

Contents

Acknowledgments	xi
PART 1—Why Think Resilience?	
1. Waking Up to Climate Change	3
Unprecedented	5
Running into Resilience	8
A Real-World Test of Resilience	11
A Word About Hope	14
2. Climate Change Is Changing the Weather	16
Two Decades of Disaster	17
The Climate Change Challenge	24
Understanding Climate Vulnerability	26
3. Understanding Exposure	32
Regional Changes and Expected Changes in Weather	34
4. Understanding Sensitivity	46
Crops and Livestock	48
Soil and Water	51
Weeds, Insects and Disease	53
People, Community, Money	56
5. Understanding Adaptive Capacity	58
Farms and Ranches Are Ecosystems	60
Cultivating Adaptive Capacity	63
6. Managing Climate Risk: Adaptation Stories	70
Farmers and Ranchers in the Northwest and Southwest	71
Farmers and Ranchers in the Great Plains	75
Farmers in the Midwest	76
Farmers in the Northeast and Southeast	79
A New Path for American Agriculture?	82

PART 2—The Rules of Resilience?

7. A New Way to Think About Solutions	89
Resilience Is Not What You Think	92
Describing a Social-Ecological System: Focal Scale, Identity and Desirability	93
More Than Bouncing Back	96
8. The Qualities and Behaviors of Resilient Systems	104
The Raw Material of Resilience: Diversity	105
A Diversified Portfolio of Assets	109
Key Resilience Behaviors	110
Specified and General Resilience	119
Resilience Design Principles	120
9. The Rules of Resilience	124
Diverse Networks of Reciprocal Relationship	125
Regional Self-Reliance	127
Accumulation of Community-Based Wealth	128
Moving Beyond Industrialism: A Just Transformation	131
10. Is Sustainable Agriculture a Resilient Agriculture?	136
What is Sustainable Agriculture?	137
Cultivating Resilience with Sustainable Agriculture	143
11. Resilient Agriculture: New Tools for Shaping Change	150
Navigating Uncertainty with Adaptive Management	150
Whole Farm Planning Is Adaptive Management	152
Nature-Based Solutions: Cultivating Healthy Ecosystems for Land, People and Community	155
The Adaptive Continuum: Protect, Adapt, Transform	158
Barriers to a Resilient Agriculture: From the Farm Gate to Your Plate	166

PART 3—What Path to Resilience?

12. The Light and the Dark of These Times	173
From Land to Mouth: In Search of Sustainable Food	177
Indigenous Foodways	177
The Good Food Movement	180

13. Adding Resilience to the Menu	188
The Regional Roots of Resilience	191
Metropolitan Foodsheds	196
14. The Way Forward	200
Twelve Things That You Can Do to Cultivate a Resilient Agriculture	206

**PART 4—Real World Resilience:
Stories of Land, People and Community**

15. Vegetables	213
A.G. Kawamura, Fullerton, California	213
Hannah Breckbill, Decorah, Iowa	220
Rebecca Graff and Tom Ruggieri, Kearney, Missouri	227
Marc White, Keymah Durden and David Hester, Cleveland, Ohio	234
Ira Wallace and Mary Berry, Mineral, Virginia	242
Pam Dawling, Louisa, Virginia	249
C. Bernard Obie, Roxboro, North Carolina	255
16. Fruits and Nuts	264
Mark Shepard, Viroqua, Wisconsin	264
Walker Miller, Six Mile, South Carolina	272
17. Grains	281
Bryce Lundberg, Richvale, California	281
Gail Fuller, Severy, Kansas	287
18. Livestock	295
Albert Straus, Marshall, California	295
Jordan Settlege, St. Mary’s, Ohio	301
Jamie Ager, Fairview, North Carolina	307
Notes	317
Index	343
About the Author	353
About New Society Publishers	354

Reading Guide available for download at:
<https://newsociety.com/pages/resilient-agriculture-2-reading-guide>