Kernza: The Future of Sustainable Agriculture?

Kernza, the perennial wonder crop developed by The Land Institute and officially registered in 2009, might just be the future of sustainable agriculture. Despite its potential, Kernza remains relatively unknown among agriculturalists and consumers. However, it has been steadily gaining traction in sustainable agriculture circles due to its numerous benefits. Perennial row crops like Kernza have the potential to significantly reduce inputs, lower costs, and maintain outputs.

Dr. Lee DeHaan, Director of Crop Improvement/Lead Scientist for the Kernza Domestication Program, explains that intermediate wheatgrass was selected for domestication as a grain crop because of its relative ease of harvest, relatively large seed size compared to other perennial grasses, a wide range of adaptation, and promising flavor and nutritional characteristics.

Kernza differs from traditional wheat in that it is planted once and can last anywhere from ten to twenty years, depending on the location and environment. Its extensive root system, which can reach up to ten feet long, aids in water absorption during droughts and helps retain soil.

While Kernza has numerous uses, including forage for livestock, flour production, beer brewing, and as a whole grain, its adoption on a large scale is still limited. Dr. DeHaan acknowledges, "We would not expect substantial acres to transition to production of IWG grain until breeding and improved agronomic practices result in grain yields on par with annual crops." However, he remains optimistic, stating, "Perennial rice in China has produced grain yields similar to annual rice over six harvests, so we now have good evidence that the goal can be achieved with perennial grains. However, meeting this objective will require expanded research for at least a couple more decades."

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