

SOYBEAN SEED TREATMENTS

Know how treatments protect against early season threats.



SITUATION

Seed treatments are valuable tools for protecting soybean genetic yield potential against a wide range of insects and diseases that threaten early growth. With so many seed treatment options, it is important to understand how each one works to protect your soybean crop.

FACTORS TO CONSIDER

- Field disease history
- Pest pressure
- Tillage practices
- Planting date
- Planting populations

ACTION PLAN

- 1 Fungicides.** These benefit soybeans planted in cool, wet soils, minimum-till or no-till systems, continuous soybean fields and in fields with history of disease. These conditions encourage the growth of Fusarium, Phomopsis, Pythium, Phytophthora and Rhizoctonia, which affect seed germination and emergence. Contact fungicides protect against pathogen exposure on planted seeds. Systemic fungicides protect against soil-borne fungi that attack seeds after planting.
- 2 Insecticides.** Insect damage can devastate early plant development and stand establishment. Insecticide seed treatments provide an early insurance policy, protecting seeds with contact insecticides and developing seedlings with systemic insecticides. Be sure to consider crop rotation and pest history when selecting an insecticide treatment.
- 3 Nematicides.** Soybean nematodes feed on soybean plant roots, restricting nutrient uptake and creating root wounds that allow disease fungus to invade the plant. The severity of crop damage depends on rotation and variety planted. Although most soybeans are bred for nematode resistance, heavy pressure situations may require treatment.
- 4 Plant growth regulators.** These biologically derived seed treatments can increase the growth and vigor of seedlings. Know the four primary plant growth regulators:
 - Cytokinins contain a phytohormone that plays a part in cell division and growth in plant roots and shoots that are essential to increasing root and leaf mass.
 - Gibberellic acid increases germination rate and plays a role in cell division and elongation in stems and leaves.
 - Harpin alpha beta proteins are plant health promoters that activate the immune system to trigger growth and defense genes, resulting in improved plant growth.
 - Indole butyric acid stimulates vigorous root formation and development and increases cell elongation.
- 5 Inoculants.** These treatments can be tremendously beneficial when soils may not contain native nitrogen-fixing inoculum, such as in situations where soybeans have not recently been grown. Inoculation ensures proper nodulation and prevents expensive, unnecessary nitrogen fertilizer rescue applications.



As seed treatment technology advances, know your options to protect soybeans during critical early development stages.

SUMMARY

Seed treatments offer protection for the genetic potential of soybeans against diseases and pests, protecting the return on your seed investment. Understanding fungicides, insecticides, nematicides, plant growth regulators and inoculants, or combinations of these, will allow you to evaluate the protection that your plants require and select an appropriate treatment.

For more information, contact your local Mycogen Seeds customer agronomist or trusted agronomic adviser.

Resource: [What's on your seed?](#) University of Wisconsin Extension.

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