The agricultural world in the face of the change in model: the situation in Latin America and elsewhere in the world

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Aapresid’s Mission

To promote sustainable production systems of Food, Fiber and Energy through innovation, science and network knowledge management
% No till area evolution in Argentina from 1989 to 2019

No till surface evolution in 6 main extensive crops in Argentina (%). Seasons 1989/90 to 2018/19
No Till farming: positive impact

Benefits of the Sustainable Production System based on No Till Farming:
- Reduces erosion by 90%
- Reduces the use of fossil fuels by more than 60%
- Reduces water losses due to evaporation by 70% and improves water use efficiency
- Boosts soils fertility

Nature Magazine: Argentina world leader in soil loss reduction
Always Green Agriculture

Towards an Always Green Agriculture
Services:

- Weed control
- Delivery of nutrients
- Erosion control
- Water management
- Maintenance of biodiversity
How much greener?
Carbon sequestration

Pergamino:
Stock evolution (ton/hectare) and correlation with the level of soil use

Increase in C stock: +12% (+6 ton C/ha)

% soil occupation with living crops
Potential in mitigation of GEIs emissions

Reduce of Net GEIs emissions from -1.3 to +2.4 kgCO2 equivalent/h/year

Source: Taboada, 2019 (INTA)
Reduced use of herbicides

Reduction in Number of herbicide applications up to 50%

Reduction in the environmental impact index (EIQ) of up to 60%

\[ y = -49.197x + 62.567 \]
\[ R^2 = 0.6173 \]

% soil occupation with living crops

+ soil occupation with living crops

Chacra Aapresid Pergamino, preliminary results
Improved water management

Increase in water capture up to 40%

Increase in water productivity (kg of grain/mm available water): up to 30%

% soil occupation with living crops

% soil occupation with living crops
Reduced use of synthetic herbicides

N-NO$_3$ availability in corn (R1) over different precedent crops.

x3 increase in N-NO$_3$ availability in soil
Interdisciplinary Public-private Network
Conservation Agriculture Can be implemented by all farmers around the world

Farming Forward for Climate Change Manifesto 2015 - supported by over 20 farmers associations
KEY MESSAGES

- Role of FARMERS in developing & disseminating sustainable production systems
- Interinstitutional and interdisciplinary NETWORKS
- Need of adequate PUBLIC POLICIES
THANKS!