Zero Tillage (No-Till) systems as a pathway to mitigation of deforestation in the Brazilian Amazon. (A06-landers065911-Oral)

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Abstract:

Brazilian zero tillage technology gives effective erosion control and permits land use intensification by planting annual or perennial crops into fallows or pastures. It also promotes biodiversity and biological controls through cover crops and crop rotations. Brazil's grain and beef production could grow at 2% a year for 25 years without any land clearing. To avoid de-forestation; farmers must be offered viable and sustainable alternatives with higher returns. ZT technologies available: (i) tree crops enriching secondary growth or into degraded pasture; (ii) 'Tipitamba' mulching of secondary fallow growth, (iii) annual crops to renovate degraded pastures, (iv) fallow enrichment with legumes followed by cropping, (iv) reforestation with native and exotic timber species and (v) several agro-forestry and agri-silvi-pastoral systems. Society must put a value on the vegetation preserved and reward sustainable ZT farmers for their new environmentally-sound vision. They should be seen as 'stewards of the land' and receive environmental services payments for off-site benefits. These principles could be powerful tools to mitigate de-forestation, especially in eastern Amazon rainforest.

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Presentation Information:

Presentation Date: Thursday, November 14, 2002

Presentation Time: 10:45 am

Keywords:
Zero Tillage, Environmental services, Rainforest, De-forestation