



Peaceful Coexistence: Creating a Strategy for Harmony Among GM, Organic and Conventional Alfalfa Producers

A.

ORGANIC ALFALFA FORAGE & SEED PRODUCTION

1. Is it likely that Roundup Ready alfalfa will lead to an increase in the development of glyphosate resistant weeds in organic alfalfa fields and/or other organic crop fields?

If yes, how will cultivation/tillage practices, and the use of glyphosate and other herbicides change?

Consider potential regional differences, resulting primary and secondary impacts and how the impacts can be mitigated (i.e. no-till, other tillage practices, rotation length/rotated crops).

Currently weeds identified as resistant have not been very well controlled by glyphosate ever.
Consensus is this is not likely.

2. What types of social/economic impacts might occur from the deregulation of GE/Roundup Ready alfalfa?

Consider potential regional differences, proximity to RR alfalfa seed/hay production, loss/gain of markets, unavailability of seed of choice, crop rotation changes, imports of organic seed, etc.

RR alfalfa deregulation may enhance this organic market. Explore an indemnity fund for the contamination from either organic producers contaminating with weeds or biotech with organic.

3. What are anticipated impacts (and their probability) on seed purity from Roundup Ready alfalfa gene flow or seed mixing with organic seed/hay fields?

Consider U.S. organic standards, customer expectations, what level of impurity triggers concern.

Insect pressure has prevented production of organic alfalfa seed within the U.S. Inability to locate sufficient acres within the U.S. to make this viable, approximately 1,000 acres.

4. How much will gene flow from Roundup Ready alfalfa forage/seed fields affect organic alfalfa forage/seed systems, feral alfalfa or wild relatives of alfalfa over time?

Identify the sources of gene flow.

How can industry and individual growers work together to mitigate gene flow?

Consider pollen, seed mixtures and influence of transportation, humans, wind, water, insect and soil movement.

If I no longer have access to seed, I no longer have access to a market. "Growing sector within the market looking for differentiated markets – taste, health, food quality." Regional locations used to minimize gene flow. What is responsibility of neighbor to stewardship to prevent contamination or increased cost – organic may add cost/contamination to biotech or visa versa. May be an education opportunity for NAFA for seed growers. Also need to enforce rules that are currently on the books for noxious weeds and/or label rates of chemicals.

5. Will animal feed or human food safety, quality or markets be improved/threatened (if so, how) by the Roundup Ready trait?

There should be no effect on food safety or food quality.

6. Will Roundup Ready alfalfa forage/seed production affect threatened and endangered species?

Consider increased glyphosate use, toxicity of Roundup Ready alfalfa indirect effects to soil microorganisms and soil biology, potential regional differences. Compare any concerns with conventional and organic production.

Wildlife habitat may be affected; less residual herbicide use likely to result in less contamination. No evidence to suggest any difference between the two systems.

7. How will the deregulation of Roundup Ready alfalfa positively/negatively alter the economics of organic alfalfa forage/seed production?

Consider cost of seed, change in herbicide use, weed problems, cultivation/tillage practices, disease/insect susceptibility, yield, quality, public perception, change in demand.

Negative impact – cross contamination, however risks not quantified; positive impact – higher quality hay; neutral – coexistence works for both parties. Improved adoption of best management practices by all seed growers no matter what the end use. Sensitivity to organic production has improved which will result in higher quality seed. Imperial Valley – Nondormant nonGMO seed; Touchet, WA Dormant nonGMO seed. Seed cost is currently 2-3 % of the production input cost for alfalfa.

8. How can growers of organic alfalfa forage/seed and GE alfalfa seed “peacefully coexist” in our ever-evolving global market and specifically, what tools are needed to ensure the long-term viability of all market opportunities?

Consider cost of responsible stewardship, segregation, education/training, contracts, isolation distances, parent seed sourcing, testing, quality management systems, timing isolation, equipment cleaning, zoning, technical assistance, etc.

(1) acceptable isolation standards (2) dedicated equipment (3) acceptable tolerance (4) education tools (5) mutual respect (6) use of certified seed for organic seed production (7) identity preserved production system evolution.