An Integrated Risk and Resiliency Extension Logic Model Framework for

Health and Wellness of Farms and Farming Populations.

By Bonnie Braun and Maria Pippidis

Introduction--Development of Logic Models

In 2018, Extension faculty in both Delaware and Maryland began to respond to an emerging crisis among farmers: Increased stress and the impact on both the farm and farm family well-being. The University of Maryland Extension created a new Farm Stress Management website; The University of Delaware Extension Stress is Gonna Get You if you Don't Watch Out.

Both institutions hosted statewide Strengthening Health and Farm Vitality forums which identified mental health and financial management as two of five issues. Together, the institutions produced a special edition of the Delmarva Farmer released in January, 2019. The University of Delaware created a Delaware Library Guide; conducted Mental Health First Aid training; made presentations at Ag Week; and focused on stress management at farm meetings.

The University of Maryland College of Agriculture and Natural Resources awarded a multi-disciplinary team a seed grant to investigate stress among Maryland Farmers. A survey of 527 attendees at winter production meetings revealed that stress was higher than the year and that finances and regulations were among the top sources of stress. A five-member team of UME agriculture and family and consumer sciences attended the Michigan State University Managing Farm Stress training. And, in partnership with the Maryland Soil Conservation Service, conducted four workshops for Extension, agriculture, natural resources, finance and health professionals to increase awareness and understanding of mental health issues and impacts on farm viability.

In 2019, the authors were asked to create logic models that would help Extension professionals in both states to have a common framework for programming to address stress. Before the models could be created, an extensive review of literature and theories was conducted by the authors to provide a basis for structuring the logic models.

During the review, the authors identified assessments for formative and summative evaluation and multiple resources for teaching. We also reviewed and created teaching tools. We determined that most existing teaching resources addressed stress management and were focused on the individual. We located only a few resources that addressed underlying causes of stress both within and external to the farming population; focused on the interactions within families and communities; or included public policies influencing the stress. We also found little evidence of multi-discipline, research-based and theory-informed resources for programming.

We concluded that a risk and resiliency framework was best suited to address the complexities of stress, stressors, risk and recovery. We decided that a guide to risk and resiliency programming and three logic models were needed. The logic models were created for three distinct audiences: professionals, the farming population and stakeholders.

Accompanying Guide:

To assist Extension educators in planning, conducting and evaluating programming, we created a toolkit that includes:

- and resiliency sociological model
- A set of three logic models for programming with three different audiences;
- Tools for assessments and teaching; and
- Resources. •

An electronic copy of the Farm and Farm Family Risk and Resiliency Guide and Toolkit [to be] located at: http://extension.udel.edu/ag/agribusiness/ or https://extension.umd.edu/FarmStressManagement

Permission to Use Logic Models

The three logic models and the socio-ecological framework for farm and farming population health and wellness may be used and/or modified to fit the needs of a variety of educators in creating their own plans of work for conducting Extension programming. For example, individual educators may choose to only do program for a portion of the logic model. But taken together, a set of educators, including an entire state program, can show collective impact.

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Author Contact Information:

Bonnie Braun, PhD

Professor Emerita, School of Public Health Department of Family Science University of Maryland Extension bbraun@umd.edu

• The Farm and Farm Family Risk and Resiliency Guide with a literature review and a farm and farm family risk

Maria Pippidis, AFC© County Director and Extension Educator--Financial Management University of Delaware Cooperative Extension pippidis@udel.edu

Explanation of Logic Models

In recent years, professionals from multiple disciplines who serve agriculture, have been seeking ways to understand and help reduce impacts of crisis and stress on farming operations and farming populations. Many of these professional are part of the Extension service in the areas of agriculture, 4-H, family and consumer sciences, and community development. Some are from health, financial and commodity organizations. Some may recall experiences of the Farm Crisis of the mid-1980s; others got involved after the 2008 recession; and some are newly learning about programming as the downturn in farming profitably continues a multi-year trend.

Cooperative Extension professionals are creating educational tools, offering professional development, conducting educational programs and doing individual consultations. In general, Extension programs are provided to local farmers, families and other professionals on separate tracks—one focused on the farming enterprise; the other on individuals and families. Separately or together, they likely include risk management aspects of the farm and/or family financial or health. Alternatively, they may focus on agricultural risk management, individual stress management techniques, finances, nutrition and health, or chronic disease management.

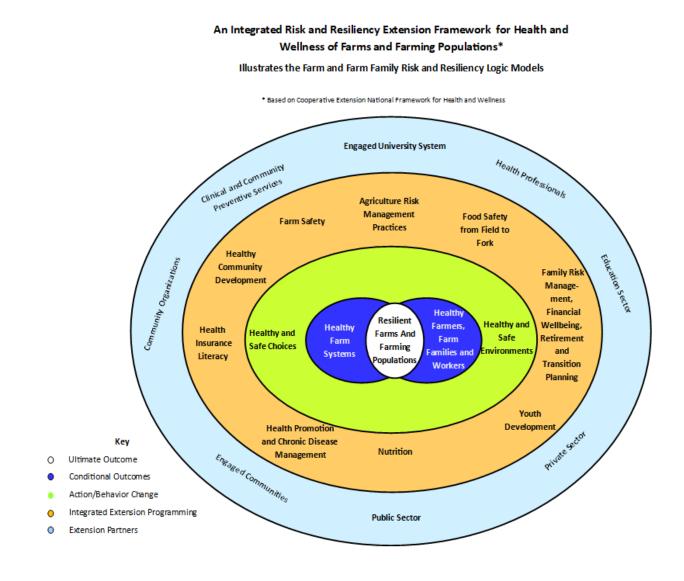
Few professionals take a multidisciplinary, integrated, socio-ecological approach to physical, mental, emotional and financial health and well-being of individuals, families and the farm to prevent or mitigate risk and impact of stress and crisis. Such an approach has been recommended by researchers and practitioners. The authors created a multi-discipline, research-based, theory-informed risk and resiliency framework, shown in Figure 1. The framework is grounded in a slightly modified version of the Cooperative Extension National Health & Wellness Framework. The title of the framework is An Integrated Risk and Resiliency Extension Framework for Health and Wellness of Farms and Farming Populations.

This framework provides a visual of relationships between the ultimate outcome in the white center, other outcomes, content and input. Each component corresponds with its color-coded component in three logic models. The logic models; a guide for programming, with a comprehensive literature review, and educational tools are available in a new Extension Farm and Family Risk and Resiliency available in later 2019 after user-testing. Three logic models were created to provide a common programming and assessment approach. Each focuses on a different audience.

Logic Model 1 targets agriculture, finance, family and health professionals who support the farming populations. 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 resiliency; 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. It can help professionals plan, implement and measure outcomes of risk and resiliency 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. It is for professionals to use to plan, implement and measure outcomes of risk and resiliency 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.



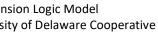
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Figure 1

Bonnie Braun and Maria Pippidis, September 30, 2019





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Farm and Farm Family Risk and Resiliency Logic Model One — Professional Development

Situation: Strengthening resiliency of farms, farm families and farm workers and reducing risks requires more than educating the farming population. It requires a socio-ecological approach, by professionals from multiple sectors, who understand the historical and current context of agriculture and challenges facing the prosperity of the farming sector of the economy. Professionals from non-agriculture sectors need to understand the impact of risks on the farming population and local communities. To build sustainable farms and rural communities, a common framework, shared language and an approach that combines expertise from multiple sectors must be developed and used to create effective and integrated solutions. Agriculture and non-agriculture professionals need to better understand ways that resiliency thinking and risk management strategies can prevent or mitigate impacts on finances, health and well-being in the short and long term of farm families and their enterprises. This need was confirmed during a recent national study of professionals and from participants in multiple state Farm Resiliency workshops and Strengthening Health and Farm Vitality forums.

Inputs	Activities	puts Participation	Learning Outcomes	Action/Behavioral Change Outcomes	Condit
 Extension Personnel Agriculture, family and consumer science, 4-H and other specialists, related faculty and Extension agents/ educators IT/Marketing staff Non Extension Personnel Agriculture, health, mental health, financial and legal specialists, members of the media Partners County and state Extension councils, staff and volunteers Extension system Non-profit organizations Faith-based organizations Schools Financial and legal services Federal, state and local agencies/government Health care system and providers Local, state and federal funding Grant funding Collaborator in-kind Program fees Sponsors Other Resources Theoretical Framework Evidence-based curriculum Technology University and other science-based resources 	Activities Number of: • On-site classes or workshops conducted • Presentations made • Webinars conducted • Newsletters/blogs written • Social media campaigns conducted • Podcasts posted • Curriculum developed • Educational or marketing products developed • Services rendered • Research projects conducted • Journal articles written/ accepted for publication • Presentations made to promote the programs • Webpages developed • Partnerships established • Media contacts including outreach as well as interviews • Pre and Post assessments completed • Follow-up surveys or interviews conducted • Proposals for funding written/awarded • Farm hosted community events	Participation Professionals • Professionals in agriculture, health care, mental health, financial and legal services, social workers, government, community development, built environments, ag teachers, FFA and 4-H Leaders • Faith-based community leaders • Elected and appointed officials • Extension personnel • Members of the media	 Professionals will gain knowledge, confidence, aspirations (plan to) and skills related to: Theoretical framework for farm risk and resiliency thinking and management including the: Stress management Strategies to stay physically and mentally healthy—physical exercise, healthy eating Strategies to support family and farm financial wellbeing Strategies and agriculture best practices in the areas of marketing, legal, production, financial and human risk. Social and professional support networks Use of contingency plans related to health care and farm operations Health insurance coverage Succession, transition and contingency planning for farm operation Family communication skills, family time, positive social bonds Community resource connections Safety precautions Accessing health care to address health issues Risk and resiliency assessments: farm risk management, financial wellbeing, stress management, nutrition and health status Advocacy regarding resiliency thinking and risk management Farm and Farm Family Risk and Resiliency Toolkit resources 	 Professionals will: Develop a plan that integrates the risk and resiliency framework into their organization /work plan Assist farm and farm families with integrating risk and resiliency thinking and management factors into family and farm operation plans that may include: stress management, health and physical and mental wellbeing, financial wellbeing, agriculture best risk management practices build family, social and professional support networks, health insurance coverage, farm continuity and contingency plans, family communication and positive family time community resources safety, accessing health care Adopt, adapt and/or create educational programs and/or informational, teaching and marketing materials. Incorporate learnings into their professional settings as teachers, service providers, information disseminators that will contribute to building risk and resiliency thinking and management factors by farm audiences Engage in advocacy with decision makers regarding building supportive communities. 	 Professio Confide success their plupositive and fart ⇒ Numl report by the ⇒ Numl report organ based resilie Contribute sup for farm ⇒ Num report in the and fart ⇒ Evide

itional Outcomes

ionals will have:

- dence and essfully implemented plan to support ve changes for farms arm families. mber of professionals orting improvements their clientele, mber of professionals
- orting changes in their anization/ work plan ed on the risk and iliency framework. Tibuted to strengthening upport of communities rms and farm families. Imber of professionals orting positive changes he community for farms I farm families support

idence of those changes

Ultimate Outcomes

Professionals will:

- Use an integrated approach as they interact with clientele as farmers and farm families implement plans that enhance the resiliency and health of the farm operation and the people working and living on the farm now and in the future.
- Align organizational policies to promote the resiliency, health and wellbeing of the farm, farm family, farm workers and the community.
- Live and work in communities that support and sustain the resilience, health and vitality farms, farm families and their 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.

Inputs Activities	Outputs Participation	Learning Outcomes	Action/Behavioral Change Outcomes	Conditional Outcomes	Ultimate Outcomes
 Extension Personnel Agriculture, family and consumer science, 4-H and other specialists, related faculty and Extension agents/ educators IT/Marketing staff Non Extension Personnel Health and financial specialists in private and public sector Partners County and state Extension councils, staff and volunteers Extension system Non-profit organizations Financial and legal services Federal, state and local agencies/government Health care system and providers Financial Resources Local, state and federal funding Collaborators in-kind Program fees Sponsors Other Resources Theoretical Framework Evidence-based curriculum 	 Youth Families Farmers and ranchers Farm workers Decision makers Stakeholders Peers Number of contacts reached through: Media Social media Webpages Newsletters Blogs Podcasts 	 Individuals and families gain knowledge, confidence, aspirations (plan to) and skills related to effective farm, farmer, farm worker and farm family's risk and resiliency thinking and management including: Risk and resiliency assessments — farm risk management, financial wellbeing, stress management, nutrition and health status Stress management techniques Strategies to stay physically and mentally healthy— physical exercise, healthy eating, health promotion Strategies to support family and farm financial wellbeing Strategies and agriculture best practices in the areas of marketing, legal, production, financial and human risk. Social and professional support networks Health insurance coverage Succession, transition and contingency planning for farm operation continuity Family communication skills, family time, positive social bonds Community resource connections Safety precautions Advocacy regarding resiliency thinking and risk management for farm audiences and farm communities 	Individuals and families have adopted one or more effective practices related to risk and resiliency thinking and management including: • Complete risk and resiliency assessments • Discussed need to develop plans to build risk management and resiliency factors for the family and farm operation. • Use strategic risk and resiliency actions to better: manage:	 Farmers and farm families will: Improve resiliency thinking and management skills. ⇒Assessed by standardized risk and resiliency assessments ⇒Number of farmers and farm families making choices that enhance healthy and safety. Adopt resiliency and risk thinking and management strategies to support healthy and safe farms and homes. ⇒Number of farmers/families completing risk and resiliency goals achieved Improve financial planning and management skills. ⇒Assessed by standardized farm and family financial assessments. ⇒Number of farmers and farm families making choices that enhance financial well-being (now and in the future). Report or demonstrate increased risk and resiliency capability and well being as measured by indicators from the Extension program (nutrition, financial, health, agriculture risk management, health insurance health etc.) in which they participated. Influenced the development of supportive communities that focus on providing support to farmers and farm families. ⇒Number of community resources supporting farmers, farm families. 	 Farmers and farm families: Resilient farms and farm families that can manage risks effectively now and in the future. ⇒Improved risk and resiliency status of farm and family through farm risk management, financial wellbeing, stress management, nutrition and health assessments Are physically, emotionally, mentally, financially and socially healthy at every stage of life. Are living in supportive communities.

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.

Outputs Activities Participation			Learning Outcomes	Action/Behavioral Change Outcomes	Со
 Number of: Extension educators and specialists serving on boards, committees, coalitions Presentations to, and consultation with, stakeholders and decision makers Media outreach Policy Briefs Forums Learning Circles Deliberation guides Didactic Theater 	Stakeholders and Decision Makers • Community leaders • Agency leaders • Government officials • Community members • Policy and issue-focused organizations		 Stakeholders/ decision makers will increase their knowledge, skills and confidence regarding: Theoretical framework for farm risk and resiliency thinking. Links between individual and family health and financial well-being and economic vitality of the farm and farm family and their communities. Links between public policy and the financial stability of farms and the farming population. 	Stakeholders/decision makers: Will adopt policies that support farmer, farm family and farm worker health and financial wellbeing Will adopt policies that provide support resources for farms, farm families and local communities. 	Stakeho makers v • Use por resourd and su familia comm profes them. ⇒Numb report their of comm ⇒Numb policia ⇒Increa activit suppo resilie ⇒Increa Coope initiati
	ActivitiesNumber of:• Extension educators and specialists serving on boards, committees, coalitions• Presentations to, and consultation with, stakeholders and decision makers• Media outreach • Policy Briefs• Forums • Learning Circles • Deliberation guides	ActivitiesParticipationNumber of:Stakeholders and Decision• Extension educators and specialists serving on boards, committees, coalitionsStakeholders and Decision Makers• Presentations to, and consultation with, stakeholders and decision makers• Community leaders • Agency leaders• Presentations to, and consultation with, stakeholders and decision makers• Community members • Government officials • Community members• Media outreach • Policy Briefs • Learning Circles • Deliberation guides• Policy Briefs • Deliberation guides	ActivitiesParticipationNumber of:Stakeholders and Decision• Extension educators and specialists serving on boards, committees, coalitionsStakeholders and Decision Makers• Presentations to, and consultation with, stakeholders and decision makers• Community leaders • Agency leaders• Presentations to, and consultation with, stakeholders and decision makers• Community members • Government officials • Community members • Policy and issue-focused organizations• Media outreach • Policy Briefs • Learning Circles • Deliberation guides	ActivitiesParticipationNumber of: • Extension educators and specialists serving on boards, committees, coalitionsStakeholders and Decision Makers• Presentations to, and consultation with, stakeholders and decision makers• Community leaders • Agency leaders • Government officials • Community members • Policy and issue-focused organizations• Theoretical framework for farm risk and resiliency thinking. • Links between individual and family health and financial well-being and economic vitality of the farm and farm family and their communities. • Links between public policy and the financial stability of farms and the farming population.	ActivitiesParticipationOutcomesNumber of: • Extension educators and specialists serving on boards, committees, coalitionsStakeholders and Decision MakersStakeholders/decision makers will increase their knowledge, skills and confidence regarding:Stakeholders/decision makers: • Will adopt policies that support farmer, farm family and farm worker health and financial well-being and economic vitality of the farm and farm family and their communities.Stakeholders/decision makers • Will adopt policies that support farmer, farm family and farm worker health and financial well-being and economic vitality of the farm and farm family and their communities.Stakeholders/decision makers • Will adopt policies that provide support resources for farms, farm families and local communities.• Media outreach • Policy Briefs • Forums • Learning Circles • Deliberation guides• Deliberation guides• Links between public policy and the farming population.• Will adopt policies that provide support resources for farms, farm families and local communities.

Sponsors

Collaborators

Other Resources

- Evidence-based curriculum
- Technology
- University resources

onditional Outcomes	Ultimate Outcomes
olders and decision s will:	Stakeholders and decision makers will:
policy making and financial urces to create resilient sustainable farms, farm lies and farming munities and support essionals working with n. ber of stakeholders rting improvements for clientele, organization or munity ber of supportive cies created. eased funding to finance ities and/or policies that ort farm and farm family ency vitality. eased support for related perative Extension tives.	 Create communities that, in the short and long term, support and sustain resilient farms, farm families, and farm workers. ⇒Number of stakeholders reporting improvements for their clientele, organization or community ⇒Increased funding to support activities and/or policies that support farm and farm family vitality. ⇒Number of supportive policies created. ⇒Increased support for Cooperative Extension initiatives.