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Sant'Anna
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Seminar

Tef (*Eragrostis tef*) in Ethiopia – an overview

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Bio:

Solomon Chanyalew (PhD) is a Lead Researcher at the Ethiopian Institute of Agricultural Research (EIAR), Addis Ababa, Ethiopia. He received his PhD from the Haramaya University, Ethiopia, through a sandwich program with Cornell University, USA. His research work mainly focuses on the improvement of tef to develop new varieties along with improved production practices. Together with his team mates, he has so far developed and released more than 20 improved tef varieties and several improved management practices. Moreover, he has published over 60 research articles in international and local peer-reviewed journals. Apart from the research work, he has served as coordinator of the national cereals research program for two years and also served as director of the Debre Zeit Agricultural Research center for more than eight years.

Abstract:

In Ethiopia the cultivation of tef predates historical records, and it existed even before the introduction of wheat and barley in the country. Regardless of its low productivity the Ethiopian farmers have continued growing tef over the millennia, and its acreage is increasing through time. Tef has the advantage of broad adaptation to altitudes from sea level to 3000 masl, reasonable tolerance to abiotic and biotic stresses, and adaptability to various cropping systems. It is preferred over other cereals thanks to its quality and most consumer-preferred injera, high returns in flour upon milling, high storage longevity of the grains, indispensable cattle feed value of the straw and high market prices. Moreover, tef is very nutritious and gluten-free. To date, a total of 58 varieties have been developed and released in Ethiopia through the National Agricultural Research System, and along with improved production practices, they allowed increasing production and productivity of tef in Ethiopia and Eritrea, where its cultivation mainly conducted. Tef is cultivated in small quantities also in South Africa, in the United States of America, the Netherlands, Spain and Israel, and its potential is becoming increasingly recognized in the western world. Still, major challenges exist in tef improvement: the low productivity of the crop, the unresolved malady of lodging in tef, tiny seeds that render its husbandry very demanding, and lack of attention of the global scientific community as well as donors. Consequently, the genetic improvement of the crop practically rests heavily upon domestic efforts with little or no technical and financial support from international and other foreign research establishments and donors. Despite the challenges, there are ample opportunities for the improvement of tef, including availability of diverse wealth of genetic resources coupled with unexploited aspects in terms of nutritional as well as biotic and abiotic stress-tolerance traits.

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