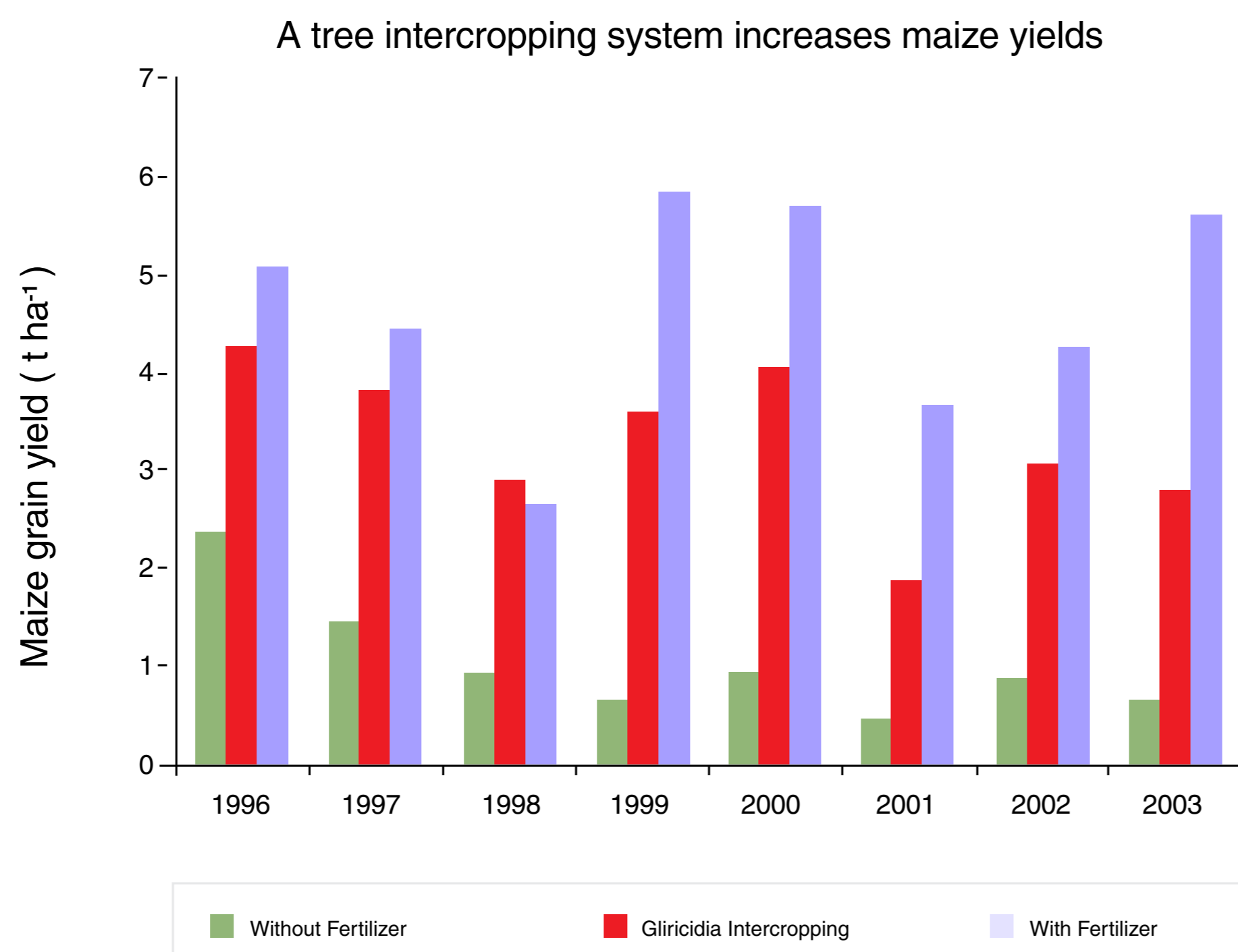




World Agroforestry Centre
TRANSFORMING LIVES AND LANDSCAPES

Agroforestry innovations multiply crop yields in Africa

Intercropping and fallowing with trees sustain higher crop yields in sub-Saharan Africa



AFRICA'S SOIL FERTILITY PROBLEM

In Africa, the traditional practice of natural fallowing is no longer possible due to high population pressure and most farmers cannot afford mineral fertilizer.

INNOVATIVE AGROFORESTRY SYSTEMS

ICRAF and its research partners worked with many communities in eastern, southern, and western Africa to develop practical and productive agroforestry systems to improve soil quality and increase crop yields.

These include:

- Improved fallows, tree inter-crops, and biomass transfer to supply nutrients
- Enriched enclosures to rehabilitate land
- Hedges for soil conservation, windbreaks

THE PROMISE OF AGROFORESTRY FOR SOIL IMPROVEMENT

The agroforestry systems work principally by fixing nitrogen from the atmosphere and making it available to crops. They also improve the physical structure of the soil and smother the growth of weeds.

AGROFORESTRY CAN MULTIPLY CROP YIELDS

Application of agroforestry systems can multiply cereal yields compared to no-input systems. In southern Africa, a permanent maize-gliricidia intercrop system has been found to sustain yields that are very close to a fully fertilized system (see graph).

AGROFORESTRY BENEFITS HUNDREDS OF THOUSANDS OF POOR FARMERS IN AFRICA

Agroforestry systems for soil fertility are being used by hundreds of thousands of poor farmers in Africa, of which nearly 100,000 are women. Research has shown that rural farmers generate millions of dollars of benefits each year by using this technology. Although these agroforestry innovations cannot solve all the soil fertility problems on the continent, they will have an important and lasting contribution to make in rural Africa.



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