National Framework for Health and Wellness (11) with our slightly modified vision shown below:

### Vision

*In the 21<sup>st</sup> century, Extension can do for the resilience of farms and the farming population what it did for American agriculture in the 20<sup>th</sup> century.*

Braun and Pippidis

Our thanks to multiple people for their input that guided our thinking and organization of concepts and materials for professionals to use for educational programming. In particular we want to acknowledge attendees at our workshop during the April 2019 National Risk Management Conference and individuals in multiple disciplines whose early reviews pushed us toward clarity and soundness of our case for an integrated risk and resilience approach.

**Elaine A. Anderson**, Professor, University of Maryland School of Public Health

**Sharon M. Danes**, Professor Emerita and Family Economist, University of Minnesota

**Shannon Dill**, Agriculture Educator; **Paul Goeringer**, Extension Legal Specialist; **Jesse Ketterman**, Finance Educator; and **Lynn Little**, Finance Educator Emerita, University of Maryland Extension

**Shoshanah Inwood**, Ohio State University, Rural Sociologist and leader of an USDA-AFRI grant

**Adam Kantrovich**, AgriBusiness Specialist, Clemson University

**Robert Milligan**, Senior Consultant, Dairy Strategies and Professor Emeritus, Cornell University

**Laurie Wolinski**, Agriculture Agent, University of Delaware Cooperative Extension and Director, Northeast Center for Risk Management.

Many thanks also to those who participated in the “Creating Thriving Farms – Managing Risk and Building Resilience” eXtension Engaged and Online Learning Circle in the fall of 2019 and provided feedback and review of this Guide:

**Leslie A. Forstadt**, Ph.D. Extension Associate Professor, Human Development Specialist and Director, Maine Agricultural Mediation Program, University of Maine Extension

**Erin Kimbrough**, Program Manager, Texas A&M University

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**Bonnie Braun and Maria Pippidis**

January 2020

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## Farm and Farm Family Risk and Resilience

### Guide for Educational Programming

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#### **Background**

This Guide was created to provide a framework as a starting place for programming that not only informs but moves individuals, families, professionals and public policy makers to take action to prevent or mitigate sources of stress.

Farms and farm families experience both ordinary and extraordinary stress and change because of the interdependent nature of the farm family business and farm family living (13).

Extraordinary stresses add additional pressures to farming enterprises and threaten their future. Examples include increasing periods of drought, rain and storms, volatile markets, tariffs and resulting falling commodity prices (20, 34, 35 & 71). Responses to those pressures range from dismay to distress, despair and even suicide often accompanied by the onset of chronic health diseases.

In addition to the extraordinary stresses, the farming population experiences ordinary stresses. Ordinary stresses include the constancy of responsibilities to make or keep the farm profitable; begin and/or retain a farming legacy; juggle on and off-farm work; care of family members; deal with illness or injury; accessing health care, obtaining health insurance, manage multi-generational tensions and handle weariness and loneliness (13).

Both types of stresses may destabilize individuals, families, farms and local communities. Agricultural communities experience downturns in their economies and available social capital to do the important work of community engagement when the farming population is coping with the pile-up of stress.

Cooperative Extension has historically responded to the challenge of changes impacting agriculture and the farming population with a focus on individuals and farms. Professionals both, within and outside of Extension, from multiple disciplines, are seeking ways to understand and address contemporary impacts of change, with accompanying stress, on farming, farming populations and the public.

Some professionals experienced the need for addressing the 1980s farm crisis; and some have identified the need after more recent downturns in farming profitably entered the public arena with news reports of suicides, farm organizations surveys, and recent research.

An array of professionals from multiple disciplines are calling for help in developing their understanding of the problems and issues, in identifying resources they can use with the people they serve and in gaining confidence to act. Some are seeking help as they handle their personal reactions to stresses and crises of those they serve.

#### **Call to Action**

Few professionals offer a risk and resilience framework with a socio-ecological theoretical model approach to physical, mental, emotional and financial health and well-being of both the farm and associated individuals, families. Such an approach is needed.

We urge professionals to respond by applying a risk and resilience, systems approach that addresses multiple aspects of successful farming and farm family living.

## Introduction to Guide

A guiding principle of Extension is that educational programming is based on the use of knowledge generated through research-based, scientific inquiry. The intent of Extension programming is to apply that knowledge to learning experiences and information-sharing that enable individuals, families, businesses, communities and public policy makers to change both private problems and public issues affecting their work and lives. Increasingly, Extension works with other professionals in health, finance and other fields who serve those we serve.

This Guide contains:

- A literature review and a farm and farm family risk and resilience framework;
- A set of three logic models for programming with three different audiences;
- Tools for assessments and teaching; and
- Teaching resources.

The Guide is part of a *Farm and Farm Family Risk and Resilience Toolkit*. The Guide and the Toolkit were created to enable Extension educators and other professionals to incorporate risk and resilience and appropriate theories and research-based information into educational program design, delivery and assessment. A study of resilience-based interventions found that 90% produced positive effects (52).

The Guide can:

1. Stimulate thought and dialogue among Extension and other professionals.
2. Shepherd professionals in designing, testing and evaluating programming.
3. Provide a common set of background information and teaching tools for both individuals and teams from multiple disciplines and different professional settings.

The Guide is divided into four sections to address four questions about programming to reduce risk and increase resilience of farms, farm families and associated communities:

1. **Why use a risk and resilience theoretical framework?**
2. **What outcomes could be achieved using a socio-ecological risk and resilience model?**
3. **How can Extension and other professionals apply research and theory and incorporate existing resources into programming?**
4. **Where do I start?**

Finally, the guide includes references used in the review of literature. These references can be used by professionals for additional information, preparation of grant proposals and for conducting research.

**The premise of this Guide is that it will take an integrated, research-based and theoretically-sound approach to effectively prevent or mitigate risk and impacts of stressors and enhance resilience of both farms and farm families.**

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### Authors' Note:

Even as we release this first edition of *Farm and Farm Family Risk and Resilience: A Guide for Extension Educational Programming*, we anticipate changes and enhancements based on new research and resources and users' experiences. We welcome all ideas and inquiries regarding the use of, and improvements to, this first edition.

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## SECTION 1

### Why use a farm and farm family risk and resilience framework?

To build a strong foundation on which to conduct intervention and programming means understanding how best to address stress on farms and farm families. This requires an examination of:

- Stressors
- Presence and consequences of stressors
- Theories to explain stress and how individuals and groups can prevent or manage it.

This understanding can then provide guidance for educational programming and evidence for assessing the effectiveness of interventions conducted by Extension and other professionals.

Our search for answers to “how” ultimately led to existing research and theories of the stress-risk connection; resilience, resilience, and ecological systems. Conclusions drawn from the literature informed the creation of a farm and farm family risk and resilience framework socio-ecological model. This section of the Guide includes a brief overview of existing research and theories.

#### Science and Best Practices

The science of risk and resilience provides an appropriate knowledge base that can guide educational, research and direct service programs. Risk and resilience span the disciplines of agriculture and the natural environment, social and cultural environments and human ecology, human development, family science, health, emotional and mental health, psychology, sociology, and others.

In this section, we have included brief explanations of risk and resilience science for thinking about and taking action, to address stress and crises with respect to total health and vitality of both farms and the individuals supporting the farm. The research

led to our conclusion that a socio-ecological approach to strengthening farms and farm families is needed.

#### Sources of Stress

Evidence of the presence of stress (distress) and sources of stress (stressors) is found in literature from both the United States and other countries. Stress appears to have no jurisdictional boundaries.

Stress becomes distress when there is a pile-up of stressors that can overwhelm the ability to process without some negative impact. Farm and farm family stress, more accurately, distress, is brought on by pressures experienced by the farming population, farming systems and the farm as a business.

Stress is a response to change in either, or both, internal and external conditions. It is a response to environmental demands and changes within an individual, family or farm or outside in economic, social, environmental, policy or physical environments.

Stressors appear to cluster into kinds: ordinary, or regular stressors, and extraordinary. Both ordinary and extraordinary stressors contribute to farm business success (13).

**Ordinary stressors.** Farm families share daily stresses experience by non-farm families like employment, childcare, household management, financial stability, and interpersonal relationships. However, the mixing of the farm business and the family creates some unique stressors. For farm families, they are tied to both the farm as a workplace and their home.

For many, off-farm employment is necessary to provide cash to finance the family and farm and



insurance to partially cover health care costs (47). Intergenerational tensions are conflated with roles as family members and roles as farm owners, operators and/or laborers. A study of multi-generational farm relationships found conflicts between generations around management, decision making, and the transfer of the farm operation (40).

Some are challenged by the profitability of long-term farming operations; others, especially beginning farmers, by new ventures. New ventures present their own set of stressors. Tensions may arise between the entrepreneur and immediate and extended family members. Researchers are acknowledging the importance of family context on both start-up success and sustainability (40).

Farm families may struggle with building and maintaining a farming legacy. Their deeply felt connections to the land, and to what, for many is a “calling,” can also become a stressor if there are different connections to the land among family members or when the viability of the farm is at-risk (66).

*There's a heavy pressure--the weight of expectations from previous generations and a sense of failing the next generation.*

U.S. Representative J.T. Wilcox WA  
speaking to farmers in 2018

**Extraordinary stressors.** Extraordinary stressors are those demands and changes that become crises and put both farm businesses and farm families at-risk. Extraordinary stressors are beyond an individual’s control. They include downturns in the agricultural economy (31); increasing weather uncertainties (73); labor shortages (76); and trade and market uncertainties (81). Together, they produce a lack of consistent farm income for many farm businesses and families.

Studies have documented that both ordinary and extraordinary stressors are risks with which farmers, farm families, and the farming workforce must cope. They are dynamic, disruptive, and destructive

forces that impact health, vitality, and viability of farms, farm families and farming communities. For example, one study found evidence of post-traumatic stress syndrome after a damaging weather event (50).

Together, extraordinary stressors produce a lack of consistent farm income for many farm businesses and families. They also produce distress among the farming population. When stress piles up, the ability to make sound decisions (37), adopt agricultural best practices, and take appropriate action decreases (15); illness and injury increase (49). The farm, and the people who farm, become at-risk.

The extent and duration of the extraordinary stressors, when combined with the stress of the ordinary constancy of responsibilities, can threaten even thriving and stable farm enterprises and farm families. Research has documented ties between the pile-up of ordinary and extraordinary stress and chronic health problems, the use of substances to alleviate pain or numb feeling, and even suicide (35, 42).

Medical research has found that chronic psychological distress is not only associated with poor mental health but also with the body losing its ability to regulate the inflammatory response which can promote the development of illness and the progression of diseases (17). Nearly two-thirds of farmers in one study reported pre-existing conditions—even among young farmers (47).

### **Farming Systems Stressors**

The farming population and the business of farming are affected by farming systems stressors from four areas of challenge: economic, environmental, social and institutional (25). Farming systems are challenged to hold up to, adapt and/or transform in response to increasingly complex impacts from all four areas. The interconnectedness, dynamics of change and uncertainties arising from each area of challenge can lead to extraordinary stressors on farming systems.

## Stress Varies across the Farming Population

As one psychological researcher put it, *Bad things happen* (8-10). Everyone experiences adversities of life. In the United States, 90% of the population has experienced a traumatic event (51). Decades of stress and health research has suggested that stressors have a substantial damaging impact on health; are experienced differently according to gender, race, marital status, socioeconomic factors and status; and occur over the life course and across generations (74). Over time and across the population, sources of stress hold constant (3).

**Females.** Females on farms carry more distress than males as they juggle on and off-farm work, and what is known as the “third shift” care of family members (32). Daughters-in-law carry the most stress due to intergenerational tensions (53).



**Children.** When children experience traumas brought on by how to handle stress, such as suicide or attempted suicide, they experience what is called Adverse Childhood Experiences. Those experiences can introduce problems physically and mentally which can carry on into adulthood (19). Children may exhibit negative behavior, injury, and illness. For some, depression and/or anxiety may be present during adolescence, young adulthood or even in later adulthood.

**Farmers.** Among farmers, young farmers are projected to suffer most from economic distress (77). They carry high burdens of depression and anxiety about finances and time pressures (67). For white, middle-aged men, suicide is sometimes a way of responding to stress and crisis. Suicide rates among farmers are twice that of the general population (61). In 2019, relationship problems and health issues, followed by financial and substance use, were associated with suicide among farmers in one state (68).

**Loneliness.** Loneliness, often experienced by farmers, along with ordinary and extraordinary stress, is linked to declining physical, mental and emotional well-being. More specifically, loneliness “increases blood pressure and cholesterol; activates physical and psychological stress responses; contributes to cardiovascular disease—the number one cause of death in the United States; and suppresses the immune system—our protection from illness and disease” (92).

**Social Isolation.** Social isolation occurs when an individual isn’t engaged with family, friends, and others. Withdrawal from social interactions is often a characteristic of farmers and family members experiencing a pile-up of stress or dealing with crises.

Positive social bonds among family and extended family members and with people in the community are associated with better health). A meta-analysis of multiple studies found that strong and deep social connections were associated with a 50% drop in the risk of early death (43).

## Health Challenges

A USDA-funded study of farmers in multiple states found that 64% had a preexisting health condition; 40% said that health problems were affecting their ability to farm, and 50% indicated they would have no one to help in the event of a major illness or injury (47). The author of a 2019 dissertation, based on the same study, concluded that the physical toil of stress reduces productivity leading to financial stress and problems among farmers (7).

**Illness.** With farming in the top ten most stressful occupations, both farms and the farming population are at-risk while at the same time facing access to care challenges (38). One study found high levels of stress among farmers working 40 hours or more off farms in addition to on-farm work (50). High levels of stress are associated with chronic health disease and mental health issues.

**Injury.** Farming is one of the most dangerous occupations (18). Farmers, their children and farm workers are at risk for injury. Injuries increase with

presence of stress or depression. When fathers engaged in injury-related behaviors on the farm while experiencing high farm-related stressors, their adolescent children did likewise (71).



Farmers with injuries are at risk for opioid addiction. The Centers for Disease Control and Prevention states that opioids are prescribed for about 20% of farmers and the farm workforce who are injured and unable to work on any given day (16).

### ***Self-Treatment***

Across the U.S., people turn to substance use as a way to cope with distress (72) as do farmers and workers. A 2015 national study (16) found that among agriculture, forestry, fishery and hunter workers ages 18-64, 9.4% used alcohol heavily in the past month. Heavy alcohol use was defined as consuming 5 or more alcoholic drinks on the same occasion on 5 or more days within the last 30 days.

In the same study, 5.7% used illicit drugs in the past month; 10.5 % were dependent on or abused alcohol or illicit drugs in the past year.

A survey commissioned by the American Farm Bureau and the National Farmers Union found that 77% of farmers said they could easily get opioids without a prescription (57). Nearly the same percentage of farmers (75%) reported being directly affected by opioid misuse, addiction, or overdose.

Another study of farmers found a correlation between a natural disaster and the increase in opioid overdose (73). The same study revealed that opioid

overdoses increase 10% with each \$10,000 reduction in net income per farm.



### **Health Insurance Challenges**

Data from a USDA-funded study (47) provided the following information:

Health insurance was identified by 73% of those farmers as an important or very important risk management strategy for their farm or ranch. Young farmers said that access to health insurance was one of the most significant issues impacting their future on the farm or ranch—a finding consistent with a survey of young farmers (2).

Health insurance was named as one of the top two reasons for off-farm employment. Among young farm and ranch families, 41% enrolled in public insurance to keep costs down and to be able to invest more of their human capital on farming operations and/or family. Among farmers in the study who had health insurance, 51% reported their plans covered mental health but 33% didn't know if mental health coverage was part of their plans.

Concerns about the financial cost of health insurance and health care were noted by many farmers:

- 1) 52% are not confident they could pay the costs of a major illness and injury without going into debt;
- 2) 45% are concerned they may need to sell some or all of their farm to pay for health care costs.

## Financial Challenges

By 2019, debt among farmers in the US jumped to \$409 billion and is at levels last seen during the 1980s farming crisis (41). Research suggests that those with debt are more likely than those not in debt to have common mental disorders like depression and anxiety (5).

The Secretary of Agriculture, speaking early in 2019 to Congress, reported that net farm income had fallen nearly 50% from its peak in six years before (45). There is an increased likelihood of mental disorders among those in debt irrespective of the source of debt—housing, utilities and purchases on credit. The situation is exacerbated among those with addictive behaviors such as alcohol, drug dependence or problem gambling (55).

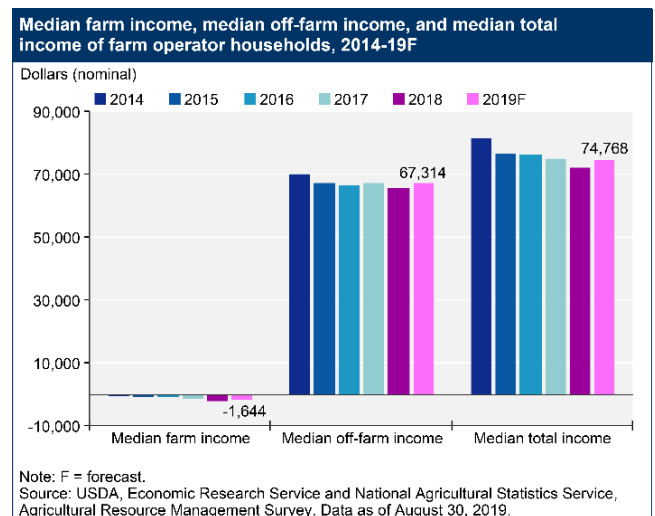
Distress about money also affects relationships: Almost a third of adults with partners (30%) report that money is a major source of conflict in their relationships. The survey results also suggest that for those living in lower income households (less than \$50,000 per year), financial distress stands in the way of a healthy lifestyle. This data suggests that those with financial stressors put their health in jeopardy and are struggling with stress-related financial matters (5).

Many farm businesses struggle to be profitable. According to the USDA Economic Research Service (58, 77, 78), median farm household income fell 6.0 percent in 2015 and continued to decline slightly through 2018. The 2017 and 2018 declines occurred despite an improvement in sector incomes as a whole and sharply higher income for households with commercial farm operations. Only 10 percent of U.S. farm households operate commercial sized farms (79).

The median farm household is more likely to operate intermediate or small farms, categories where farm-sourced income dropped in 2018 with no appreciable increase expected in 2019 (80).

Farm households typically receive income from both farm and off-farm sources. Median farm income earned by farm households is estimated in nominal terms at \$1,840 in 2018 and is forecast to decrease slightly to \$1,644 in 2019. In recent years, slightly more than half of farm households have had negative farm income.

Many of these households rely on off-farm income—and median off-farm income is forecast to increase 2.2 percent from \$65,841 in 2018 to \$67,314 in 2019<sup>1</sup>. Stress about money and finances, combined with health, family relations, and other stressors has a significant impact on both the farming population and farm businesses.



## Farm and Farm Family Risks

Human risk management is one of the five areas of agriculture risk management. The others are production, marketing, financial (as it relates to enterprise and family) and legal. Programming and interventions focus on eliminating, reducing or minimizing risk through the use of best practices that are grounded in theory and practice.

Human risk includes risk to physical, mental and emotional, and social health and well-being of the farming population. The previous section outlined

<sup>1</sup> Because farm and off-farm income are not distributed identically for every farm, median total income will generally not equal the sum of median off-farm and median farm income.



some of the statistics and stressors as they relate to a human risk area. Safety, stress management, wellness, and other risk management programs help mitigate some of the factors that create increased stress for farmers and their families that will hopefully improve the vitality of the farm.

In the human risk area, farm and family financial plans come together. Farm operators and family members need to invest resources (financial, time and mental) in developing risk management plans that lessen the risks of illness (mental and physical) and injury on farming operations and the family. Risk management plans need to comprehensively address access to, and payment of, health care as well as build in a combination of savings and health insurance.

and family member goals and aspirations; 3) family communications; 4) relationships with community members and professionals who can support farms and farm families; and 5) social cohesion of the community.

Depending on the dynamics, these factors could be part of the ordinary or extraordinary stressors within the family or be resilience factors that help protect the family and farm against crisis. If these human capital and social factors are at odds, the health and well-being of the family and the farm can be affected negatively. Figure 1 summarizes a list of impacts of farm family stressors on farmers and families.



**Figure 1**

**Impacts of Stressors on the Farming Population**

- Inhibited decision-making and adoption of agricultural practices
- Physical and mental chronic health problems among family members
- Depression, anxiety, despair, and suicide
- Injuries
- Opioid and alcohol misuse, addiction and, overdose
- Loneliness and social isolation
- Lack of access to health care
- Postponement of preventive care
- Concern of inability to pay for medical care costs
- Juggling on and off farm work to get and pay for health insurance
- Fear of losing their farm as a business, a home and a family legacy

**From Threat to Opportunity**

How individuals, families and businesses handle stressful demands and changes will, in part, determine outcomes or impact. Handling demands or changes is influenced both by perceived meaning of the demands and changes and available internal and external resources or capital (59, 60).

For some, the demands and changes are perceived as negative - threatening the status quo, life and legacy of the farm and farm family. To them, stressors and resulting distress are fundamentally risks to both the farm business and the farm family. For some, the demands and changes are perceived as an opportunity to change the business, its products or processes, or family functioning.

An equally important human risk management strategy is the need to prepare for, and develop, strategies to address risks associated with other human or social factors such as 1) family dynamics, including multi-generational dynamics; 2) family

## The Power of Resilience

Farms play important roles in not only producing products, protecting the environment and contributing to the economy but in contributing to social cohesion, or social capital, the culture of rural communities and in providing food for the USA and beyond.

No matter the discipline, the commonality of the concept of resilience is the ability to recover from, or adjust to, change with its accompanying stress and/or crisis. For some, it implies getting back to conditions as they were before the change; for others, it is using change as an opportunity to adapt or become something new. For all, resilience is both a protective and recovery resource or capital for risk management.

Farms and farm families need a reservoir of resources to survive the ordinary and extraordinary stressors of life and maintain their mental, emotional, physical, social and financial health and well-being. They need the capital of resilience.

Resilience as a capital is gained through resilience processes. The science behind resilience continues to evolve as does the meaning of terms. Family stress, resilience, and behavioral sciences look at both the state of resilience and the process of developing resilience (59, 60).

For this Guide, we use the following definitions:

**Resilience**—capital available to individuals, families, communities, and businesses to respond to demands and challenges of change.

**Resiliency**—the ability to draw on the capital of resilience in response to risks produced by demands and challenges.

Resilience as a capital is gained through resiliency processes.

## Individual and Family Resilience

Resilience is both a dynamic process and a measure of health, or well-being and vitality, for farm enterprises and people associated with the farm. The

extent to which a family is resilient during tough times is a combination of the individuals in the family and extended family members and the communities with which they interact (communities of place, interest and/or beliefs). Resilience science contains credible evidence about how individuals and families can prevent and recover from stress and crises--how they get through tough times and challenges (54, 59, 60, 1, 83-91).

While resilience can be specific to individuals and families and to the type of stress or crisis, research shows that such characteristics of family resilience as harmony, communication skills, family time, financial management skills, optimism, hardiness, support networks and flexibility can buffer the impacts of distress (22, 29). Each of these resilience factors can be strengthened when individuals and their immediate and extended families are aware of the role the factors and family members play in positive outcomes for the farm business and family living.

Psychology and family researchers have identified individual, adult resilience recovery characteristics and skills present after individuals experience tough times such as traumatic events and setbacks in business, personal and family life (4). These recovery characteristics and skills include:

- Self-compassion (positive adaptation to a crisis or stress);
- Hardiness (the belief one can get through tough times);
- Self-control (the belief that you have some control—if only of your response); and
- Managerial skills (organization, decision-making and establishing priorities (22)

Though there is no single resilient type of person or family, a capacity for healthy functioning and positive emotions is part of a pattern. Resilience can help protect individuals from a variety of mental and emotional health conditions such as depression and anxiety and can help offset their impact when present. Positive emotions promote adaptive

flexibility and teach proactive response to opportunities during less stressful times (33).

Extension professionals, experiencing ordinary and/or extraordinary stressors can personally benefit from building resilience. Stories are being told of stressors on these professionals due to stress on the farms and farming population they serve.

**Relationship resilience** is particularly relevant to understanding risk and resilience from a multi-systems perspective (24-28). Relationship resilience requires that both professionals and the farming population acknowledge and draw on reciprocal relationships between and among people who work on, or for, the farm to reduce risk and develop resilience prior to, and during, times of intense stressors. Relationships include multiple family members, people in communities; beneficiaries of the productivity of the farm; and those making policy decisions about farming.

Relationship resilience acknowledges that getting through tough times is not just an issue for each farm and farm family but for rural areas, their communities and the broader society. It is about availability and the accessibility of community supports. Public policy can be both a cause of stress and a contributor to resilience. For example, farmers cite changing government regulations as a source of stress. They also benefit from policy that provides protection (crop insurance) or subsidies. The policy arena affects farming enterprises, communities and farming populations.

### **Farming System Resilience**

Specific farm and agriculture stress and resilience literature is limited. Some key concepts are found in the literature on sustainability and agricultural generativity described as a system of applying principles and practices that improve the physical environment, yield, resilience and vitality for farming communities (56).

Farming systems are accumulating economic, ecological and societal challenges (56). These are challenges to resilience and need to be addressed by multiple systems in which they are embedded.

Research released in 2019 found that performance of farming systems, resilience capacities and attributes can be measured (56). Other research (27) reinforces the need to view farm resilience from three points of view:

1. Roles of farm types and dynamics, for example size of the farm, number of employees, diversity of production, etc.
2. Primary and secondary actors including farmers, agency personnel and social forces
3. Relationships between structure, capacity to act, physical environments and social processes

Other studies of farms as businesses, and especially of new ventures, document the need to focus on resilience and on personal, business, community and policy relationships to increase the likelihood of a viable business and a healthy family (82).

**The challenge of the 21<sup>st</sup> century is not to increase agricultural productivity but to strengthen the resilience of our food production in the face of ever increasing stress on the system.**

### **Resilience Thinking and Doing**

Resilience thinking and doing consider proactive strategies involving multiple capitals or assets in an integrated way. Resilience thinking strategies would balance short-term and long-term profitability, health, vitality and adaptability with demands and changes that may cause increased risk, stress and for some, crisis (21, 24-28).

Farm and family resilience thinking can help build protective and resilience capital, resources or assets to prevent, manage and recover from stressful situations and crises. By using resilience thinking to gain multiple insights into farm management practices, farmers may be better able to balance short and long-term costs and benefits to both the health and financial well-being of the farming enterprise and that of the farm family (23).



Resilience thinking and doing can also be practiced by professionals who support the population. In Extension, professionals in agriculture, family and consumer science, community development and 4-H can practice resilience thinking and doing as they develop, deliver and evaluate their programs.

### **Building Resilience - Social Ecological Systems**

Efforts to change behaviors and conditions will have limited impact if the focus is only on individuals (30). An example of this type of intervention is stress management programming. While important and likely necessary, it is not sufficient to prevent or reduce the impact of stressors.

Individuals are embedded in multiple systems or environments that affect their ability to adapt to stressors. Their success, in part, depends on the extent to which these systems are supportive. The Centers for Disease Control and Prevention (CDC) and others are providing credible evidence that an approach they call PSE—policies, systems, and environments—works (44).

Human or social ecology and agroecology are systems focused and look at the interactions of multiple systems. Our risk and resilience sociological framework incorporate both and uses the following definitions:

**Human or social ecology--** the study and application of relationships between people and their natural, social and built environments (6, 14).

**Agroecology--**the study and application of a holistic, systems-level understanding of food systems sustainability (39).

Human or social ecology intersect with agroecology when the human, cultural and social, values and practices interact with agricultural practices.

A socio-ecological theoretical approach moves the focus of interventions from the personal (stress and farm management) to the public (prevention or mitigation of stressors; enhancement of farming practices).

A socio-ecological approach would not only teach individuals how to prevent and manage stress and farms but would incorporate all of the following:

- Identify and integrate the roles of families, the community, organizations and public policies in supporting farms and the family;
- Develop a stronger position for the farm and family by building the capital of resilience and the ability to apply the processes of resilience;
- Develop support and actions through the public policy arena.

Responses to stressors and farming practices among farmers and farm family members are typically thought of as personal in nature. They move into the public arena when impacts go beyond the family to farm businesses, communities, organizations, and policies. The farming population can advocate for policies and supports to maintain their health and that of their farm business.

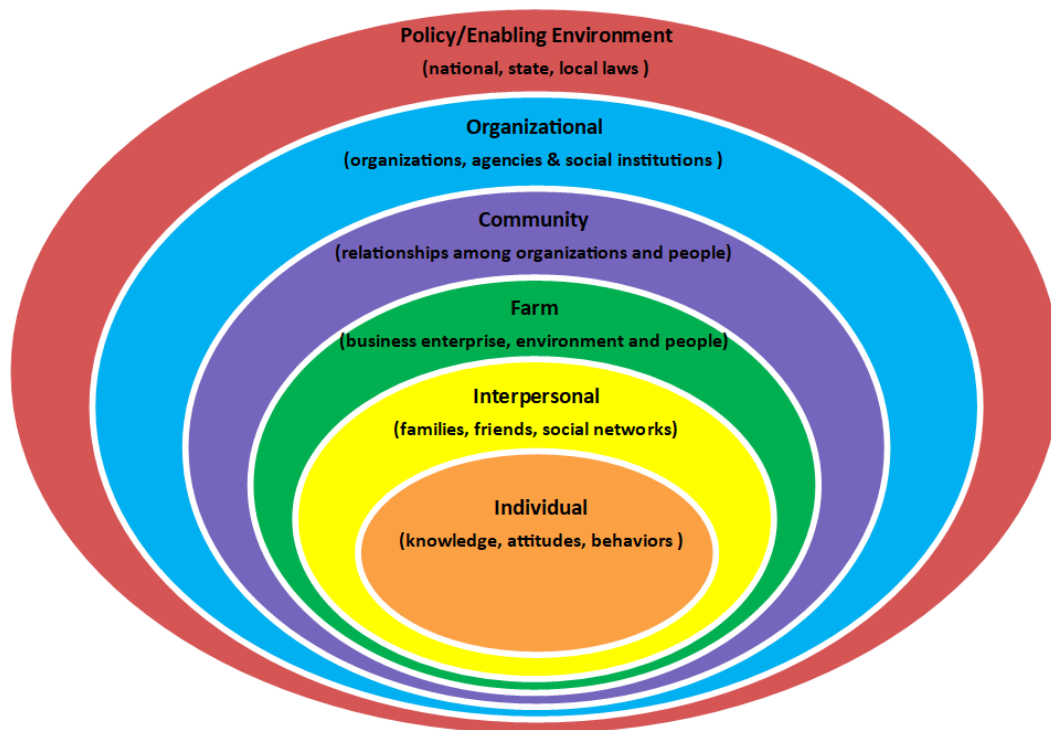
Evidence of the public nature is found in headlines and stories carried by mass media and political cartoons. Since 2017, multiple stories about farms and farmers under stress and suicides have publicized the situation. Solutions need to come both internally to individuals and families and externally from communities and beyond.

Figure 2 illustrates the interrelated nature of multiple systems in a socio-ecology model. What differentiates this model from others is the addition by the authors or the farm as a system. We added this environment to illustrate how farmers and farm families are embedded in a farming system and how the farm is embedded in community, organizational and policy environments.

Years of human stress and health research point to the need to combine simultaneous teaching individuals and families how to manage stress,

## Figure 2. Farm and Farm Family Risk and Resilience Socio-Ecological Model

Braun and Pippidis, 2019



enabling professionals and community members to provide support and adopting public policies that address external environments that produce distress (13).

The Centers for Disease Control encourages the use of a social ecological model to permit a multi-systems approach to change (44). A multi-systems approach can provide a framework for considering options for preventing and mitigating stressors and reducing distress. The model can be a starting place for actions, a way of organizing responses and reporting evidence of impact.

### Public Responses to Private Problems

*Communities* can support farms, farmers and farm families by providing removing stigma and lack of awareness or understanding about challenges facing the farming population and by providing easy access to care (38). Communities can:

- Feature articles in local newspapers;
- Provide access to health care, including mental health care;
- Conduct conversations or forums to address the health and vitality of the farming populations and their farms and the community as a whole;
- Collect information about stressors and their impacts among the farming population; and
- Explore existing and potential public policies that add to, or relieve, some stressors.

A new guide for conducting community forums to strengthen health and farm vitality will be released in early 2020<sup>2</sup>. The Guide is based on strengthening health and farm vitality forums held in four states over a three-year period. The forums and Guide were funded, in part, by the Northeast Region Center for Rural Development.

<sup>2</sup> Contact the authors to access the Forum Guide

**Organizations** can be part of local communities but may be county, regional, state, multistate or nationally based. Organizations can use their influence among members and outside the organization to address issues impacting the farming population and farm businesses. Examples include the American Farm Bureau, Farm Aid, National Farmers Union, National Young Farmers Coalition, and Women in Agriculture.

Another example is the role of land-grant universities. Such institutions can call attention to issues, conduct research and work with local communities through their outreach/Extension capacity, and produce materials as documented by a study in the North Central region (46).

Extension as a system can bring people from multiple disciplines together through professional development, community engagement, and direct farmer and family programming. Within Extension, professionals from multiple disciplines and program areas can work together for greater impact.

After extensive searching, we were unable to locate a socio-ecological model that included the farm. We created the *Farm and Farm Family Risk and Resilience Socio-Ecological Model* to integrate the farm as one of the environments in which the farming population is embedded. That model, coupled with resilience thinking and doing, can serve as a frame for education, research and professional services by Extension and partners.

**We created the farm and farm family risk and resilience socio-ecological model to integrate the farm as one of the environments in which the farming population is embedded.**

**Public Policy** can be used by public policy makers to address both short and long needs of farms, farm families and farming communities. For example, the Minnesota Department of Agriculture subsidizes counseling for farms through its Director of Minnesota Rural Mental Health and nine health advocates. Due to increased need, a second position was added in 2019. Wisconsin authorized money to focus on the mental health needs of farmers during their 2019 legislative session.

A 2018 federal public policy example was the authorization of the Farm and Ranch Stress Assistance Network as part of the Agricultural Improvement Act. In 2019, congress appropriated funds for a two-year start-up phase. Establishment of multi-disciplinary networks across regions, to address health and wellness, began with the release of contracts in the four regions in 2019<sup>3</sup>.

Networks became operational in early 2020 and will continue through 2023 if funds are appropriated. The network will then need to be reauthorized in the 2023 Farm Bill. Research on the effectiveness of the networks will be helpful to inform reauthorization decisions.

Another federal public policy, Seeding Rural Resilience, was introduced in 2019 with the intent to curb the rise in suicides among the farming population. One of the three provisions directs the USDA Secretary to work with state, local and non-governmental stakeholders to determine the best practices for responding to farm and ranch mental stress.

### **Theory and Strategies behind Responses**

Policy makers are responding to stressors affecting the farming population as are communities and organizations. They share with Extension educators, and partners, the desire to make good decisions about what policies, interventions, and programming to do for the farming population. To make wise decisions, professionals can turn to, and

<sup>3</sup> <https://nifa.usda.gov/program/farm-and-ranch-stress-assistance-network-frsan>

apply, appropriate science to both policies, program content and methods of delivery and assessment.

Extension educators and partners want to be strategic and offer education and interventions that are effective. The likelihood of effectively preventing or reducing negative impacts of stressors increases when responses are integrated, multi-disciplinary, theory-driven and evidence-based.

An integrated, multi-discipline, social-ecological systems perspective can guide planning, implementation, and evaluation of individual and group programs that focus on both the farm and the people of the farm. A pilot test (48) of an integrated program based on resilience theory (54, 65) for farmers in one state found that nearly 100% of participants thought such an approach by Extension was worthy of taxpayers' dollar.

To date, there is no one integrated theory for handling stressors across the farming population and on farms and farming systems. Thus, interventions need to draw from multiple theories.

Theories provide answers to such questions as to how to make programming effective. There are many theories that deserve consideration for Extension programming that are in use already that come from a variety of disciplines such as health, agriculture risk management, finance, theories of change, youth and adult development, empowerment, social cognition, planned behavior, communications, assessment and evaluation. They are all relevant. A quick explanation of each is found in *Extension Education Theoretical Framework with Criterion-Referenced Assessment Tools* (12).

This Guide proposes Extension's need to expand across disciplinary lines and develop multisystem approaches to addressing risk and resiliency among farms and farm families. As we reviewed literature,

we found six theories that we believe meet the "goodness of fit" test and are particularly relevant to our risk and resilience socio-ecological framework. The following theories meet these tests as they are:

- Logical;
- Consistent with everyday observations;
- Similar to those used in previous successful programs; and
- Supported by past research in the same or related areas

**Change Theories** are fundamental for interventions intended to make changes in individuals, groups, institutions and public policy. Change theories are fundamental to educational programming.

### *Change Theory One*

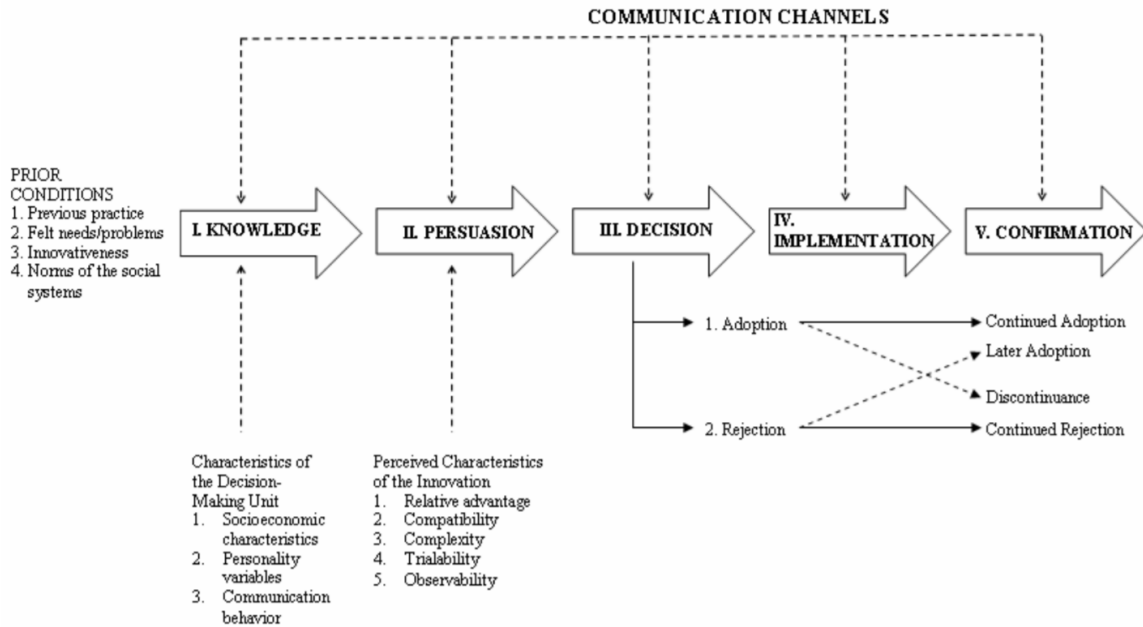
In 1962, Evert Rogers published his pioneering research on the Diffusion of Innovations Theory to explain how, why and at what speed ideas and technology spread. Rogers focused on diffusion of information and innovation in agriculture.

Rogers conceptualized his theory as having four factors that influenced diffusion grounded in social systems (64). He viewed the decision process as having five phases requiring different interventions at each stage moving from knowledge to persuasion decision, implementation and confirmation. See Figure 3.

Rogers named five types of adopters of information and innovations. Adopters ranged from innovators to laggards—each playing a role in influencing adoption of innovations shown in Figure 4. Educators who understand the process of change and innovation, and how people differ in their response to both, will increase the likelihood that their educational programming will have impact.

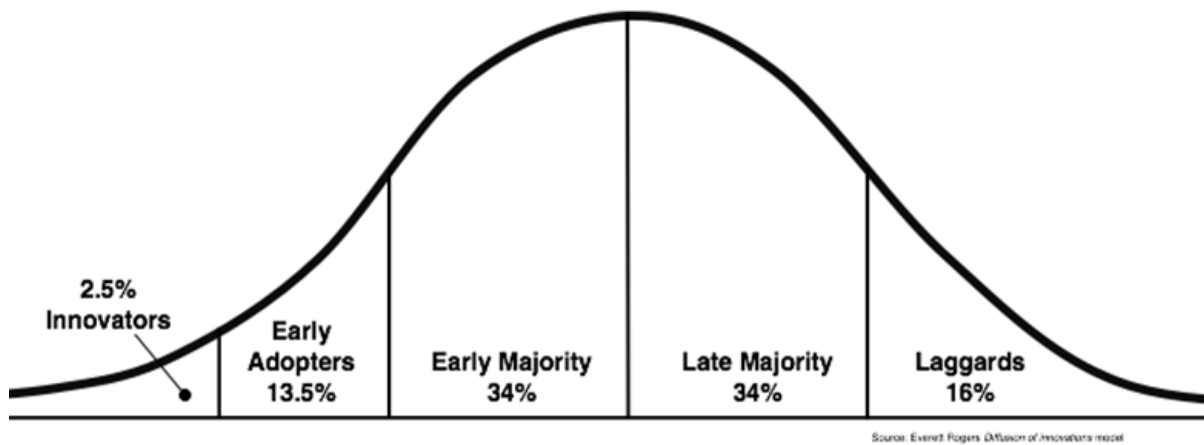
**Educators who understand the process of change and innovation, and how people differ in their responses to both, will increase the likelihood that their educational programming will have impact.**

**Figure 3. A Model of Five Stages in the Innovation-Decision Process**



Diffusion of Innovations, Fifth Edition by Everett M. Rogers

**Figure 4. Diffusion of Innovation Theory**



### *Change Theory Two*

Twenty years after Rogers work, the Trans-Theoretical Model of behavior change was introduced to public health (62). The model features five stages beginning with the first stage of pre-contemplation. The model moves to contemplation, determination, action, relapse and maintenance of behavior change. It integrates multiple theories. See Figure 5.

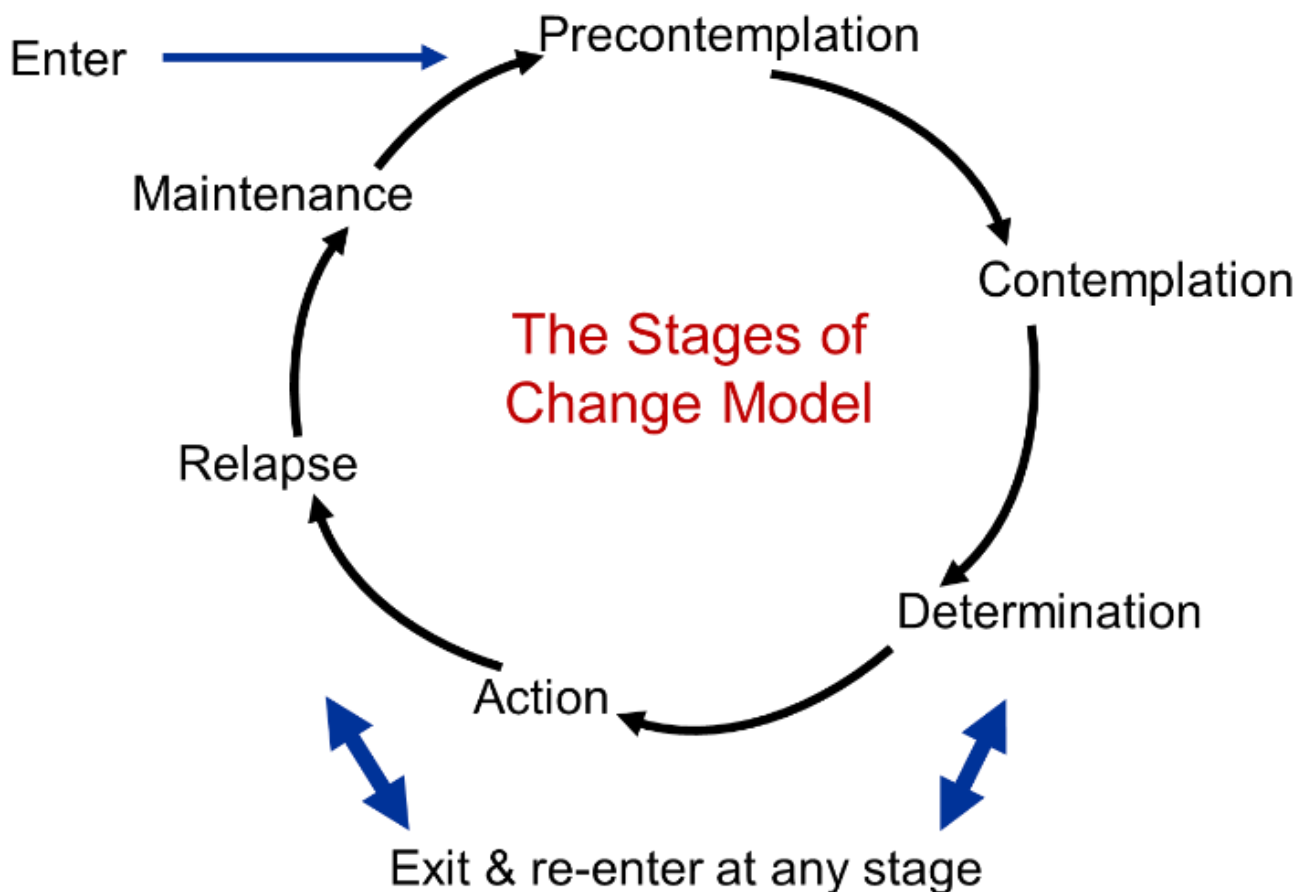
We choose these two change models because the Diffusion of Innovation Theory is grounded in agriculture; the Trans-Theoretical model in health.

Professionals in both areas can use either, both or a modified version to plan educational programming that leads to short and long-term outcomes among individuals, families, and communities.

The innovation-decision process behind the adoption of our *Farm and Farm Family Risk and Resilience Socio-Ecological Model* will likely follow stages. Some innovative educators will adopt this approach to reducing stressors and increasing resilience quickly; others will need time to process before using the model and framework.

**Figure 5. Trans-theoretical Stages of Change Model**

Prochaska & DiClemente, 1983



**Risk and Resilience Theories** included in this Guide come from multiple disciplines and use different models to illustrate ecological approaches. These models address individual, family and business resilience and the ability for each to adapt to change. They should be combined with either or both of the change theories just described.

Many stress and resilience theories focus on individuals. The following four theories expand the focus to include families in which individuals are embedded and the farming system.

**Risk and Resilience Theory One**

Patterson’s *Family Adjustment and Adaptation Response Theory (FAAR)* (59, 60) focuses on interactions of family members and on outcomes which can result in resilience. It integrates a focus on stress among individuals and how they adapt with the unit of the family and how they collectively adapt to stressors. When intra-family interactions are positive, they contribute to physical and mental health, well-being and sustainability of business ventures and vice-versa if they are not positive.

Another way of explaining FAAR, is that it looks at resilience building as a process of adapting to ordinary stressors and generating and using resources in response to extraordinary stressors. See Figure 6.

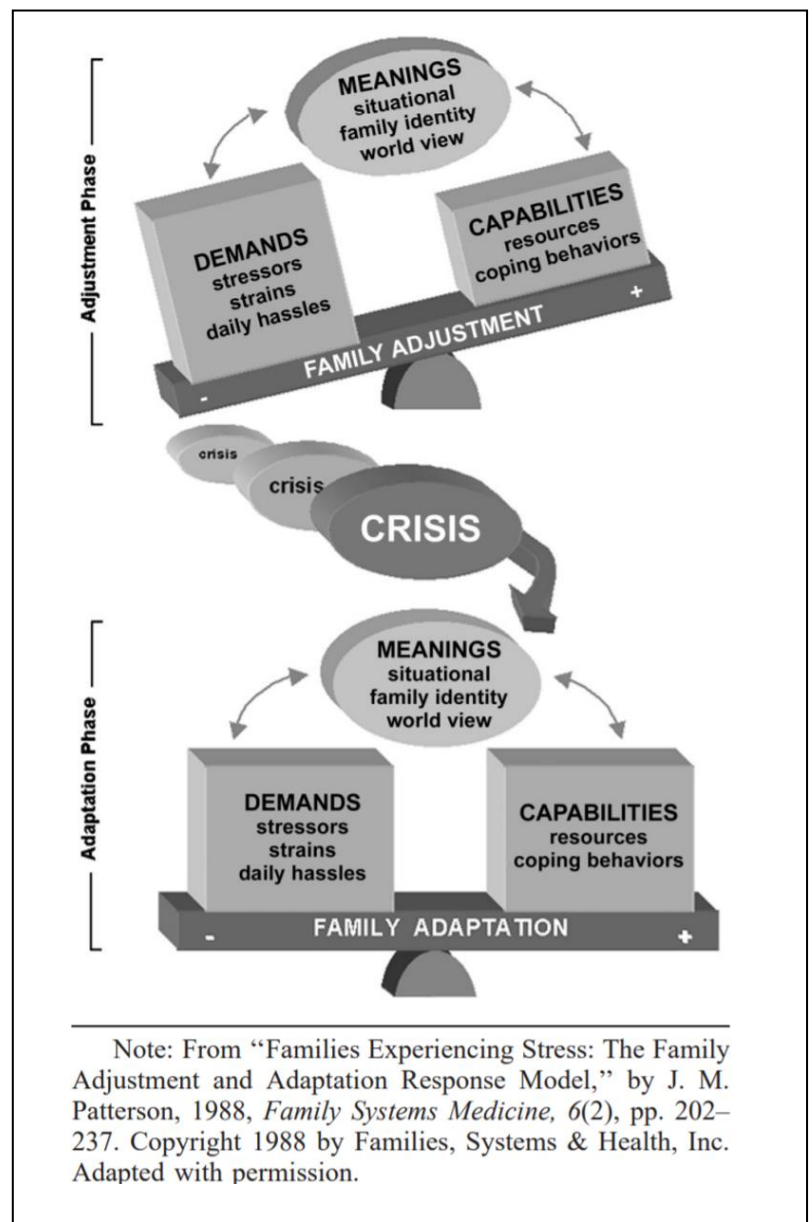
We included the FAAR model as a well-accepted explanation of how crisis can put demands on families that cause an unbalance and how families respond to crisis by adjusting to the demands, making meaning of their situation and managing resources to handle the crisis. The model shows a return to equilibrium after adapting to life after the crisis.

Farm families who experience extraordinary stressors that lead to crisis can be guided through the process of adjustment and adaptation as part of their recovery.

The model provides a guide for professionals from multiple disciplines to assist individuals and families who are facing stressors to identify demands, the meanings and the resources available to guide the individuals and families to find adaptations that will help them find acceptable balance.

**Figure 6.**

**Family Adjustment and Adaptation Response Model**





## Risk and Resilience Theory Two

Walsh's *Multi-Level Recursive Processes in Resilience Theoretical Framework* (89) combines the eco-systems in which people and families are embedded. The framework also incorporates developmental aspects of the family experience of adversity--stressors.

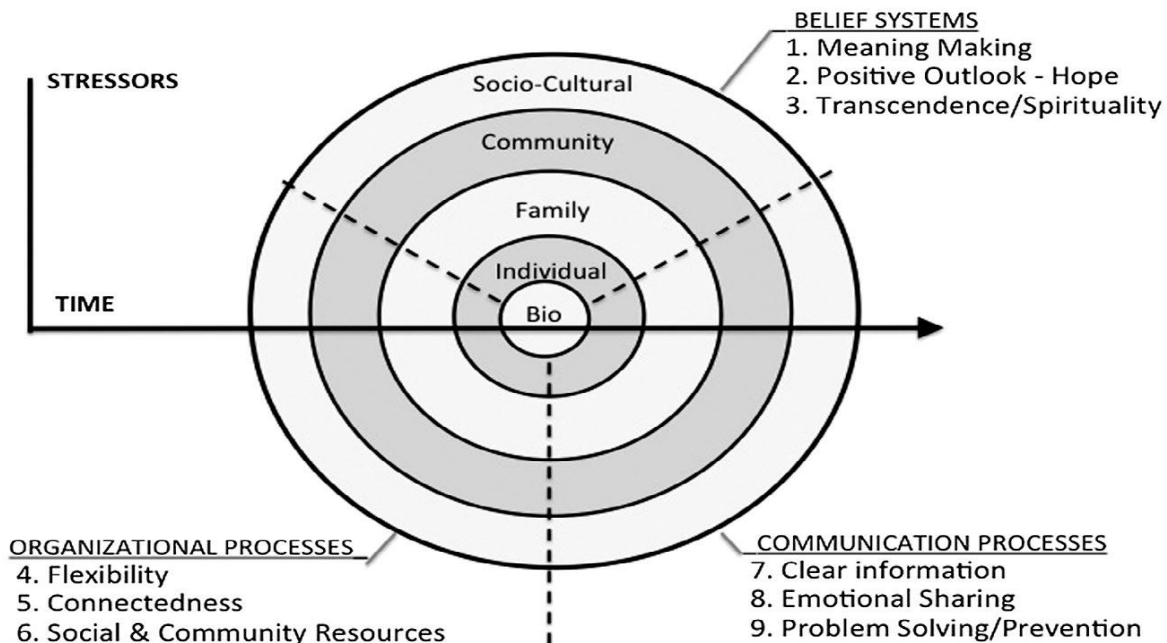
Walsh's work goes beyond research focused on the resilience of children that dominates much of the field to focus on the resilience of families. Walsh gleaned from three decades of research to create an integrative model (83-91).

Figure 7 illustrates how families are complex, share both borders and common ground with other families and yet have differences in life stage, demographics and position in society. The creator of the model did so to organize core process elements into a map that would be useful for both practice and research.

We included Walsh's theoretical framework because it is one of the most cited in the area of family resilience and because it helps to articulate the core process elements. These elements are in effect resiliency processes that when developed can assist individuals and families build resilience. The nine processes identified can be applied to any of the ecosystem levels. Improved resilience occurs when there is an understanding of the differences in these core processes across the ecosystem levels.

This theoretical framework reinforces the use of the socio-ecological framework, provides guidance regarding the types of resiliency processes professionals can help to develop in farm individuals, families and other ecosystems and can assist in helping to identify strategies professionals from multiple disciplines can use for identifying multilevel interventions that will increase effectiveness in working with farm families to achieve resilient farm families.

**Figure 7. Multi-Level Recursive Processes in Resilience Theoretical Framework, Walsh 2016a**



**Risk and Resilience Theory Three**

Danes and Brewton (23) advanced the *Sustainable Family Business Theory (SFBT)* as a tested theory that explains the role of family in entrepreneurial businesses. The theory focuses on sustainability as both a measure of success of the business and family functioning. The theory assumes that both the business (i.e. farming enterprise) and family systems are subsystems of a family business system, with its own resources and processes.

The SFBT is built on the work of Patterson illustrated in the FAAR model. SFBT differs from most business theories that focus on structures and family theories that focus on relationships. Rather, SFBT focuses on resource accumulation and the use over time, acknowledging that use of resources in times of stability affects resource use in stressful times.

A model of the theory is shown in Figure 8. We included this model because it is a theory that clearly links the family and the farming business.

This theoretical framework may be very helpful to Extension professionals across the program areas of agriculture, family and consumer sciences, 4-H and Community Development because it shows the

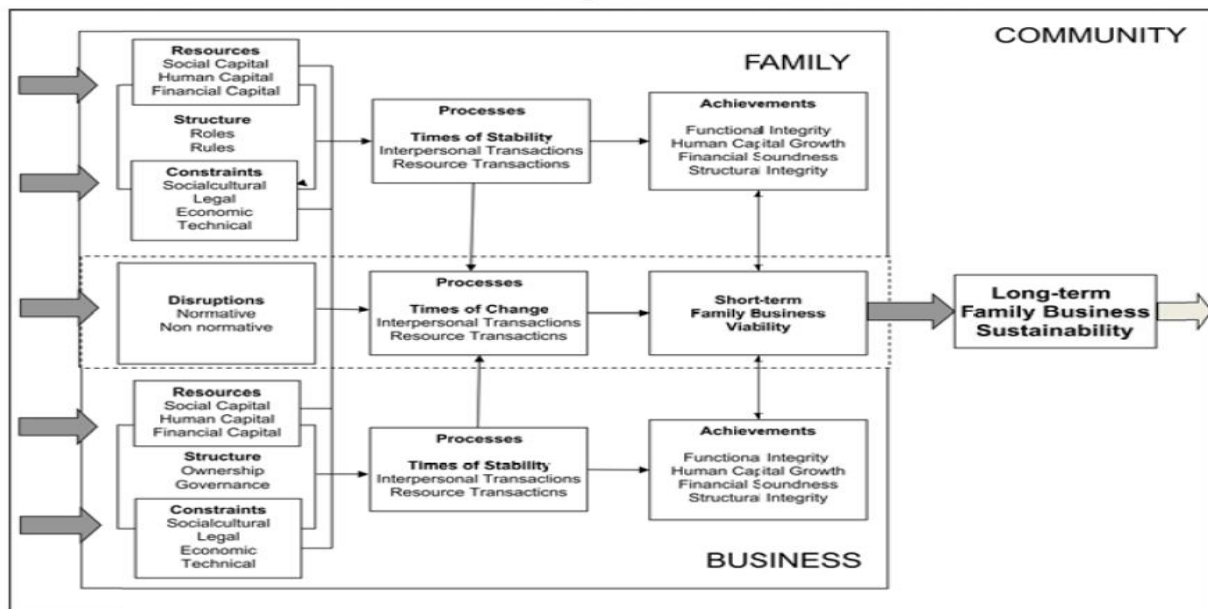
importance of developing social, human and financial capital and resources over time for both the personal/family side as well as the business side.

Building skills that help to support interpersonal and resource transactions are often the knowledge, skills and behavior change outcomes Extension programming focuses on. This model helps to illustrate the need for multi-program area collaboration in the development of effective programming.

The theory also helps professionals think about the relationships of the farm business and functioning of immediate and extended families. With its explicit components, professionals can devise strategies and incorporate content relevant to long term family business and family sustainability.

This theory also acknowledges the role that the community can play in supporting human, social and financial capital development as well. To develop partnerships to support farms and their families, Extension should look for partners who can assist in providing the necessary expertise and resources will be productive in creating positive outcomes for this audience.

**Figure 8. Sustainable Family Business Theory Model**  
Danes and Brewton, 2011



**Risk and Resiliency Theory Four**

The last theoretical model we'd like to share is a new *Farming Systems Resilience Assessment Theory* (60). The theory was devised to measure adaptation to economic, environmental, social and institutional challenges.

The creators defined farming systems resilience as the ability to maintain system functioning in the presence of “increasingly complex and accumulating economic, social, environmental and institutional shocks and stresses....”

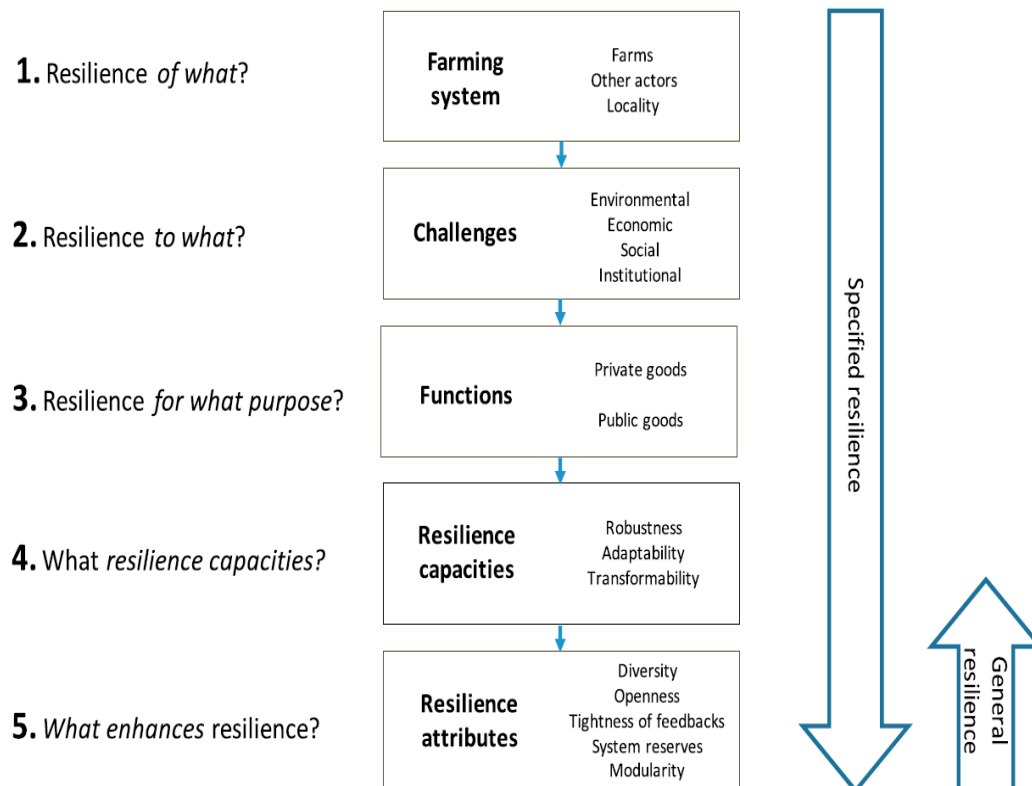
They measured capacities of robustness, adaptability, and transformability. The adaptability

capacity is the same concept used in the FAAR model. The *Farming Systems Resilience Assessment Theoretical Framework* is shown in Figure 9.

We included this theory and assessment for its uniqueness. It provides a tool for examining the resilience of the farming system in which individual farmers and farm families are embedded. It also explains attributes that enhance resilience both specifically and in general.

With a 2019 release date, this theoretical framework provides a new approach to addressing resilience. It provides a framework for accessing the farm system and identifying what needs to be developed in order to develop resilience within the operation.

**Figure 9. Framework to Assess Resilience of Farming Systems**  
Miranda, et al 2019



Though there are other theoretical frameworks or models that could be used for educational programming, we chose these four because we believe they help to explain and integrated, multi-disciplinary systems approach. They reveal the complexity of farmer, farm family, and farm systems in relation to the business of farming.

They begin to draw connections across the socio-ecological systems model. They can help with identifying strategies to address farm and family risk and resilience. Professionals can identify key strategies from the frameworks and theories for programming planning, delivery and assessment.



*Maryland Century Farm*



*Delaware Century Farm*

***Ownership of a family farm is the triumphant result of the struggles of multiple generations....***

***Losing the family farm is the ultimate loss....***

Michael R. Rosmann

## SECTION 2

### What outcomes could be achieved using a socio-ecological risk and resilience framework?

If sustainable change to conditions that give rise to crises on the farm can be achieved, it will be through a multi-disciplinary, research-based approach with multiple professionals, farmers, their families, and farm workers, and stakeholders, including decision-makers, working together.

A sustainable change approach to resilient farms and farming population must go beyond teaching an individual or family how to manage stress (30). Efforts to get people to change behavior will be limited in success if policies, systems, and environments (PSE) do not support the desired changes (44).

A framework for achieving sustainable change was missing when we began the task of creating the risk and resilience framework. We believed that a framework would guide the collective work needed to make sustainable changes in both forces and reactions that give rise to chronic stress detrimental to the physical, mental and financial well-being of individuals, families and farms.

**A sustainable change approach to resilient farms and farming population must go beyond teaching an individual or family how to manage stress or farms...to addressing policies, systems and environments.**

We chose to ground the framework in a slightly modified version of the Cooperative Extension National Health and Wellness Framework (11).

Our new *Integrated Risk and Resilience Extension Framework for Health and Wellness of Farms and Farming Populations* retains the general framework of the ECOP model. It changes the ultimate outcome to be: “resilient farms and farming populations.

Conditional outcomes are now “Healthy Farm Systems and Health Farmers, Farm Families and Workers.” The action or behavior changes remain the same. We added a few content areas to the original priorities for the ECOP model and retained the same Extension Partners.

Our modification, *Farm and Farm Family Risk and Resilience Socio-Ecological Model*, is shown in Figure 10.

Both models draw on other socio-ecological models (6, 14). Both identify current programmatic endeavors with respect to health, put them in the socio-ecological systems and contexts in which individuals live and encourage Extension personnel to engage in policy and systems change.

By changing environments and systems, some stressors can be prevented and many can be mitigated. Points of intervention can be identified when a situation analysis reveals risks and opportunities to build resilience of farmers, farm families and farming systems.

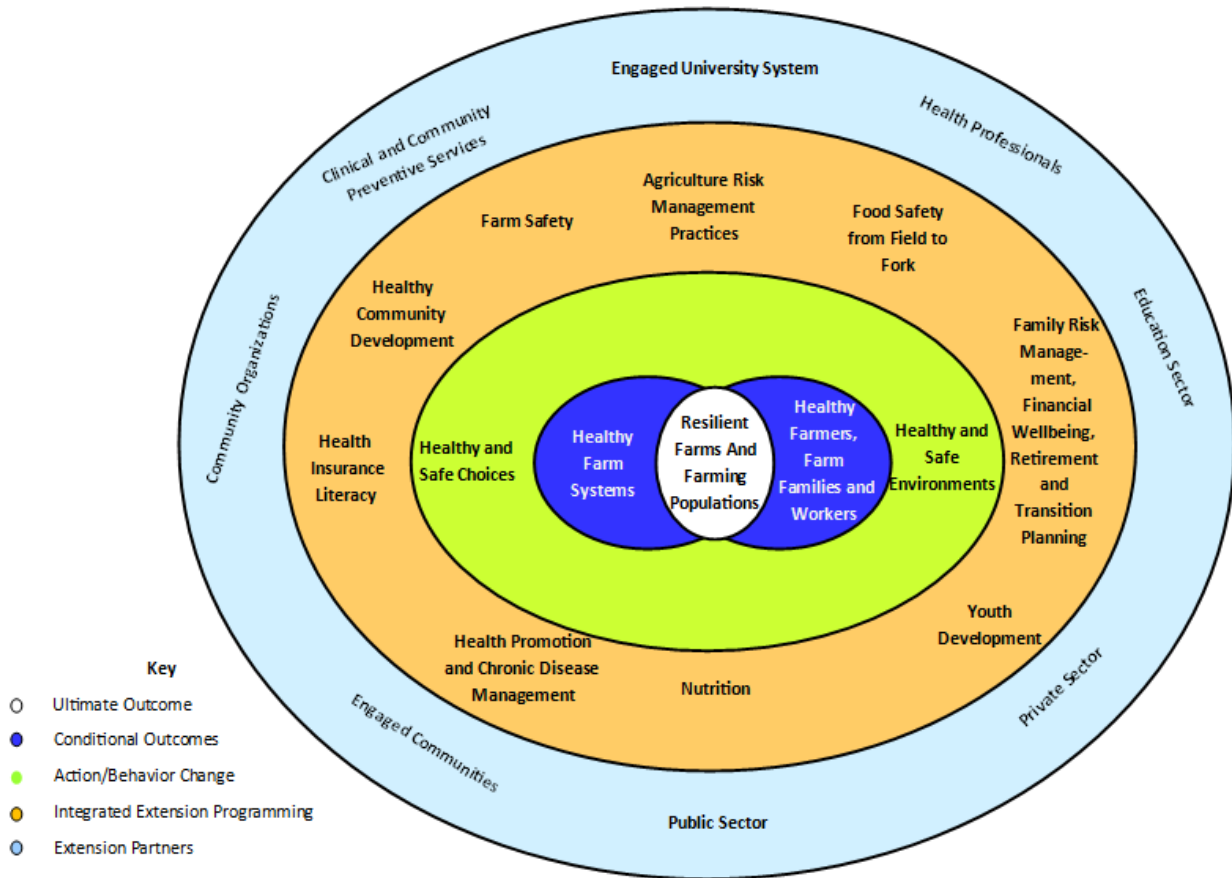
The ECOP Health and Wellness model, and our modified *Farm and Farm Family Risk and Resilience* model, present a complex interplay between individuals, communities and greater society requiring responses that account for that complexity (63).

**Figure 10**

**An Integrated Risk and Resiliency Extension Framework for Health and Wellness of Farms and Farming Populations\***

Illustrates the Farm and Farm Family Risk and Resiliency Logic Models

\* Based on Cooperative Extension National Framework for Health and Wellness



Bonnie Braun and Maria Pippidis, October, 2019



## **Risk and Resilience Educational Logic Models**

The *Framework* quickly captures the organized whole and illustrates that farm and family risk and resilience is more than the sum of its parts. It does not show specific outcomes or how they can be measured. For specifics, we created three logic models – a tool frequently used by Cooperative Extension to show the relationship of inputs to actions and outcomes. The three logic models are for three different targeted audiences:

1. Professionals who support farms and the farming population
2. Farmers, Farm Families, Farm Workers
3. Stakeholders

The three logic models are in Appendix A, B and C. They are also included in the Farm and Farm Family Risk and Resilience Toolkit located at

<https://www.udel.edu/academics/colleges/canr/cooperative-extension/personal-economic-development/agribusiness/>

Individual professionals and groups of professionals can use each logic model individually or as a set, depending on targeted audiences.

**Logic Model 1 targets *agriculture, finance, family and health professionals*** who support the farming populations and is found in Appendix A. This logic model can be used to guide decision making and measure impact of professional development programs intended to increase awareness of challenges experienced by the farming population; increase understanding of research that supports an integrated risk and resilience; and, increase capacity to apply principles and confidence to conduct the programming. It can also serve as a basis for proposals for funding requests.

**Logic Model 2 targets *farmers, farm families and/or farm workers*** and can be found in Appendix B. It can help professionals plan, implement and measure outcomes of risk and resilience programs. This logic model can save individual professionals time in developing programs; can serve as a basis for working with multiple professionals; and, can provide a common base for assessing the extent to

which multiple professionals are increasing the likelihood of reaching the intended short, medium and long-term outcomes.

**Logic Model 3 targets *stakeholders*** whose decisions and actions impact farming communities and farming populations. This logic model is in Appendix C. It is for professionals to use to plan, implement and measure outcomes of risk and resilience programming. This logic model can save individual professionals time in developing programs; can serve as a basis for working with multiple professionals; and can provide a common base for assessing the extent to which multiple professionals are increasing the likelihood of reaching the intended short, medium and long-term outcomes.

## **Use of Logic Models**

Not only do these logic models show inputs, actions and outcomes but they include measures that can be used by professionals to show impact across multiple disciplines and professional settings. A variety of assessments can be used with the targeted audiences to self-assess areas that are their strengths and areas that could be improved. Several assessments are included in Section 3 of this Guide.

For professionals, assessments can provide benchmark data and specific point-in-time changes within and among the three targeted audiences. Results can be used for decision-making about additional programming and interventions; requests for funding and other support; the case for public policy and additional research, and reports to participants and stakeholders.

**Logic models show inputs, actions and outcomes including measures that professionals can use to show impact across multiple disciplines and practice settings.**



## SECTION 3

### How can Extension and other professionals apply research and theories and incorporate existing resources into programming?

Once professionals understand the why and what of educational programming, they must determine the how. In this case, it means determining how to use the research findings and theories to design, deliver, and assess the degree to which outcomes are achieved. When an area of programming is new, professionals may not be aware of tools they can use.

In early 2019, a research team from the North Central region searched on-line for programs and educational materials addressing farmer mental health (46). The region was the focus of the investigation due to tariffs, trade wars and flooding in 2019 becoming a crisis for farms, families and communities. The goal of the study was to both catalogue programs, so Extension can better respond to the crisis, and to identify potential programming. Researchers found that the majority of the materials and education were self-help focused—not created to address systems change.

#### Purpose of Section Three

The purpose of this section is to provide information about assessment and educational tools and resources developed by both the authors and other professionals. The tools address individuals, families, farms, communities and policy. There are three defining characteristics of the section.

#### Characteristics

The first defining characteristic is the inclusion of links to theories to guide program decision making. Our Guide, with its literature review and resulting logic models, provides theories that can strengthen program decision making and design.

A second characteristic is the use of a social-ecological framework. As we reviewed and

identified assessment tools and educational program resources, we also found that many tools are individually focused. They do not take a socio-ecological approach.

To move programming to a more systems approach, may require use of a combination of tools or developing additional tools that will create the outcomes desired. Extension professionals will need to base their intervention and tools-of-choice on the level within the risk and resilience social-ecological model in which they will be programming. Tools and program design should be matched to the audience: other professionals, farmers, and their families and/or stakeholders.

*A Farm and Farm Family Risk and Resilience Program Planning Worksheet* is provided in Appendix D to aid educators in developing responses consistent with social-ecological approaches.

A third distinguishing characteristic is the inclusion of assessment and programmatic tools and logic models to frame programming.

In this section, assessment and programmatic tools and resources are divided into three categories:

- 1) Health and Well-Being
- 2) Financial Management
- 3) Individual and Family Resilience Development.

**The Farm and Farm Family Risk and Resilience Guide can strengthen programming decisions and the likelihood of reaching multiple outcomes.**

## Health and Well-Being

Many areas of Extension programming are designed to work with individuals to improve their wellbeing. Family and Consumer Science programming has focused on health topics that include nutrition, physical activity, chronic disease management such as diabetes education, health management, and health insurance literacy and increasingly wellness.

Farm, pesticide and vehicle safety are examples of programs offered by Agriculture personnel. Collaborative projects between Agriculture and Family and Consumer Science educators recently have focused on farm stress management. These programs are important and can show impact. Adapting these programs to integrate risk and resilience approaches would benefit farm audiences.

The link between farm vitality and health is essential. Without a healthy farming population, the farm's success will deteriorate. The rise in stress and suicide demonstrates the relationship. Accessibility and affordability of health care and mental health care are important aspects of farm risk management. Building resilience factors and understanding will help reduce the stigma associated with taking care of one's self, improve the connection to resources, and improve accessibility for farm audiences.

The tools below can help farm audiences and community members recognize the importance of health-related issues and encourage the development of strategies to address these issues at a community level. These tools and activities can easily be integrated into program planning and implementation. They can be found at

<https://www.udel.edu/academics/colleges/canr/cooperative-extension/personal-economic-development/agribusiness/>

### Assessment Tools:

#### *1. How Healthy is Your Farm? Linking Farm Vitality and Family Health and Wealth*

This 13-question Likert scale self-assessment tool that helps farm audiences: 1) see the linkages between their health and the financial vitality of the farm; and 2) determine what areas might need improvement through their self-ranking. Developed by the University of Delaware Cooperative Extension and University of Maryland Extension, the self-assessment tool is available at <https://www.udel.edu/academics/colleges/canr/cooperative-extension/personal-economic-development/agribusiness/>

### Tools for Farm Family Audiences

#### *1. Farm and Farm Family Risk and Resiliency Toolkit*

Based on the work of the authors, several tools have been created to support introducing the concepts of risk and resilience for farm audiences.

##### *a. Thriving Farm Visuals and Descriptions*

To illustrate how the health and wellbeing of the farm is dependent on a number of factors, the authors created a Factsheet *Creating a Thriving Farm Visuals, Descriptions and Stacking Game*, to illustrate the factors that would characterize Thriving, Coping, Struggling and Failing Farms. This Factsheet outlines these characteristics for each type of farm and provides visuals that can be used to show how a farm can move from Thriving to Failing if a key farm employee becomes ill and other factors are diminished over time.

This Factsheet, describes the socio-ecological factors for each type of farm. Developed by the University of Delaware Cooperative Extension and University of Maryland Extension, the Fact sheet is available at <https://www.udel.edu/academics/colleges/canr/cooperative-extension/personal-economic-development/agribusiness/>

### ***b. Building a Thriving Farm – Stacking Game***

The objective of this game is to show how key elements work together and support one another to build a resilient, thriving farm that can manage risks. This activity can be used to set the stage for education about key risk management strategies including health. Using the stackable labeled with key elements of a thriving farm, participants build their farm by stacking and prioritizing the pieces in a way that they think will create a thriving farm.

Once built, the facilitator announces a scenario, like someone becoming unable to work due to illness or farm accident. Participants must remove blocks that are impacted by the scenario and the structural integrity of the farm will be impacted. Participants will see how well their structure is built.

The facilitator then asks questions and provides information about how to anticipate and put into place best practices that will stabilize the farm during times of distress based on the scenario. Developed by the University of Delaware Cooperative Extension and University of Maryland Extension.

Information about and directions for instruction can be found within the Factsheet, *Creating a Thriving Farm Visuals, Descriptions and Stacking Game* located at

<https://www.udel.edu/academics/colleges/canr/cooperative-extension/personal-economic-development/agribusiness/>

### ***2. “How Healthy is Your Farm?”***

This short, animated video shows the importance of personnel health to the vitality of the farm. It illustrates the key human capital building blocks necessary to keep the farm thriving. Developed by the University of Delaware Extension and University of Maryland Extension.



### ***3. The Smart Choice Health Insurance™ and Smart Use Health Insurance™ educational modules and materials***

Designed for all audiences, these materials have an option to use farm-related case studies. These educational modules help participants better understand the why, what and how of 4 different health insurance related topics:

- *Smart Choice Basics* – provides an overview of why insurance is important for both health and financial wellbeing and reviews a tool that can be used to comparison shop for health insurance plans based on health care needs. A Medicare version is soon to be released.
- *Smart Use - Actions* – provides an overview of 7 steps consumers can implement to use their health insurance wisely for their health and financial wellbeing.
- *Smart Use – Your Health Insurance Benefits* – provides an overview of the types of benefits offered in plans and how to get and use these health benefits
- *Smart Use – Understanding and Estimating Costs* – provides an overview of the types of costs, why it’s important to understand them and how to estimate out of pocket costs for the plan you have so you can integrate them into your monthly spending plan.

In addition, there are specific resources for farm audiences located on the website.

<https://www.extension.umd.edu/insure>

Developed by the University of Maryland Extension and University of Delaware Cooperative Extension.

#### **4. *Resilient Farms: Financial & Management Guides and Resilient Minds***

Managing stress on the farm resources include educational programs and written resources that can be used by educators. In addition, training to become certified to use educational programs in your state can be acquired. These resources have been developed by Michigan State University Extension and can be found at [https://www.canr.msu.edu/managing\\_farm\\_stress/](https://www.canr.msu.edu/managing_farm_stress/)

#### **5. *Mental Health and the Impact on Wellness for Farm Families***

This two-page publication quickly outlines signs, symptoms and steps to be taken to get help when dealing with stress or depression. It also offers a guide for how to talk with your doctor.

Developed by the AgriSafe Network and can be found at <https://agn.memberclicks.net/assets/docs/OSHAREsources/Mental%20Health%20Resource.pdf>

#### **6. *Your Healthiest Self: Wellness Toolkits***

These online and printable resources developed by the National Institutes of Health provide an overview and then specific steps individuals can take for better health. The following topics are covered:

- Your Surroundings
- Your Feelings
- Your Body
- Your Relationships
- Your Disease Defense

This resource can be found at <https://www.nih.gov/health-information/your-healthiest-self-wellness-toolkits>

#### **7. *Getting Experience with Mindfulness (GEM)***

GEM: Get Experience in Mindfulness is an Awareness and Acceptance Stress Management Program. This program places an emphasis on stress management taught through practical and interactive mindfulness-based activities to facilitate experiential learning.

The program is a research based and theory-driven program that meets National Health Education Standards. There are five lesson topics: Intentions and Goal Setting, Awareness and Attention, Self-care: Stress Reduction and Relaxation, Communication and Relationships, and Gratitude and Acceptance. Among other things, participants of the program learn what mindfulness is and how to integrate it into daily life, alignment and form for over 25 strength and flexibility poses adapted from yoga poses and relaxation techniques.

The 108-page guide is designed for a lay-leader and is intended to be used with ages 10 and up.

Developed in 2018 by the University of Delaware it can be purchased from <https://shop4-h.org/products/gem-get-experience-in-mindfulness>

#### **8. *Mindful Wellness***

Ohio State University Extension has developed a website with resources that focus on mindfulness and its relation to physical and mental wellness. In addition, this resource connects readers to Ohio State's Center for Integrative Health and Wellness free mindfulness recordings for personal use through the OSU Wexner Medical Center. Additional guided imagery downloads are available through the OSU Health Plan.

This resource can be found at <https://fcs.osu.edu/programs/major-program-areas/healthy-relationships/mindful-wellness>

#### **9. *Farming and Ranching in Tough Times (FS1804 June 2016)***

This publication from North Dakota State University Extension speaks to the types of stressors farmers and ranchers experience. The publication also outlines what individuals can do to reduce stress and improve health by managing stress symptoms and specific actions are suggested. This resource can be found at <https://www.ag.ndsu.edu/publications/kids-family/farming-and-ranching-in-tough-times#section-4>

## Tools for Professionals and Key Stakeholders

### 1. *Linking Farm Vitality and Health Community Forums*

Increasing the awareness of issues related to farmer health and access to health and farm and community vitality by professionals in the health care, mental health, agriculture, finance, estate planning, and risk management sectors was the objective of community forums held in Vermont, Ohio, Maryland and Delaware.

During a daylong event, information was provided to set the stage and participants worked together to better understand the resources they could bring to supporting the farming community. Additionally, short term action plans were developed to rally collaborative efforts in addressing issues faced by farmers and their families regarding health, mental health, farm and family risk management, and transition and succession planning.

These forums were funded, in part, by the Northeast Region Center for Rural Development. The goal of the project was to create a Guide so other states could conduct state and local forums. The Guide describes how to conduct strengthening health and farm forums and will be available in early 2020. Contact the authors of this publication for more information.

### 2. *Farm Family Stressors: Private Problems, Public Issue*

This policy brief provides a summary of the stressors faced by farm families and their implications. It also provides strategies communities and decision-makers can use to better support farm audiences. This Brief can be used to help inform decision-makers.

Written by Dr. Bonnie Braun for the National Council on Family Relations. It can be found at <https://www.ncfr.org/resources/research-and-policy-briefs/farm-family-stressors-private-problems-public-issue>

### 3. *HIREDnAG*

The Health Insurance Rural Economic Development in Agriculture website was developed by a group of research and Extension professionals committed to understanding how health insurance decisions impact farm and ranch families and rural development. Resources are available for farmers and professionals and include research articles, educational tools, and videos that can be used with community members, key stakeholders and professionals. The HIREDnAG website is located at <https://www.hirednag.net/>.

### 4. *Mental Health First Aid Training*

This training provides a full day of information regarding types of mental illness -signs and symptoms; response strategies for those working with clientele; and local resource and referral information. There is a version for those working with adults and one for those working with youth.

There is some evidence that Mental Health First Aid (MHFA) increases participants' understanding of mental health and confidence helping individuals with mental health problems, and modestly improves attitudes toward mental illness, with small reductions in stigma (94).

The training is available in most states. For more information go to <https://www.mentalhealthfirstaid.org/>

### 5. *National Issues Forums – (NIF)*

This is a nonpartisan, nationwide network of locally sponsored public forums for the consideration of public policy issues. It is rooted in the simple notion that people need to come together to reason and talk - to deliberate about common problems.

Conducted by a variety of organizations, including Cooperative Extension, the forum offers citizens the opportunity to join together to deliberate, to make choices with others about ways to approach difficult issues and to work toward creating reasoned public judgment. Forums focus on an issue such as health care and provide a way for people of diverse views and experiences to seek a shared understanding of



the problem and to search for actionable common ground.

Forums are led by trained, neutral moderators, and use an issue discussion Guide that frames the issue by presenting the overall problem and then three or four broad approaches to the problem. Forum participants work through the issue by considering each approach, examining what option appeals to concerns them, and identifying the costs, consequences, and tradeoffs that would be incurred in following that approach.

NIF Forum topics are not specific to farm audiences but can be a tool to engage the broader community in deliberative discussion. National Issues Forums topics related to health issues include:

- How Can We Reduce Costs and Still Get the Care We Need?
- How Should We Ensure that People Have the Food They Need?
- What Should We Do about the Opioid Epidemic?
- What Should We Do When Alcohol & Drug Use Become a Problem to Society?

More information about NIF can be found at <https://www.nifi.org/>

## **6. Community Vitality and Rural Healthcare**

This topic guide focuses on how community and economic development can complement health services in rural areas and how collaboration between these sectors can address issues such as population health and public health issues. The guide can be found at <https://www.ruralhealthinfo.org/topics/community-vitality-and-rural-healthcare>

## **7. Rural Agricultural Health and Safety**

This topic guide focuses specifically on the health and safety issues inherent in the agricultural industry for farmers, their families, and their workers. It includes mental health information as well. The guide can be found at <https://www.ruralhealthinfo.org/topics/agricultural-health-and-safety>

## **8. Rural Suicide Prevention Toolkit**

The Rural Suicide Prevention Toolkit goes beyond farmers to include rural residents. The toolkit was produced by the NORC Walsh Center for Rural Health. Included are modules with resources and information focused on developing, implementing, evaluating, and sustaining rural suicide prevention programs. The toolkit is found at <https://www.ruralhealthinfo.org/toolkits/suicide>

## **9. Rural Response to Farmer Mental Health and Suicide Prevention Issue Guide**

In the summer of 2019, a team from the non-partisan and objective research organization at the University of Chicago's (NORC) Walsh Center for Rural Health Analysis produced a Guide with an extensive list of current resources and information available nationally. The new online guide is located on the Rural Health Information Hub with additional navigational assistance to help people move easily through the content.

<https://www.ruralhealthinfo.org/topics/farmer-mental-health>

## **10. Practical Strategies for Extension Agents to Partner with Mental Health Professionals in Providing Family Consultation to Farm/Ranch Families**

This Journal of Extension (JOE) article from October 2006 provides some guidance for Extension professionals who wish to partner with mental health professionals. The article can be found at

<https://www.joe.org/joe/2006october/iw3.php>

## **11. Mindful Wellness Curriculum**

Ohio State University Extension's digital Mindful Wellness Curriculum is a series of mindfulness lessons created by and for Extension educators to use in their community. The curriculum can be offered as a series of up to five lessons or one stand-alone lesson. Designed as PowerPoints with instructor information included in the slide notes.

Also sold with the curriculum: an overview of the curriculum, binder cover, a two-page participant

handout, and recommended pre- and post-program evaluations. The cost is \$48. More information can be found at <https://extensionpubs.osu.edu/mindful-wellness/>

### ***12. Mental Health America***

Mental Health America (MHA) organization was founded in 1909 and is the nation's leading community-based nonprofit dedicated to addressing the needs of those living with mental illness and promoting the overall mental health of all Americans. Their work is driven by their commitment to promote mental health as a critical part of overall wellness, including prevention services for all; early identification and intervention for those at risk; integrated care, services, and supports for those who need it; with recovery as the goal.

More information and educational resources can be found at <https://www.mhanational.org/>

### ***13. Teen Mindfulness: Breathe Deeply 4-H Lesson***

This 2-page lesson Guide can be used by educators or leaders. It provides activities that encourage youth to identify worries and strategies to help address them.

This resource can be found at [https://ohio4h.org/sites/ohio4h/files/imce/books\\_resources/Designteam/Mindfulness%20Lesson\\_0.pdf](https://ohio4h.org/sites/ohio4h/files/imce/books_resources/Designteam/Mindfulness%20Lesson_0.pdf)



## Financial Management

For many farmers, farm families and farm operations, major stressors include: managing of cash flow for the farm and the household, maximizing net worth and minimizing debt, planning for retirement and health care coverage, and determining contingency, transition and succession plans. Cooperative Extension Financial Management or Family Resource Management Educators and Specialists offer personal finance programming on a variety of topics that would be relevant for farm families. Agriculture Farm Management, Economists and Risk Management Specialists and educators also offer a variety of programs to support producers and their workers.

There are many resources available to support farm operators and their families in these areas. However, developing cross-subject matter programming to build resilience will be key to changing outcomes for clientele. Determining strategies to engage stakeholders, community decision and policy makers will enhance their ability to develop approaches to assist rural areas and farm populations. A few are included here.

### Assessment Tools

#### *Personal Finance*

##### **1. Consumer Financial Protection Bureau Financial Wellness Scale**

The financial well-being scale is a free tool to help measure the financial well-being of the people you serve. The scale, which was developed and rigorously tested by The Bureau, contains 10 questions to capture how people feel about their financial security and freedom of choice, plus 2 questions to assist with scoring. Responses to the questions can be converted into an overall financial well-being “score” between 0 and 100. This survey is available in English and Spanish.

The tool and guide for using the tool can be found at <https://www.consumerfinance.gov/practitioner-resources/financial-well-being-resources/measure-and-score/>

##### **2. Personal Finance Assessment Tools**

Dr. Barbara O’Neill of Rutgers University Extension developed several quizzes that can be used in programming to help participants to self-assess. These are now located

<https://njaes.rutgers.edu/money/assessment-tools/>

- *Financial Fitness Quiz* - how well you have managed your money.
- *Personal Health and Finance Quiz*- a survey regarding health practices and financial practices that prompts people to simultaneously assess both aspects of their lives.
- *Personal Resilience Resources Assessment Quiz* – assess available resources that can help them cope with financially stressful situations.
- *Investment Risk Tolerance Quiz*- Assesses your propensity to take risks and your investment practices.
- *Wise Credit Management Quiz*- Assess your frequency of performing recommended credit and debt management practices.

#### **Farm Business Finance**

##### **1. Oklahoma Farm and Ranch (Financial) Stress Test (Factsheet: AGEC-237)**

The farm stress test is designed to provide insight into sources of farm financial stress and the extent of stress. It highlights a few key financial measures and provides a visual interpretation of the numbers. This test can be found at

<http://dasnr22.dasnr.okstate.edu/docushare/dsweb/Get/Version-4797/F-237web-color.pdf>

##### **2. Interpreting Financial Statements and Measures (IFSaM)**

Use your financial statements effectively is important. This online self-paced tool will help you 1) learn to use your financial statements in day-to-day management, 2) understand how to interpret common financial statements, 3) acquire a powerful skill set to enhance your farm business and 4) help you gain self-confidence in the area of finance.

This resource can be found at <https://ifsam.cffm.umn.edu/>

## **Tools for Individuals and Farm Family Audiences**

There is a wide range of financial topics that fall into this area including personal finance, retirement planning, financial business planning, and contingency, succession, and transition planning to name a few. Cooperative Extension does provide programming in these areas. Here are a few resources:

### **1. *Extension Risk Management Education Centers***

These centers provide resources and grants to support programs that assist farmers in managing risk in the areas of production, price/market, legal/institutional, financial, and human. The website for grant information can be found at <http://extensionrme.org/>

This site also curates the agriculture risk and farm management documents, videos and presentations that can help educators find the information needed. It can be found at [www.AgRisk.umn.edu](http://www.AgRisk.umn.edu) The library has several major components including:

- Documents & Videos – 2,000+ organized by Production, Marketing, Financial, Legal, and Human Risk topics
- Crop & Livestock Budgets – Over 2,700 crop budgets representing over 280 crops and more than 400 livestock budgets from over 30 states
- Collections – Collections give you access to materials focused on a specific topic or developed as a comprehensive curriculum
- Conference Materials – A continually growing list of presentations from agricultural conferences.

Many Cooperative Extension educational resources and programs are identified in this library and, therefore, it is an excellent place to see what has been conducted in other states.

### **2. *Annie's Project***

This organization provides educational programs (Annie's Project, Managing for Today and Tomorrow, and Inspired by Annie's Project) designed to strengthen women's roles in the modern farm enterprise. The mission is to empower farm and ranch women to be better business partners through networks and by managing and organizing critical information. <https://www.anniesproject.org/>

### **3. *Making Family Business Decisions***

This Iowa State University Extension publication provides guidelines for conducting effective family business meetings. <https://www.extension.iastate.edu/agdm/wholefarm/html/c4-72.html>

### **4. *Workbook for Ranch Transition When You Aren't in Control***

This University of Nebraska Extension publication provides a resource for helping individuals plan discussions and provides strategies to address farming issues when they are not the key decision maker. The resource can be found at <https://extension.unl.edu/statewide/centralsandhills/2018%20Workbook%20for%20participants%20-%20complete.pdf>

### **5. *Financial Security for All***

At the eXtension website, a variety of topics are covered in articles and/or online learning modules that are provided by the Extension community that focuses on personal financial management. From basic money management to retirement planning to understanding investing, the lessons were developed by Extension personnel specializing in personal and family financial management. The homepage is located at <https://personal-finance.extension.org/financial-security-for-all-learning-lessons/>

### **6. *My Retirement Paycheck***

Developed by the National Endowment for Financial Education this resource allows participants to explore the eight aspects of one's life that work together to make up a retirement

paycheck. The decisions made produce or reduce retirement income. A nest egg can last much longer when different streams of income are pieced together and informed decisions within each interrelated decision area are made. The tool can be found at <https://www.myretirementpaycheck.org/>

### **7. *Planning for a Secure Retirement***

This online educational series walks participants through the process of estimating retirement needs and determining next steps. Developed by Purdue Cooperative Extension, it can be found at <https://ag.purdue.edu/programs/areyouprepared/secureretirement/Pages/default.aspx>

### **8. *Your Money Your Goals***

Your Money, Your Goals is a set of financial empowerment materials for organizations that help people meet their financial goals by increasing their knowledge, skills, and resources. Developed by the Consumer Financial Protection Bureau these materials can be found at <https://www.consumerfinance.gov/practitioner-resources/your-money-your-goals/>

### **9. *Counting Your Money Calendar***

Developed by Ohio State University Extension, the Counting your Money Calendar (\$8.50) is a tool that helps people track their income and expenses. It provides a fillable calendar and budget worksheet as well as information about other OSU Extension resources. It can be found at <https://extensionpubs.osu.edu/counting-your-money-calendar/>

### **10. *AgPlan***

AgPlan is a powerful website developed to help rural businesses develop a business plan. It is free of charge for anyone to use individually or in educational programs and is designed to provide customized assistance to different types of rural businesses. When you enter the site, you will be able to select your business type from the following choices: Ag – Commodity, Ag - Value-Added, Organic Transition, Personal Plan, or Small Business.

Each business type has an outline designed specifically for that particular type of business, tips or questions that help you develop each section of the plan, sample business plans, and links to additional resources for each section of the plan.

AgPlan is designed to help businessowners work with an educator or consultant while developing a business plan. You can give access to your business plan to the reviewers of your choice and AgPlan will facilitate interaction with them.

Developed by Center for Farm Financial Management at the University of Minnesota and the resource can be found at <https://agplan.umn.edu/>

### **11. *Ag Transitions***

The Ag Transitions website helps farmers & ranchers develop a plan to transition their business to the next generation. On the site, it will help farm operators develop their own transition plan, learn what needs to be included in the plan and provides tips and resources. It will help stimulate multi-generational discussions. Users can share the plan with family members, key advisors and the transition team for feedback and assistance.

Developed by Center for Farm Financial Management at the University of Minnesota and the resource can be found at <https://agtransitions.umn.edu/>

### **12. *Health Insurance & Farm Risk Management***

This video resource summarizes the recent 2017 USDA study regarding health insurance and farm operations. It helps set the stage for the importance of health care coverage, health care risk management and insurance.

Developed by University of Vermont Extension Risk Management Education. It can be found at <https://www.hirednag.net/resources-for-farmers>.

### **13. *Healthy Farmers, Prosperous Farms***

This video resource speaks to the importance of farmer health as it relates to farm vitality and prosperity. It summarizes research findings regard farmers, access to care and insurance coverage.

Developed by the HIREdNAg project, the video can be found on the Tools and Resources pages of <https://www.hirednag.net/resources-for-farmers>

## **Tools for Professionals and Key Stakeholders**

### **1. *Defining Stakeholders for Agriculture***

This table outlines key stakeholders for agriculture and was developed by the Integrated Environmental Health Impact Assessment System. It can be found at [http://www.integrated-assessment.eu/eu/guidebook/defining\\_stakeholders\\_example\\_agriculture.html](http://www.integrated-assessment.eu/eu/guidebook/defining_stakeholders_example_agriculture.html)

### **2. *A Framework to Assess the Resilience of Farming Systems***

Resilience of a farming system is defined as its ability to ensure the provision of the system functions in the face of increasingly complex and accumulating economic, social, environmental and institutional shocks and stresses, through capacities of robustness, adaptability, and transformability (55). This framework provides a tool that can be used to assess a farms robustness, adaptability, and transformability in relation to challenges. The article, framework and resources can be found at <https://www.sciencedirect.com/science/article/pii/S0308521X19300046>

### **3. *National Association of Personal Financial Advisors (NAPFA)***

Is the country's leading professional association of Fee-Only financial advisors—highly trained professionals who are committed to working in the best interests of those they serve. The association provides support and education for over 3,700 practitioners all over the country and is governed by the NAPFA Board of Directors and supported by our four Region Boards. More information and to find a local advisor go to: <https://www.napfa.org>

### **4. *Association for Financial Counselors, Planners and Educators***

The mission is to ensure the highest level of knowledge, skill, and integrity of the personal finance profession by certifying, connecting and

supporting diverse and capable professionals who serve communities worldwide. Referral information can be found by location by going to:

<https://www.afcpe.org>

### **5. *Coalition of Agricultural Mediation Programs***

This is a network of USDA Certified State Programs offering mediation services to the agricultural community. As of late 2019, 42 certified state programs were in operation.

From farm credit issues to disputes over participation in USDA programs, the state mediation programs demonstrate that regardless of the nature of the dispute, mediation can improve communication and repair the relationship between the parties, enable the parties to tailor solutions that work for them, and is generally faster and cheaper than traditional litigation.

More information can be found at <https://agriculturemediation.org>

## Personal, Family and Farm Resilience Development

As emphasized in this Guide, personal and family resilience are a big part of farm vitality. On the individual level, resilience characteristics and skills include self-compassion, hardiness, self-control and managerial skills. The characteristics of family resilience include harmony, communication skills, family time, optimism, hardiness, support networks and flexibility. Family resilience theory indicates belief systems, organization skills and communication skills are key to family resilience (54, 59, 60, 65, 83-91). Building human and social resources that assist in developing strong interpersonal interactions are key to the short and long-term functionality of the success of businesses (22, 40, 71, 82).

Relationship resilience is built through reciprocal associations between and among people who live and work together, people in their communities, those who benefit from the productivity of the farm, and those making policy decisions about farming.

Cooperative Extension has not developed many programs to help build these skills specifically for farm adults and families. Development of farm support networks has happened through programming efforts like field days, agriculture leadership programs, and risk management program series like Annie's Project. Communication has been addressed in business transition and succession planning or retirement planning programs. In the past, Family and Consumer Science programming offered individual and family relations programming that included parenting, aging and life span development topics.

A main focus of 4-H is to provide youth an environment to build individual and social relationships in a safe place. In Family and Consumer Science programs, the focus has been parenting programs such as Strong Families, care giving programs and mindfulness programs.

In short, the teaching of and discussion about personal, family and farm business resilience skills

have been supplementary to other programming. Working across program areas can help to bring a more integrated approach to building resilience skills in our audiences. Work by other organizations may provide some guidance and resources.

### Assessment Tools:

#### 1. *Personal/Individual resilience “How to Measure Resilience with These 8 Resilience Scales”*

This article (1) provides eight scales that can be used to assess personal resilience. Three scales that are listed in the article have been shown to be valid measures and are offered below. An additional scale and information focus on resilience in the workplace. The article can be found at <https://positivepsychology.com/3-resilience-scales/>

Three tools from this article are shared below:

- a) Connor-Davidson Resilience Scale (CD-RISC). This scale was originally developed by Connor-Davidson (21) as a self-report measure of resilience within the Post Traumatic Stress Disorder (PTSD) clinical community. It is a validated and widely recognized scale. More about this scale can be found at <https://positivepsychology.com/connor-davidson-brief-resilience-scale/>
- b) Resilience Scale for Adults (RSA). This highly rated (93) resilience scale, was authored (36) as a self-report scale targeting adults. The scale has five scoring items that examine both the intrapersonal and interpersonal protective factors that promote adaptation to adversity.
- c) Brief Resilience Scale – this is a self-rating questionnaire aimed at measuring an individuals' ability to “bounce back from stress”. This instrument (70), has not been used in the clinical population; however, it could provide some key insights for individuals with health-related stress.



## 2. *Family Resilience Assessment Scale*

A scale was developed for a dissertation that can be used to measure family resilience (75). The scale has been subsequently referenced as part of other research projects. The scale is based on the work of a variety of family resilience researchers included Walsh, cited in the reference list of this guide, who has been studying family resilience for multiple decades. Information is located at <https://ufdc.ufl.edu/UFE0012882/00001>

Extension and research professionals could work together to develop self-assessment tools for Extension audiences.

### **Tools for Individual and Farm Family Audiences**

#### 1. *The Road to Resilience*

People generally adapt well over time to life-changing situations and stressful conditions. What enables them to do so? It involves resilience, an ongoing process that requires time and effort and engages people in taking a number of steps. The website is intended to help readers with taking their own road to resilience. The information describes resilience and some factors that affect how people deal with hardship.

Much of the content focuses on developing and using a personal strategy for enhancing resilience. Developed by the American Psychological Association. <https://www.apa.org/helpcenter/road-resilience>. A printed pdf version can be found at [https://www.uis.edu/counselingcenter/wp-content/uploads/sites/87/2013/04/the\\_road\\_to\\_resilience.pdf](https://www.uis.edu/counselingcenter/wp-content/uploads/sites/87/2013/04/the_road_to_resilience.pdf)

#### 2. *Building Resilience Together*

Everyone faces the stress of adversity and change. For people working in agriculture, that adversity and change can be even more challenging.

*Building Resilience Together* is a way to improve your resilience by intentionally working on your social support system. Social support is a critical part of your resilience. By working on your social support system alongside a small group of other women in agriculture, you'll develop ways of

thinking and doing that will contribute to your resilience. This resources can be found at [https://agrisk.umn.edu/Library/Record/building\\_resilience\\_together\\_8\\_week\\_guide](https://agrisk.umn.edu/Library/Record/building_resilience_together_8_week_guide)

#### 3) *Keys to Resilience: Transformation through Adversity*

Based on the Walsh model, Wisconsin Cooperative Extension has developed a short program and resource materials to be used with audiences that will help them understand factors that contribute to family resilience. More information can be found at <https://fyi.extension.wisc.edu/familyresilience/>

#### 4) *Strengthening Families Program*

The *Strengthening Families Program* is for parents and youth 10-14 is delivered in seven parent, youth, and family sessions using narrated videos portraying typical youth and parent situations with diverse families. It is an evidence-based program showing success. Information about the program and becoming certified to use the material can be found at <https://www.extension.iastate.edu/sfp10-14/>

#### 5) *National Extension Relationship and Marriage Education Network*

A multistate group of Extension and faculty that support Extension educators and professional partners who are working with youth and adults to enrich couple relationships. They provide several educational programs and offer train the trainer opportunities. More information can be found at <https://www.fcs.uga.edu/nermen/nermen>

#### 6) *Preparing the Next Generation to Take Over the Family Business*

This PowerPoint presentation Bernie Erven, Professor Emeritus, Ohio State University, and Erven HR Services outlines the roots of family business succession challenges; provides some guidelines for leaders of management succession and for the next generation; and identifies some key communication strategies. It is included in this list of tools as an example of the types of human and social capital resources and resilience factors that



need to be developed for farm operators and their successors.

It can be found at

<http://www.hort.cornell.edu/expo/proceedings/2011/General%20Session/Management%20Succession%20Preparing%20Next%20Generation%20New%20York%20January%202011.pdf>

### 7) *Checking Your Farm Business Management Skills*

Significant financial and economic stress is facing many farm families, and a number of them are attempting to assess their potential to not just survive the current period of low prices and incomes, but to be viable, long-term participants in the agriculture of the future. This is a critical issue for Indiana farm families—will the business be positioned for long-run financial success after struggling through short-run financial stress?

The checklists in this publication can assist you in assessing whether you have the required skills. Given the profound changes in the agricultural industry and in the farming environment, it is essential to honestly assess your managerial skills and capacities, and to improve those skills if your assessment indicates that you come up short or are vulnerable.

This resource can be found at

<https://www.extension.purdue.edu/extmedia/ID/ID-237.pdf>

### **Tools for Professionals and Key Stakeholders**

Resources for professional development and key stakeholders can be found in a variety of places because different disciplines are using the resilience framework. Most typically it is with child and family development.

#### 1. *Building Resilience and Reducing Risk: What Youth Need from Families and Communities to Succeed*

To bring a family focus to policy making, key stakeholders in Wisconsin developed this document. It provides a check list for policy makers as well as

provide background information on a number of youth development and family topics of importance for youth and family wellbeing and resilience. The document can be found at

[https://www.purdue.edu/hhs/hdfs/fii/wp-content/uploads/2015/07/s\\_wifis10report.pdf](https://www.purdue.edu/hhs/hdfs/fii/wp-content/uploads/2015/07/s_wifis10report.pdf)

#### 2. *Farm Family Stressors: Private Problem, Public Issue*

This policy brief, and its accompanying executive summary, was written to explain the impact of ordinary and extraordinary stressors on farm families. The brief contains talking points and seven possible policy actions. It could be used to open conversations with professionals and stakeholders. The brief can be found at

<https://www.ncfr.org/resources/research-and-policy-briefs/farm-family-stressors-private-problems-public-issue>

#### 3. *Preventing Adverse Childhood Experiences (ACEs): Leveraging the Best Available Evidence*

Adverse Childhood Experiences (ACEs) have been linked to risky health behaviors, chronic health conditions, low life potential, and early death. As the number of ACEs increases, so does the risk for these outcomes (21). ACEs are potentially traumatic events that occur in childhood (0-17 years) such as experiencing violence, abuse, or neglect; witnessing violence in the home; and having a family member attempt or die by suicide. Also included are aspects of the child's environment that can undermine their sense of safety, stability, and bonding such as growing up in a household with substance misuse, mental health problems, or instability due to parental separation or incarceration of a parent, sibling or another member of the household.

Traumatic events in childhood can be emotionally painful or distressing and can have effects that persist for years. Factors such as the nature, frequency and seriousness of the traumatic event, prior history of trauma, and available family and community supports can shape a child's response to trauma.

The CDC has developed this resource to help states and communities leverage the best available evidence to prevent ACEs from happening in the first place as well as lessen harms when ACEs do occur. This resource can be found at <https://www.cdc.gov/violenceprevention/pdf/preventingACES-508.pdf>

**Wrap up:**

The key to using the *Farm and Family Risk and Resilience Socio-Ecological Model* will be to plan programming that addresses knowledge and skill-building for both risk management and resilience.

By integrating the breadth and depth of risk and resilience, multi- and cross-disciplinary approaches will likely increase or maximize benefits to individuals, families and systems that support farming operations. Though effective, research grounded programming is occurring, a review that will ultimately integrate the socio-ecological model will be needed.

Both new and existing programming may bring greater meaning and impact for Extension audiences. The evaluation and assessment

components of programming can provide evidence of impact.

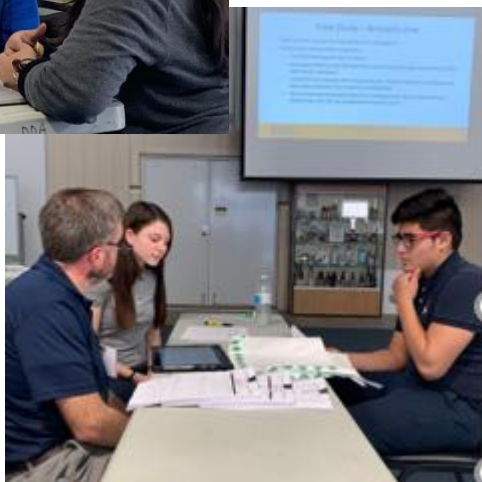
Working with professionals from other disciplines will enrich content. In this way both educators and researchers will be better able to guide individuals to behavior change for their own lives, farming enterprises, and promote condition changes in their farming communities and beyond.

Tools developed by the authors that were described in this section are available in the *Farm and Farm Family Risk and Resilience Tool Kit* located at

<https://www.udel.edu/academics/colleges/canr/cooperative-extension/personal-economic-development/agribusiness/>

**The authors welcome suggestions for additional tools for subsequent editions of the guide.**

Students learned about succession planning during the 2020 Delaware Ag Week Risk Management Session. They started by building their thriving farm using the Stacking Game then they asked questions of a lawyer, accountant and other professionals after reviewing a succession planning case scenario.



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## SECTION 4

### Where Do I Start?

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Developing farm and farm family risk management and resilience skills is no easy task. The system is complex and it will take time to determine needs and identify strategies that will help support farms, farmers and farm families from multiple systemic approaches.

Developing risk management and resilience skills is also exacerbated by the lack of resources grounded in the socio-ecological approach. Tools and programming will need to be adapted to take into consideration risk and resilience approaches as well as the socio-ecological systems that can support the farms, their families and workers and the communities in which they live.

So where do to start?

Strategies to build resilience and strengthen resilience thinking and practice include:

1. **Consider** the value of resilience thinking to the farmers, farm families, and communities with whom you provide education and other professional services. Weigh how the approach might reduce the negative impact of stress and crises among those you serve.
2. **Broaden** self-understanding of the interconnectedness between the ecological, social and relational factors that affect farming operations and the human capital and abilities of farm family members to manage change and stress. Expanded learning can increase professional expertise.
3. **Discuss** with colleagues the appropriateness for, and feasibility of, incorporating resilience thinking into educational programs and other services. Peer learning can increase confidence

in adapting current programming to a resilience framework.

4. **Determine** how you and other professionals can provide or expand a network of supportive professionals and peers that can support farmers and farm families in good times and in tough times. This approach will help strengthen the social support network and communities of place, in which farming occurs, interest and practice.
5. **Begin and/or continue** to provide research-based or informed, theory-driven strategies that help build knowledge, confidence, skills and behavior change with respect to best management practices regarding environmental, agricultural, marketing, financial, production, health, and well-being.

The approach needs to recognize it's not just about the best practice, but also about the guidance for planning and adopting new practices that will enhance the farm and farm family resilience thinking and vitality in the short and long term.

6. **Show** how the work you do is connected to the farm and family risk and resilience socio-ecological model and explain why the connections are important for farm and family resilience.
7. **Incorporate** change and resilience theories in program planning, implementation and evaluation.

8. **Use** strategies and tools to assist farm operators, key personnel, community members and policy makers integrate eco-system approaches for planning that helps to manage risk and build resilience thinking. If a resilience approach is valid, the health of the farm and of the farming population should be strengthened.
9. **Work** in partnership with others to develop organizational and community policies and collaborations that support and enhance the physical, mental, emotional and financial health and well-being of farming operations, farmers, their families and workers as well as the communities in which they reside.

Policies and activities should make it easier for farmers and farm families to connect with risk management actions like accessing health care; affording health insurance, connecting to local markets; finding skilled labor; finding off-farm employment and child or adult care, if needed; and adapt to changes in regulations regarding environmental, production, or food safety;

These policies and activities need to address the supports required to build resilience capital for families and farm enterprises. Examples include building strong support networks, creating easy access to care, de-stigmatizing mental health issues, providing low-cost mediation services, finding ways to get products to local and regional markets, finding affordable labor, and identifying creative solutions for training the next generation of farmers so farms can stay viable.

Educational programming can address any or all of those supports. Efforts will do much to strengthen the health and vitality of farming operations, farmers and farm families as well as the communities in which they are located.

## **Program Planning**

### ***Understand issues and problems***

When planning educational programs, it is important to understand the key issues and problems that you want to address. These issues and problems should be grounded in needs assessment, current conditions, and understanding of the literature.

### ***Name and frame problem and issue***

When working toward developing programming that addresses farm and farm family risk and resiliency, it will be important to identify, name and frame the issue or problem in such a way that both risk management and resilience factor development can be addressed.

In addition, program planners who follow the socio-ecological model and resiliency thinking will be tackling the issue from multiple levels of the framework, identifying appropriate strategies of engagement for each of the audiences in relation to desired outcomes.

### ***Identify Outcomes***

Identifying outcomes is critical to selecting strategies for program development and implementation. Effective outcomes achievement will be determined by both partners inside Extension and external partners through the expertise and other resources they both bring to addressing issues and problems. Depending on the issue or problem a variety of community partners, professionals and decision-makers may be needed.

### ***Develop Timeline***

The authors recognize that the development of a program plan using an integrative approach will take time. Developing a strategic timeline will be helpful to allow sufficient time yet do the programming within a desired or required timeframe.

For example, raising awareness with the community and with other professionals may

have to come before educational programming can be done with farmers, families and farm workers.

Working backwards in your timeline may be helpful. As an example, in Delaware major programming efforts with farmers happen after the first of the year. In order to prepare our partners and professionals to be aware of the needs and enlist their assistance, working almost a year ahead of time helped them and our Extension colleagues to be ready for programming around mental and physical health. For this reason, thinking through the timeline will be important as well.

### ***Program Planning Tool***

The authors provided a Program Planning Tool worksheet to help educators with program planning. It can be found in Appendix D.

Specific strategies can be developed based on appropriate theories, current conditions and resources, needs and values of local farmers, families and communities and existing public policies. When combined with logic models, educators have tools to plan programs for farmers and farm families, professional development for those who support farmers and farm families and for informing and engaging stakeholders.

The tool allows for using the socio-ecological approach by planning coordinated responses across audience groups based on the interventions that will best meet the needs to address an issue or problem for each audience group. By programming at multiple levels

within a timeframe, simultaneous awareness and knowledge building and collective programming can make a greater impact.

### **Conclusion**

This Guide was created to help professionals think and act through a research- based, theory-informed, multidisciplinary resilience framework. More specifically, we provided:

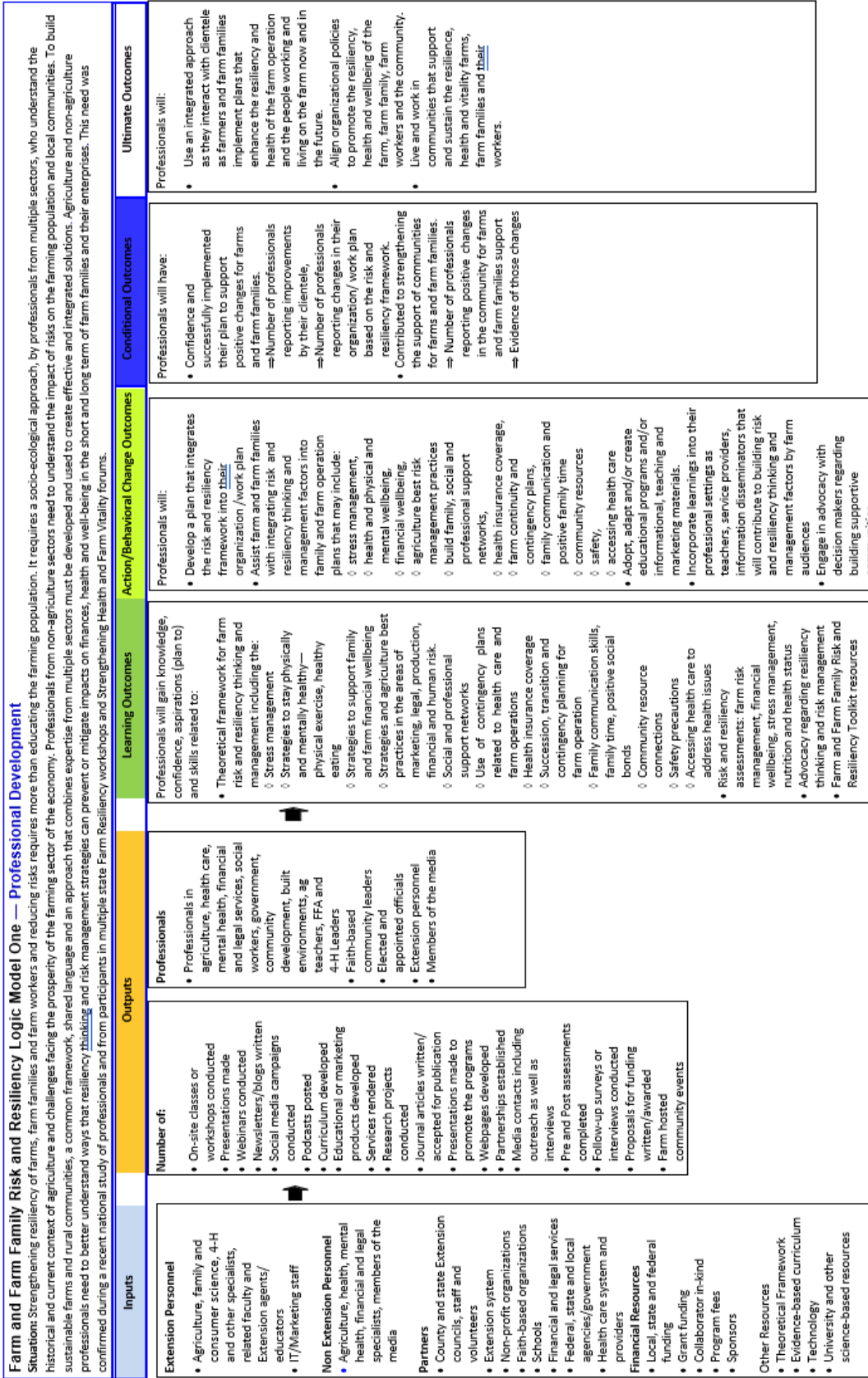
- Evidence of need for, and types of, programming in our review of literature
- Two change theories and four resilience theories that together can guide decision making and provide a basis for evaluation of impact
- Three logic models to focus program planning by audience and link inputs to actions to outcomes.
- Tools for assessment and teaching
- An extensive list of references which can be used in seeking grants
- An invitation to add tools and references by contacting the authors

We encourage educators to use these tools to change both individual responses and systems that impact health of individuals and farms. In one state, 100% of participants in an Extension program thought a risk and resilience approach was worthy of taxpayer' dollars (40).

**100% of participants in an Extension program thought a risk and resilience approach was worthy of taxpayers' dollars.**



# Appendix A: Logic Model One - for Professionals



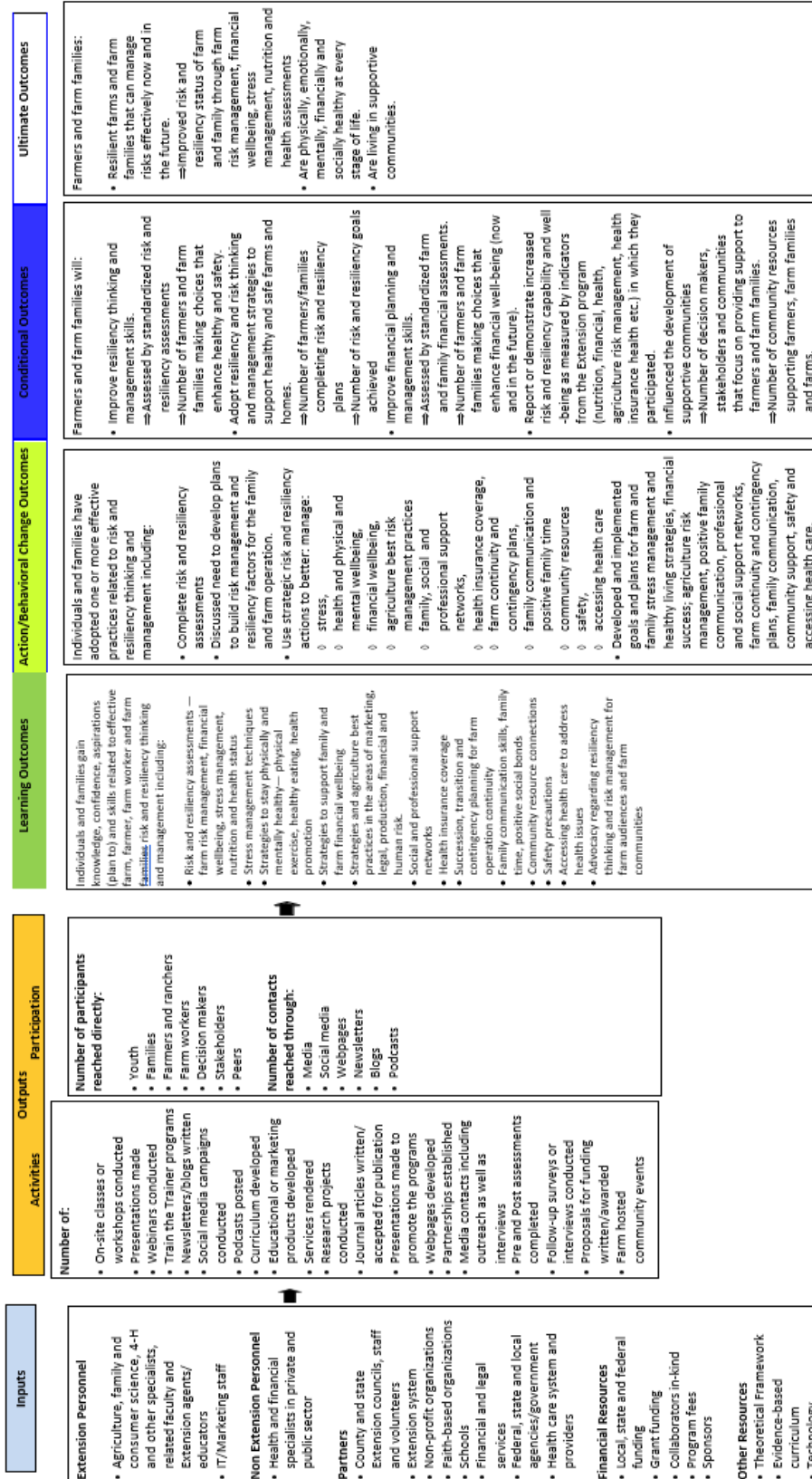
Created by Bonnie Braun & Maria Pippidis, 2019



# Appendix B - Logic Model Two - for Farmers, Farm Families and Farm Workers

## Farm and Farm Family Risk and Resiliency Logic Model Two — Farm and Farm Families

**Situation:** Farm families experience both ordinary and extra-ordinary stress and change because of the interdependent nature of family farm business and farm family living. Ordinary stresses include the constancy of responsibilities to make or keep the farm profitable; begin and/or retain a farming legacy; juggle on and off-farm work; care for family members; deal with illness or injury; manage multi-generational tensions and handle weariness and loneliness. Extra-ordinary stresses, like bad weather, volatile markets, and tariffs, add pressures to farming enterprises. These pressures impact the health of the farm and farming population. Responses to pressures, or stressors, range from faulty thinking to dismay, distress, illness, despair and even suicide. At stake—the future of many farming operations, farm families, farm workers, farming communities, the prosperity of agriculture and the availability of domestic products for our country's citizens. The farming population can benefit by understanding and adoption of skills in resiliency thinking and risk management. They can learn through an integrated informational and educational approach among agriculture, family, finance, community and health professionals.

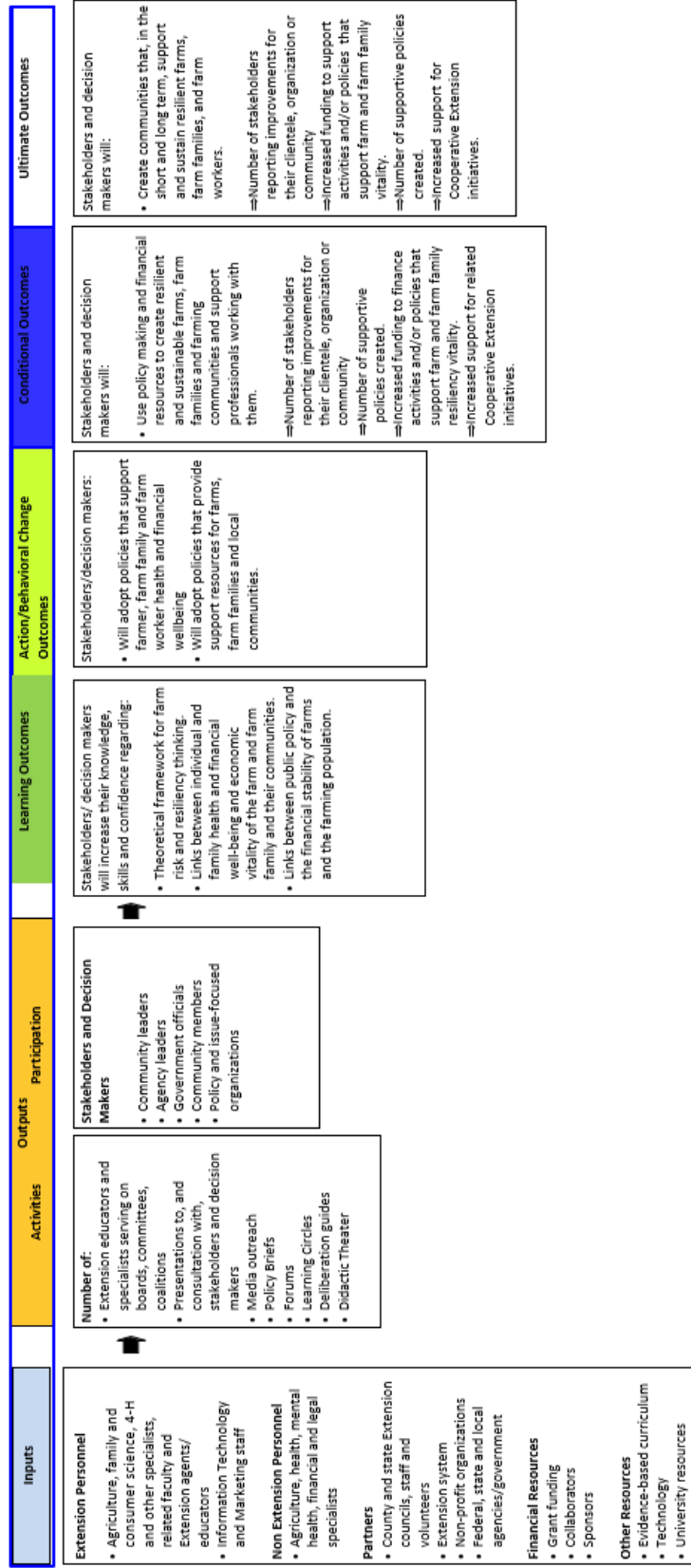


Created by Bonnie Braun & Maria Pippidis, 2019

# Appendix C - Logic Model Three - for Stakeholders

## Farm and Farm Family Risk and Resiliency Logic Model Three — Stakeholder Development

Situation: Reducing risks and strengthening resiliency of farms, farm families and farm workers requires more than educating the farming population. It requires that communities be supportive. For communities to be supportive, policies, procedures, services, rules and regulations and ways of interacting with the farming population must be integrated across multiple sectors using a socio-ecological approach. The ways communities work must be in alignment with risk and resiliency thinking and actions. Professionals, decision and public policy makers and other stakeholders need to understand risks faced by the farming population, the agricultural economy and ultimately the community and the economy. They need to understand how community support and resources enable the farming population and their farm enterprises to be resilient. They need a common framework and shared language to organize communities to identify challenges, create integrated solutions and institute supports that strengthen finances, health and well-being of the farm, farm family and farm workers. This approach will further strengthen the broader community's economic and social determinants of health and wealth.



Created by Bonnie Braun & Maria Pippidis, 2019

**Farm and Farm Family Risk and Resiliency Extension Program Planning Worksheet**

1. What is the issue or problem you are addressing and why?

What:

Why:

2. What will success look like for...?

Individuals

Farm Families

Farm Enterprises

Communities

Policy/Decision Makers

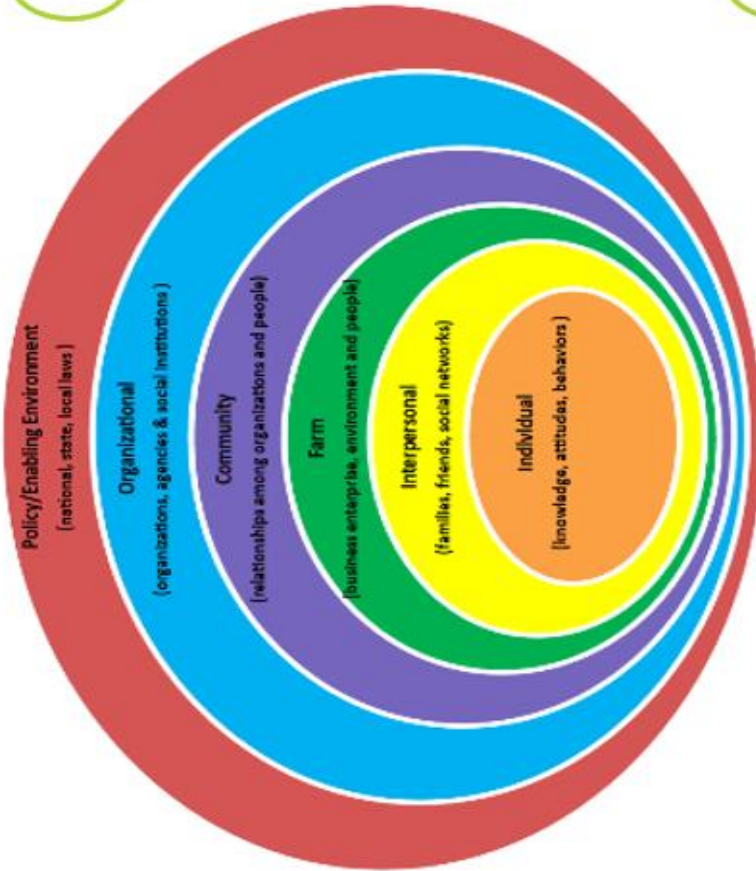
**Program Planning Tool page 2**

3. What are the risk management and resilience factors and strategies that will assist in addressing the identified issue or problem?

| <b>Socio-Ecological level</b> | <b>Risk Factors</b> | <b>Risk Management Strategies</b> | <b>Resilience Factors</b> | <b>Resiliency Strategies</b> |
|-------------------------------|---------------------|-----------------------------------|---------------------------|------------------------------|
| Individual                    |                     |                                   |                           |                              |
| Family                        |                     |                                   |                           |                              |
| Farm                          |                     |                                   |                           |                              |
| Community                     |                     |                                   |                           |                              |
| Policy Makers/Decision makers |                     |                                   |                           |                              |

Created by Maria Pippidis, University of Delaware Cooperative Extension, November, 2019

Points of Action and Notes



**Program Planning Tool Page 4**

**Program Planning Worksheet**

| <b>WHO — Targeted Audience</b> | <b>WHAT -- Outcomes will be addressed?</b> | <b>HOW – Outcomes will be assessed using which indicators</b> | <b>WHAT Teaching Tools</b> | <b>What Assessment Tools</b> | <b>WHICH Partners and their contributions</b> | <b>Timetable</b> | <b>Responsible Educators</b> |
|--------------------------------|--|---|----------------------------|------------------------------|---|------------------|------------------------------|
| Individual level               |  |   |                            |                              |   |                  |                              |
| Family level                   |  |   |                            |                              |   |                  |                              |
| Farm business level            |  |   |                            |                              |   |                  |                              |
| Community level                |  |   |                            |                              |   |                  |                              |
| Policy/Decision makers         |  |   |                            |                              |   |                  |                              |

**Gaps?**



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