

Meth Inhibitor FAQs

Q: How would you summarize the scope of this research project?

A: Today's announcement is the culmination of a six-year, \$1.2 million national research project spearheaded by Iowa State University in cooperation with the Iowa Department of Agriculture and the Agribusiness Association of Iowa. Other partners include the Iowa Department of Public Safety's Division of Criminal Investigation lab, U.S. Drug Enforcement Administration forensics lab, Iowa and U.S. Departments of Transportation and Iowa Ag Retailers that participated in field testing. The results promise to help deter illegal meth production in several states where anhydrous ammonia is a readily accessible farm fertilizer.

Q: What prompted this research project?

A: Anhydrous Ammonia is used in one of two primary meth production processes, and was being stolen to make meth in several agricultural states. This contributed to several problems affecting public safety including: (1) a growing number of toxic meth labs; (2) increased tampering with tanks containing a hazardous chemical; and (3) a drain on law enforcement resources to respond to theft and lab reports. These concerns led to the formation of an alliance involving the Agribusiness Association of Iowa, the Iowa Department of Agriculture, the Iowa Department of Public Safety and others to devise a method of deterring the use of Anhydrous Ammonia in the meth manufacturing process. Iowa State University conducted the research, and other agencies assisted with validation and safety testing. Senators Harkin and Grassley helped secure federal grants through the U.S. Department of Agriculture and U.S. Department of Justice to fund the work.

Q: What is the meth inhibitor, and how well does it work?

A: The chemical compound is Calcium Nitrate, a common fertilizer compound used primarily in horticulture. Calcium Nitrate is non-toxic, safe for food supplies, and has no adverse impact on the environment or farm equipment. When added to Anhydrous Ammonia in prescribed amounts, the result is a dramatic reduction in the amount of methamphetamine that can be produced. For example, meth cooks who use untreated Anhydrous Ammonia typically get a 42 percent yield of pseudoephedrine for conversion to meth. However, that yield drops to two percent or less when the Calcium Nitrate inhibitor is added. The inhibitor also reduces the purity of the drug.

Q: How do you know it works?

A: Findings by the ISU researchers—Dr. George Kraus and Dr. John Verkade—were confirmed on numerous occasions by DCI lab tests. U.S. DEA lab testing also confirmed the ISU results. DOT testing has determined the additive to be safe for use in Anhydrous Ammonia nurse tanks. Perhaps most telling is the cessation of Anhydrous Ammonia thefts at three Iowa ag retailers where the inhibitor was field tested, and where meth cooks reportedly said the Anhydrous Ammonia “was no good.”

Q: How will the meth inhibitor be used, and how much will it cost?

A: The Calcium Nitrate will be used on a voluntary basis, and will be injected as a liquid additive into Anhydrous Ammonia nurse tanks at ag retailers. Iowa has approximately 26,000 Anhydrous Ammonia nurse tanks statewide. Annual costs to apply the inhibitor in Iowa may range between \$62,000 and \$1.2 million. The Iowa Department of Agriculture *estimates* a cost of \$24 for Calcium Nitrate per injection per nurse tank. Assuming two seasonal doses of inhibitor per year in all tanks, the annual cost would be a little more than \$1.2 million. A more realistic scenario would involve strategic injections of the additive on a seasonal basis in as few as 10 percent of the nurse tanks, in which case the annual Calcium Nitrate cost would be about \$120,000.

Q: Is the meth inhibitor still needed?

A: Yes. Although we've been successful in reducing Iowa meth labs by about 77% over the last two years, an average of 29 per month are still reported. That's too many. The meth inhibitor promises to further reduce meth labs in Iowa AND many other states, where meth lab numbers are higher. Similar to regulatory controls on pseudoephedrine and Anhydrous Ammonia tank locks, the meth inhibitor is one more tool to reduce meth production.