From Uniformity to Diversity: A paradigm shift from industrial agriculture to diversified agroecological systems

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Many of the key problems in food systems are linked specifically to industrial agriculture: uniform crop monocultures relying on chemical fertilizers and pesticides, industrial feedlots (the infamous "CAFOs") using preventive antibiotics. This form of agriculture is generating negative outcomes on multiple fronts: widespread degradation of land, water and ecosystems; high GHG emissions; biodiversity losses; persistent hunger and micro-nutrient deficiencies alongside the rapid rise of obesity and diet-related diseases; and livelihood stresses for farmers around the world.

In contrast, diversified agroecological farming can deliver simultaneous and mutually-reinforcing benefits for productivity, the environment and society. These alternative systems deliver strong and stable yields over time by building healthy ecosystems where different species interact in ways that improve soil fertility and water retention. They perform particularly strongly under environmental stress and deliver production increases in the places where additional food is most needed. These systems have major potential to keep carbon in the ground, increase resource efficiency and restore degraded land, turning agriculture from a major contributor to climate change to one of the key solutions.

Diversified agriculture also holds the key to increasing dietary diversity at the local level, as well as reducing the multiple health risks from industrial agriculture (e.g. pesticide exposure, antibiotic resistance).

The report identifies eight powerful "lock-ins" which, despite increasing evidence of the benefits of diversified agroecological farming keep the currently dominant paradigm in place. The report also identifies a series of modest steps that could collectively shift the centre of gravity in food systems.