

# **COVER CROP MANAGEMENT FOR SOYBEAN IRON DEFICIENCY CHLOROSIS**

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## **Abstract**

Iron Deficiency Chlorosis (IDC) has been a soybean production in the Upper Midwest for many years. A study was conducted in 2006 and 2007 to determine the effect of cover crop management under increasing soil nitrate-N concentrations. The study was conducted at two locations each year with histories of IDC. The treatments include nitrogen rates of 0, 100, and 200 pounds N per acre applied as Urea with and without an oat cover crop. The oat cover crop was planted at a rate of 1 bushel per acre. The cover crop was planted a day before soybean was planted. The cover crop was killed with glyphosate when at a height of 8 to 10 inches tall. In 2006, the soybean grain yields were reduced as nitrogen rate increased at both locations. Cover crop use increased soybean grain yields at one of the two sites in 2006. The non-responsive site grain yields were affected by dry soil conditions. In 2007, in-season observations indicate that the increased nitrogen levels increased the severity of IDC while the use of a cover crop reduced the severity of IDC at both locations. The use of a cover crop, such as oats, in areas with IDC may be a good management tool for IDC.

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