Evergreen agriculture is an alternative to modern, intensive agriculture that exploits the environment. It is a proven way to achieve the increased yields needed to feed a growing population in a way that is sustainable, affordable and does not further threaten biodiversity. Evergreen agriculture is the integration of trees into annual food crops. Intercropping trees with food crops and livestock helps sustain a green cover on the land throughout the year. This bolsters nutrient supply, increases direct production of food, fodder, fuel, fibre and income from tree products. It also enhances carbon storage and resilience to climate change.

**Trees and conservation agriculture**

Evergreen agriculture increases farm productivity while conserving the natural resource base and the environment. It is based on conservation agriculture principles such as tilling the soil as little as possible, rotating crops, putting plant material leftover after a harvest back into the soil, and planting nitrogen-fixing trees.

Trees provide the additional value of holding the soil in place. The canopy, roots and leaf litter all play a role in controlling soil erosion, capturing water runoff and protecting watersheds. Combined with conservation agriculture, agroforestry creates a productive, profitable, diverse and sustainable land-use system.

**Fertilizer trees improve soil fertility**

Evergreen agricultural systems are already restoring exhausted soils and increasing yields, helping to feed the rural poor while protecting the natural resources on which we all depend.

The most promising evergreen agriculture systems are those that integrate ‘fertilizer trees’ into cropping systems. These trees improve soil fertility by drawing nitrogen from the air and transferring it to the soil through their roots and leaf litter.
**Faidherbia, corner stone of evergreen agriculture?**

One particular fertilizer tree, *Faidherbia*, an indigenous African acacia, shows promise as a possible cornerstone of evergreen agriculture in the future. Unlike most other trees, *Faidherbia* sheds its nitrogen-rich leaves during the early rainy season when crops are planted and remains dormant throughout the crop-growing period, so it does not compete with the crop for light, nutrients or water. Results from research in Malawi show maize yields have increased by up to 280 per cent in the zone under a canopy of *Faidherbia* trees compared with the zone outside the tree canopy. Satellite data indicate that Niger has about 4.8 million hectares of *Faidherbia*-dominated farmlands. In Malawi and Tanzania it is estimated that 500,000 farmers maintain *Faidherbia* trees in their maize fields.

**Fewer inputs, greater yields**

Collens Mwinga began conservation agriculture on his small farm in Zambia’s central province seven years ago. By adopting evergreen agriculture practices he has transformed his land and his life. “Before I began practising conservation agriculture,” explains Mr Mwinga, “I would use eight bags of fertilizer per hectare and I would harvest about 1.25 tonnes of maize. Now I use half the fertilizer and get over 8 tonnes a hectare.” In the past the Mwinga family had to buy food. Now they are self-sufficient, with plenty left over to sell.

**Evergreen agriculture in the Sahel**

Across the Sahel region of Africa large tracts of degraded land have been restored to health by evergreen agriculture. In Niger hundreds of thousands of hectares of unproductive land have been transformed with evergreen agricultural systems based on the fertilizer tree, *Faidherbia*. Crops such as millet have had dramatic increases in yields, the trees have brought resilience to climate variability and improved smallholder incomes from the production of fuel wood and timber.

**Agroforests help restore degraded land in Mali**

Research from the US Geological Survey shows that medium to high-density agroforests now cover over 500,000 hectares of previously depleted land in Mali, bringing new health and prosperity to impoverished land.

**The Sahelian Eco-Farm, a model for evergreen agriculture**

The land of the Sahel – which spans Africa along the southern fringe of the Sahara – is becoming a desert due to unsustainable farming and overpopulation. The Sahelian Eco-Farm is an integrated tree-crops livestock system that diversifies the Sahelian farming system. It makes it more resilient by combining trees, shrubs, grass and high-value annual cash crops such as roselle, with food crops such as millet and cowpea.

The Eco-Farm is relatively simple but has great benefits not only for the farmers but for the entire region, thus protecting its residents and the environment.

For more information visit www.worldagroforestry.org, and search the keyword ‘Evergreen agriculture’