

# **Food Security in 2030/2050 at the Crossroads – A Wake-up Call in 2012! An Emergency Call in 2025!!**

**Dr. Manfred J. Kern, Director, AgriExcellence e.K.**

55296 Lörzweiler, Germany

[Manfred.Kern@agriexcellence.de](mailto:Manfred.Kern@agriexcellence.de)

## **Challenges:**

Food Security, Food Insecurity, Global Food Demand and Supply 2030/2050, Land Use, SD Goal 2: Zero Hunger by 2030, Hunger 2030/2050, Malnutrition (Predictions versus Reality)

## **Risks:**

Climate Change, Social Unrests, Conflicts, Wars, Migration, Plastic, Micro- and Nanoplastics (Invisible and Neglected Epidemic Pollution), Growing Pet Population, Ignorance of Societies, Lack of National and International Political Will, NON-‘United’ Nations (“NON-UN“)

## **Options:**

Innovations in Agriculture, Improvements of Food and Feed Quality, New Crop Protection Technologies, Smart Agriculture, IoT, Crop Monitoring, Drones, AI-ChatGPT Agrar, AI-Enabled Plant Breeding, PlantRNA-FM, Sequence Modelling and Design, New Crop Designs, DNA-@evolution, RNA-Sprays

## **Results:**

Low Use of Fossil Energy, Fossil Fuel Free Farming, Eff-Eff-Agriculture (Efficiency + Effectiveness = Sustainability = “EffEffSus“), Zero Hunger by 2060

## **Emergency Call in 2025!**

**Kern’s Vision in 2000: Is - Reality in 2025 and an essential break through for actual and future generations living on globe!**

**"To understand the dialogue of genes and carry it on further.**

**To decipher the primary language of nature, to marvel at it, to understand it, to open up its possibilities with a sense of responsibility, and to use it in an ethically acceptable way.**

**... for without genes there can be no seeing, speaking, hearing, feeling or smelling - there can be no language, no communication, no dialogue, no art, no ethics, no morality - and no life.**

**To use the primary language of Nature, or: *How can we find the way from the secrets of life to ethically acceptable innovations for the future?*“**