

# Improving Uptake Of Nitrogen

## *Pioneer Is In Process Of Developing Hybrids That Are More Nitrogen Efficient*

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### **DES MOINES, IOWA**

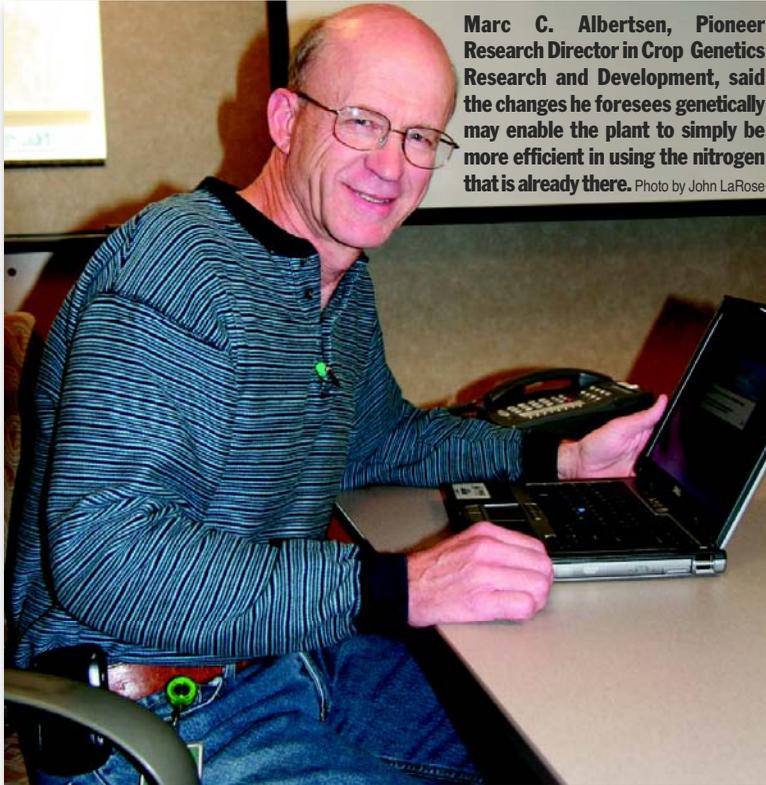
**E**fficiency in nitrogen use is a top concern at Pioneer Hi-Bred. Researchers are applying both transgenic and traditional research methods to future hybrid improvement in order to deliver a product that requires reduced quantities of nitrogen while maintaining overall yield; or, alternatively, increasing overall yield at existing levels of nitrogen use.

Marc C. Albertsen, Pioneer research director in Crop Genetics Research and Development, said the changes he foresees genetically may enable the plant to simply be more efficient in using the nitrogen that is already there. Presently, Pioneer is in *Phase 1, Proof of Concept* with its high nitrogen efficiency hybrids and an-

tipiculates having a product ready for the commercial market in the next 10 years.

"There has been some work underway to stabilize ammonia so it sticks around and doesn't volatilize so quickly," he said. "However, while it may not volatilize you still have the still bacteria that are going through the nitrification process and converting to nitrate very quickly." The plant cannot use nitrogen in the nitrate form.

"What we can do about volatilization of ammonia is if temperatures are above a certain point we probably shouldn't be applying ammonia," he suggested. "Or if you have the type of soil where you can't close the cultivator or furrows very well, improved equipment would help. Otherwise the solution is going to be genetic." Δ



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