

1. Record Nr.	UNINA9910298379303321
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Titolo	Chasing the Red Queen : The Evolutionary Race Between Agricultural Pests and Poisons // by Andy Dyer
Pubbl/distr/stampa	Washington, DC : , : Island Press/Center for Resource Economics : , : Imprint : Island Press, , 2014
ISBN	1-61091-519-4 1-61091-520-8
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (241 p.)
Disciplina	333.7
Soggetti	Environment Life sciences Environment, general Life Sciences, general
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di bibliografia	Includes bibliographical references (pages 193-210) and index.
Nota di contenuto	Introducing the Red Queen. The never-ending race: adaptation and environmental stress -- The evolution of farming: scaling up productivity -- Survival of the fittest: Darwin's principles -- Ignoring the Red Queen. Reductionist farming: losing ecosystem services -- A weed by any other name : monocultures and wild species -- Running faster: insecticide and herbicide resistance -- Trying to beat the Red Queen. Exercises in futility: cases of resistance -- King Cotton vs. The Red Queen -- The cornucopia of maize vs. the Red Queen -- The Red Queen trumps technology: the failures of biotech -- Playing the Red Queen. Understanding the chase to escape the cycle -- Slowing the race by slowing the attack -- Ecosystem farming: letting nature do the work -- Integrated systems and long-term stability -- Epilogue: Putting all of our eggs in a diversity of baskets.
Sommario/riassunto	In the race to feed the world's seven billion people, we are at a standstill. Over the past century, we have developed increasingly potent and sophisticated pesticides, yet in 2014, the average percentage of U. S. crops lost to agricultural pests was no less than in 1944. To use a metaphor the field of evolutionary biology borrowed from Alice in

Wonderland, farmers must run ever faster to stay in the same place—i. e., produce the same yields. With *Chasing the Red Queen*, Andy Dyer offers the first book to apply the Red Queen Hypothesis to agriculture. Dyer examines one of the world's most pressing problems as a biological case study. He presents key concepts, from Darwin's principles of natural selection to genetic variation and adaptive phenotypes. Understanding the fundamentals of ecology and biology is the first step to "playing the Red Queen," and escaping her unwinnable race. The book's novel frame will help students, researchers, and policy-makers alike apply that knowledge to the critical task of achieving food security.
