

"Weeds Your Way" – Organic Farmers Share Secrets of Herbicide-Free Farming

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June 24, 2015 – The battle between weeds

and food crops is as old as agriculture, a conflict that organic farmers manage through knowledge, experience, and creativity.

“[Weeds Your Way](#),” a new study by researchers at Cornell University funded by OFRF, found that successful organic farmers deploy a range of weed-fighting techniques to keep their fields clean and productive; including crop rotations, intercropping, and plowing fields before weeds are able to set seed.

Farmers reported that, over time, consistent use of organic techniques led to fewer recurring weeds, healthier soil and more successful harvests – a contrast to the soil depletion and emergence of mutant superweeds resulting from chronic use of chemical herbicides.

Researchers Brian P. Baker and Charles L. Mohler surveyed and interviewed well-respected organic farmers operating a diverse range of farming systems throughout the upstate New York area. The farmers held an average 24 years of farming experience, and their farms ranged in size from 4 to 2,600 acres.

The farmers confirmed that organic weed control is far more complex and nuanced than herbicide use, requiring detailed knowledge of weed and crop lifecycles, and a deep understanding of the interplay of regional weather, soil and seasons. As farmers became more experienced, researchers found, they tended to employ more elaborate crop rotations.

Farmers used crop rotations to disrupt weed life cycles, and deployed cover crops to smother or out-compete weeds. Some cash crops, like brassicas, perform double duty by secreting allelopathic substances that inhibit weed growth. And tillage kills weeds by slicing through taproots and yanking weeds from the soil, though timing is crucial.

Tillage during wet weather can compact soil, giving some weeds an advantage, and cool, moist weather allows uprooted weeds to recover and regrow. Too-deep cultivation can bring weed seeds to the surface or cause erosion, and care must be taken to avoid damaging the roots of crops.

Farmers reported that over-fertilizing can benefit weeds over crops, and noted that the use of un-composted manure can be a significant source of weed seeds – a common rookie mistake. Thorough composting kills weed seeds, but the benefit can be lost if weeds are allowed to go to seed around compost piles.

Hand-roguing with a shovel or hoe might be deployed for noxious perennials such as cocklebur or wild garlic. And in the case of severe infestation, some farmers reported plowing under cash crops, or prematurely harvesting food crops as forage, to prevent weeds from becoming entrenched.

Other weed-fighting strategies include using transplants instead of direct-seeding crops, smothering weeds with straw or plastic mulch, and even blasting the pests with flame-weeders.

While researchers found farmers using a wide variety of effective weed-control strategies, they acknowledged that experience, timing and location is key to using those techniques successfully, precluding an easy “step-by-step” prescription for other growers.

- See more at: http://www.ofrf.org/news/weeds-your-way-%E2%80%93organic-farmers-share-secrets-herbicide-free-farming?utm_source=OFRF+Mailing+List&utm_campaign=0fd0e1dba0-May+2015+Newsletter&utm_medium=email&utm_term=0_4e39bea10a-0fd0e1dba0-22334217&ct=t%28%29#sthash.3D0TNI86.dpuf