

Breakthrough development of sustainable bioherbicides by advancing RNA herbicides approach

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GreenLight Biosciences, a pioneering agricultural biotechnology company, has announced a significant breakthrough in its bioherbicide development pipeline.

A new era in weed control

GreenLight Bio's RNA-based solution introduces a novel MOA that works with biology rather than against it. GreenLight Bio's RNAi platform of foliar-applied sprays precisely targets essential weed plant functions, leaving crops and the surrounding environment unharmed. The RNA molecules break down quickly, reducing environmental persistence while maintaining efficacy and leaving no harmful residue on crops. This approach offers a much-needed alternative that reduces the need for chemical herbicides that persist in the environment and face increasing regulatory and activist scrutiny.

Further, GreenLight Bio aims to leverage its RNA platform for agricultural innovation, including developing non-GMO solutions for enhanced crop heat tolerance and improved plant defense mechanisms. The Company's next solution targets control of Varroa mites, a devastating pest of honeybees, which was submitted to EPA for regulatory review in early 2023. A leader in RNA for agriculture, GreenLight Biosciences has a broad pipeline addressing insecticide, fungicide, and herbicide pain points for farmers.

According to greenhouse and field trials conducted by the Company, RNA technology is consistent and effective for controlling difficult to kill weeds. In addition to enhancing efficacy, RNA technology can also be used in conjunction with conventional herbicides to reduce overall toxicity and herbicide load. This strategy enables farmers to easily integrate an RNA solution into their current weed management practices. Over time, GreenLight Bio aims to develop a range of standalone RNA-based solutions for row crops and specialty crops that address a wide variety of problematic weed species with precision, further reduce environmental burdens and alleviate resistance issues common among conventional pesticides, including herbicides.

The Company's lead product candidate is designed to control horseweed (*Conyza canadensis*). Using expertise in biology and proprietary AI-enabled design tools, GreenLight Bio created a pipeline of over 180 possible choices and selected the lead candidate. Horseweed is one of the most problematic weeds in no-till agriculture, particularly in soy production.

Andrey Zarur, CEO of GreenLight Biosciences said "Our RNA-based platform introduces a revolutionary, non-GMO approach to weed management. This breakthrough not only targets weeds with precision but also paves the way for potential solutions that can help farmers reduce their reliance on traditional chemical herbicides like glyphosate."