

# Transformational farming: A vision for the 21<sup>st</sup> Century

*Prof Steven M Newman*

*BioDiversity International Ltd and University of Leeds*

*Oxon*

## *Introduction and background*

I have been lucky enough to have been involved with evaluation and research on agroforestry and mixed cropping systems worldwide (over 60 Countries for over 30 years) and hav gained a number of insights and provocative propositions that may help new entrants think about sustainable farming possibilities in a new paradigm. The aim of the session is to develop a framework for radical thought and action on the subject.

## *Definition*

Transformational farming has the notion of wellbeing at its core. The idea is to develop a profitable path to (1) positive transformation of key actors and beneficiaries (2) improved system resilience in a world of increased volatility

## *Some Preliminary "Provocative Propositions"*

The word farm is derived from the latin "firma" meaning contract. New entrants do not need to have their thoughts imprisoned by the nation of a farmstead or the expectations of their forefathers.

Production insights gained from agroforestry, permaculture and mixed cropping show that both resilience and productivity can be enhanced by an understanding of "fractal niche space". Evolution appears to create "longage" through increasing the chances for coexistence.

The chemical paradigm of 20 century agriculture is no longer of central relevance and optimising ecological combining ability (through partitioning, synthesis and physical facilitation) is the key as shown by Land Equivalent Ratio and other measures.

Trees and woody perennials have special potential for increasing and utilising fractal niche space and allow new entrants to crop the vertical dimension and stimulate connectivity through microorganisms and mycorrhizae

Stable contracts with enhanced vitality will require new partnerships as part of new governance models developed through an appreciative approach

The idea of reducing casual labour should be replaced by increased profit through enhanced human capital and right livelihood.

Stable contracts with enhanced vitality will require many income streams including (1) food/fibre/materials/energy, (2) environmental services, (3) social services land, (4) company and asset development and sales

New geographical and action learning approaches that new consider “carbon synergy partnerships” and urban-rural linkages and transport will give economy of scale and may form a middle road between large scale agribusiness and a nation of smallholdings