

Endosidin 7 and Related Compounds as Plant Growth Regulators

Tech ID: 34867 / UC Case 2026-463-0

ABSTRACT

Researchers at the University of California, Davis have developed novel herbicidal and plant growth regulating compositions effective against herbicide-resistant weeds and suitable for use in crop management.

FULL DESCRIPTION

The invention relates to compositions containing Endosidin 7 and related compounds designed to control plant growth by inhibiting cytokinin signaling. These compounds can selectively regulate growth of unwanted vegetation, including herbicide-resistant weeds, without significant damage to desirable crops. The compositions include various chemical derivatives and can be applied as herbicides or plant growth regulators across diverse plant species. This technology addresses resistance to common herbicides and improves weed management by providing new modes of action and broad-spectrum efficacy.

APPLICATIONS

- ▶ Herbicides for selective weed control in crop production.
- ▶ Plant growth regulators for crop management.
- ▶ Weed control products targeting herbicide-resistant species.
- ▶ Agrochemical formulations for diverse crop genera.
- ▶ Sustainable agriculture and integrated pest management solutions.
- ▶ Development of new agrochemical products with novel modes of action.

FEATURES/BENEFITS

- ▶ Targets herbicide-resistant weeds with selective activity.
- ▶ Controls weeds resistant to multiple herbicide classes.
- ▶ Reduces crop injury by improving selectivity versus non-selective herbicides.
- ▶ Extends use across diverse crop genera and agricultural settings.
- ▶ Introduces a novel mode of action by inhibiting cytokinin signaling.
- ▶ Simplifies field deployment through application-ready formulation.
- ▶ Strengthens integrated weed management programs by adding a complementary control tool.
- ▶ Slows the development of new herbicide resistance by diversifying selection pressure.
- ▶ Integrates with existing herbicides to support combination or rotation strategies.
- ▶ Enables optimization through versatile chemical modification to tune performance.
- ▶ Overcomes weed populations that no longer respond to existing herbicide classes.
- ▶ Prevents crop damage caused by non-selective weed-control chemistries.

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INVENTORS

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OTHER INFORMATION

KEYWORDS

agriculture,
agrochemicals, cytokinin
signaling, endosidin 7,
herbicide resistance,
herbicides, plant growth
regulator, selective
herbicide, weed control,
weed management

CATEGORIZED AS

- ▶ **Agriculture & Animal Science**
- ▶ Chemicals
- ▶ Plant Traits

RELATED CASES

2026-463-0

- ▶ Restores effective chemical control where current products show limited efficacy.
- ▶ Addresses the shortage of herbicides with genuinely new modes of action.
- ▶ Supports weed control needs across varied crops and production environments.

PATENT STATUS

Patent Pending

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