



Put your spray program on target with Endosight™ from Four Star Services, Inc. The mesoporous silica nanoparticles of Endosight™ (<100 nanometers...really small, approximately 1,000 times smaller than plant cells) each load and carry thousands of applied chemical molecules into the plant in an extremely efficient way; through a process called endocytosis.

This differs from the typical entry of chemicals into plants, known as diffusion. Diffusion, even with the aid of adjuvants, requires each chemical molecule pass through the cell membrane individually.

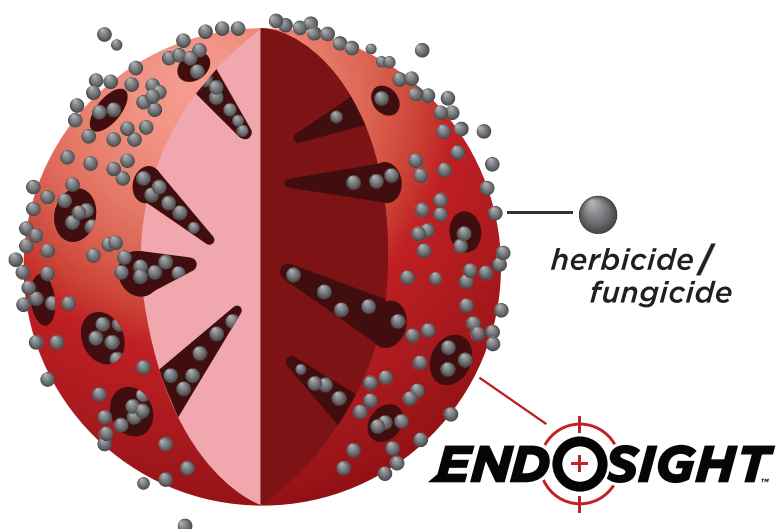
Through diffusion, the chemical on the outside and inside of the plant also hit a point of equilibrium, leaving much of the sprayed application outside the cell membrane. Through endocytosis of the loaded Endosight™ nanoparticles, a higher percentage of the applied chemical rapidly enters into the plant, increasing the effectiveness of the application.

**INCREASE
HERBICIDE & FUNGICIDE
INTAKE**

CASE STUDY

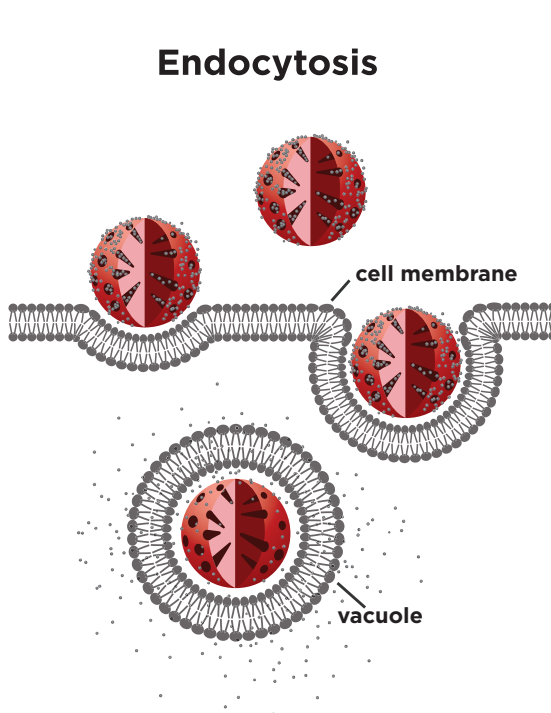
- Test performed by independent grower in southern Ohio.
- With less herbicide and 4 oz. of Endosight™, growth of the rye grass was stopped sooner.
- Using low end of herbicide label rate, grower achieved a thorough kill while using **35% less herbicide.**



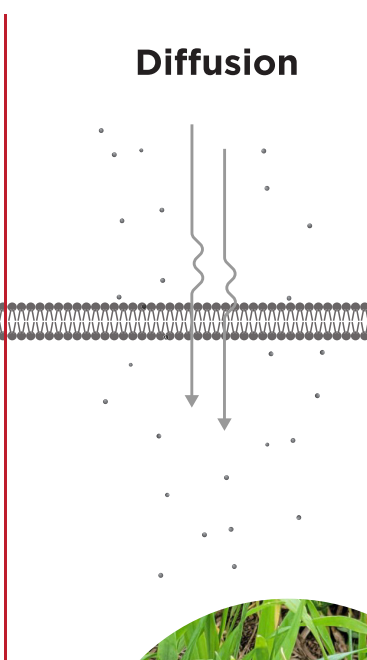


Endosight™ mesoporous silica nanoparticles attract and load thousands of herbicide or fungicide molecules into one grouping of molecules in the spray tank. Other molecules in the spray mixture remain ‘free’ from the Endosight™ loading and are available to enter the weed or crop via diffusion and ion transport. Diffusion and ion transport of individual molecules into the plant can be likened to a vast amount of small openings in the plant cell membrane allowing access into the cells.

Endocytosis



Diffusion



When Endosight™ loaded particles hit the targeted weed or crop membrane, the groupings of molecules enter the plant together through the process of endocytosis. Endosight™ gains entry for thousands of molecules at a time, thus decreasing the time it takes for crop protection products to enter and effect targeted plants.

Grower noted significantly less burn when the herbicide enters the plant through endocytosis.



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Endosight™ is an exclusive product of



800-348-2608

fourstarservices.com