



The critical role of innovation in Agriculture

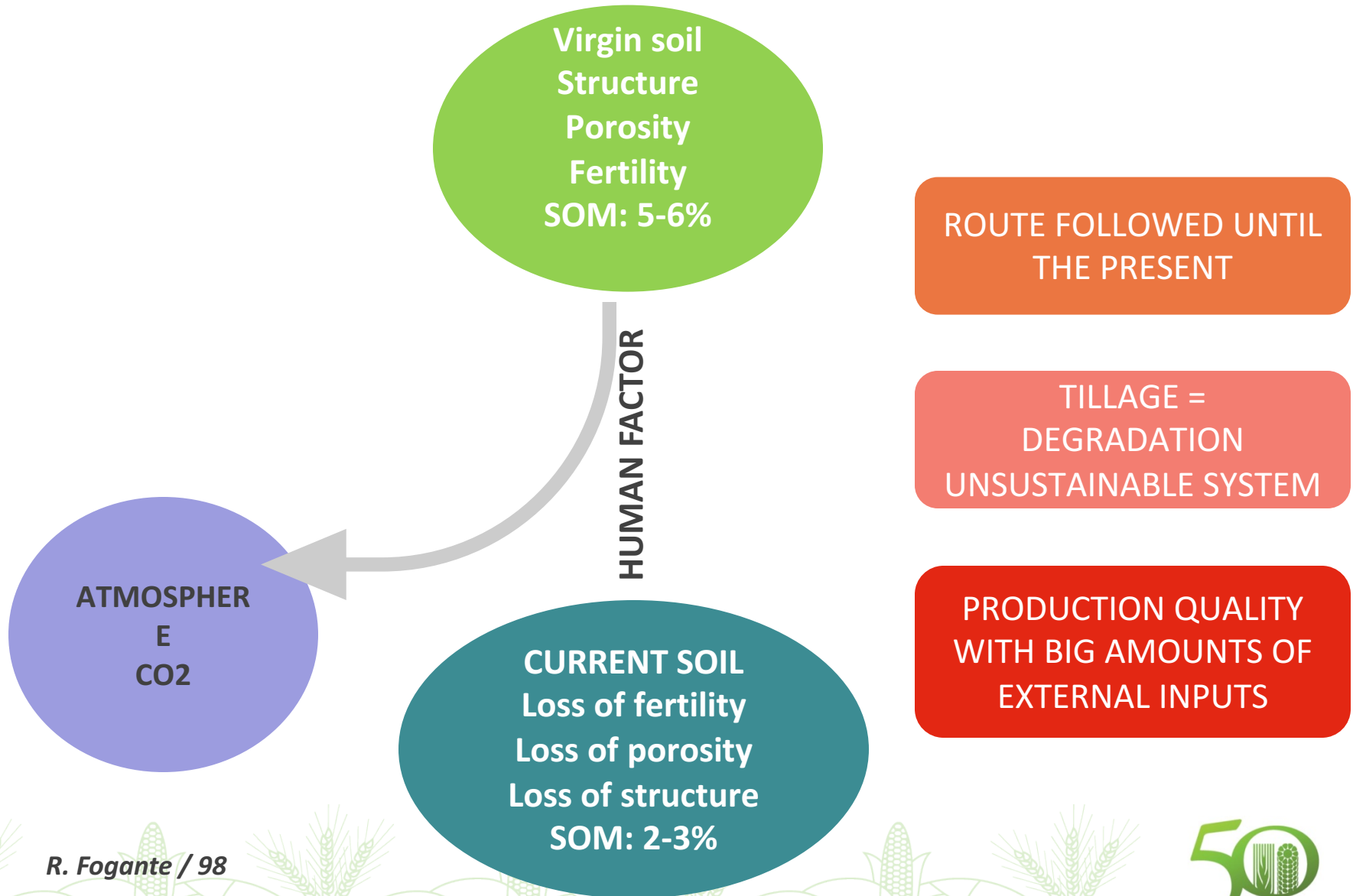
Agricultural innovation and rural transformation
in
Latin America

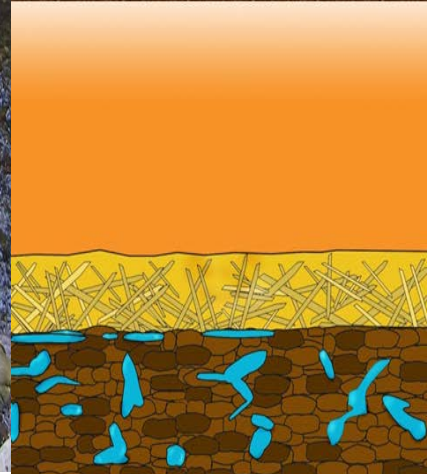
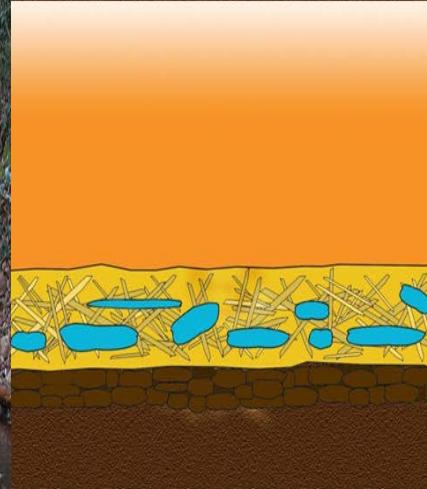
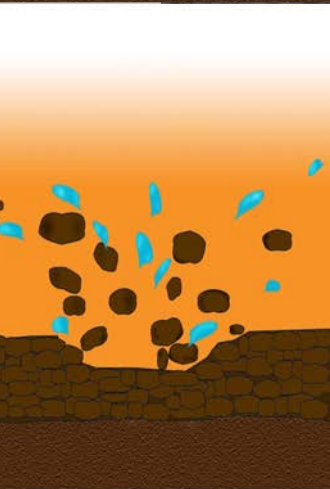
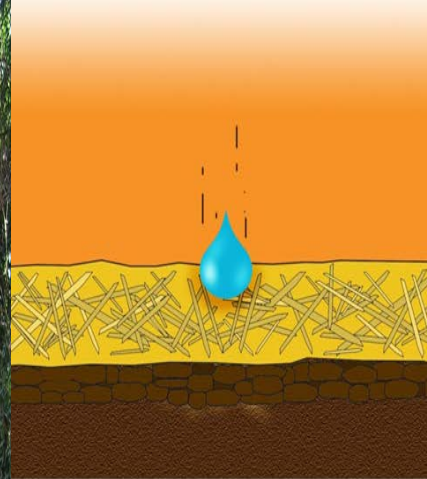
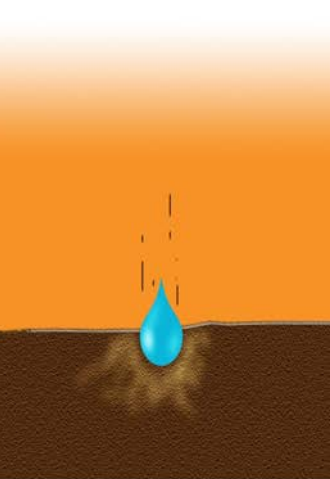
AGR. ENG. MARÍA BEATRIZ (pilu) GIRAUDO





CONVENTIONAL TILLAGE PARADIGM







NO TILL SYSTEM

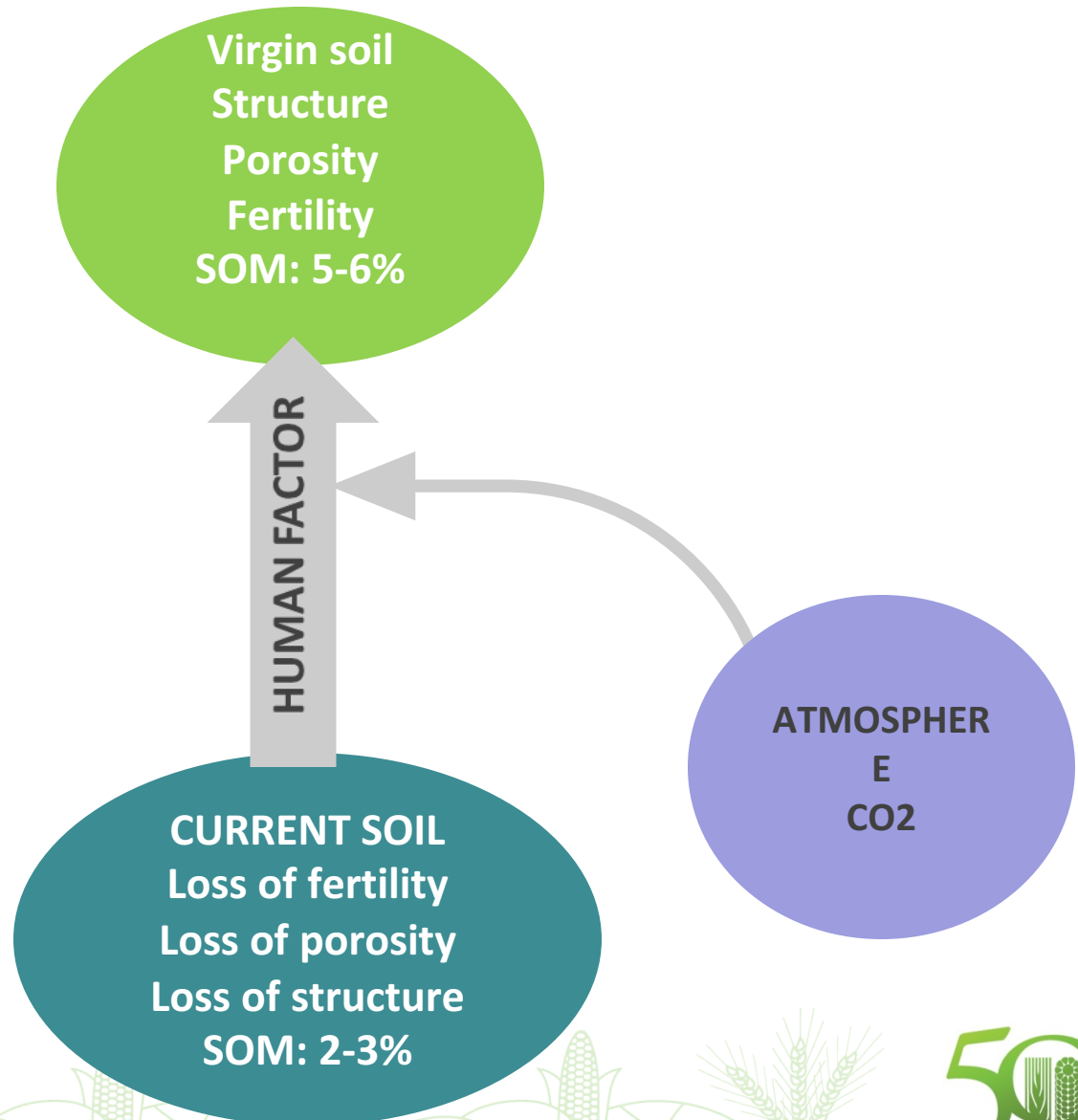
ROUTE TO FOLLOW

NO TILL

COVERED SOILS

BIODIVERSITY

PROPORTIONALLY LESS
EXTERNAL INPUTS

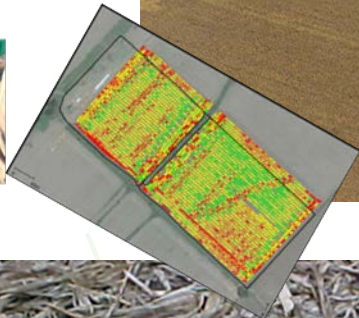




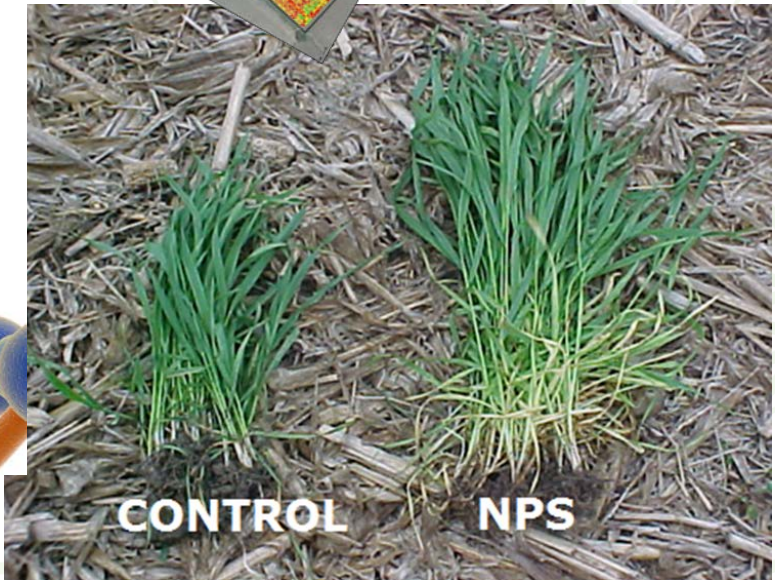
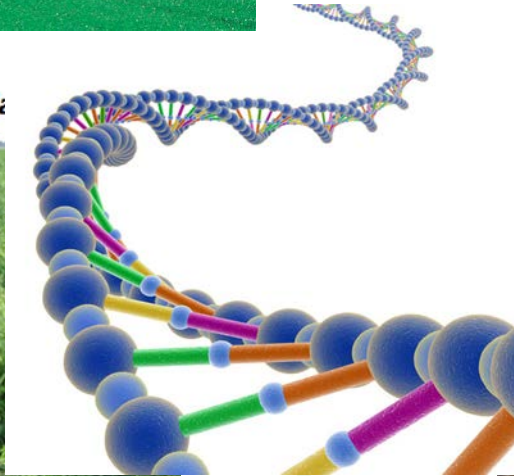


**Cuidado del recurso suelo:
Menos erosión (96% menos)**

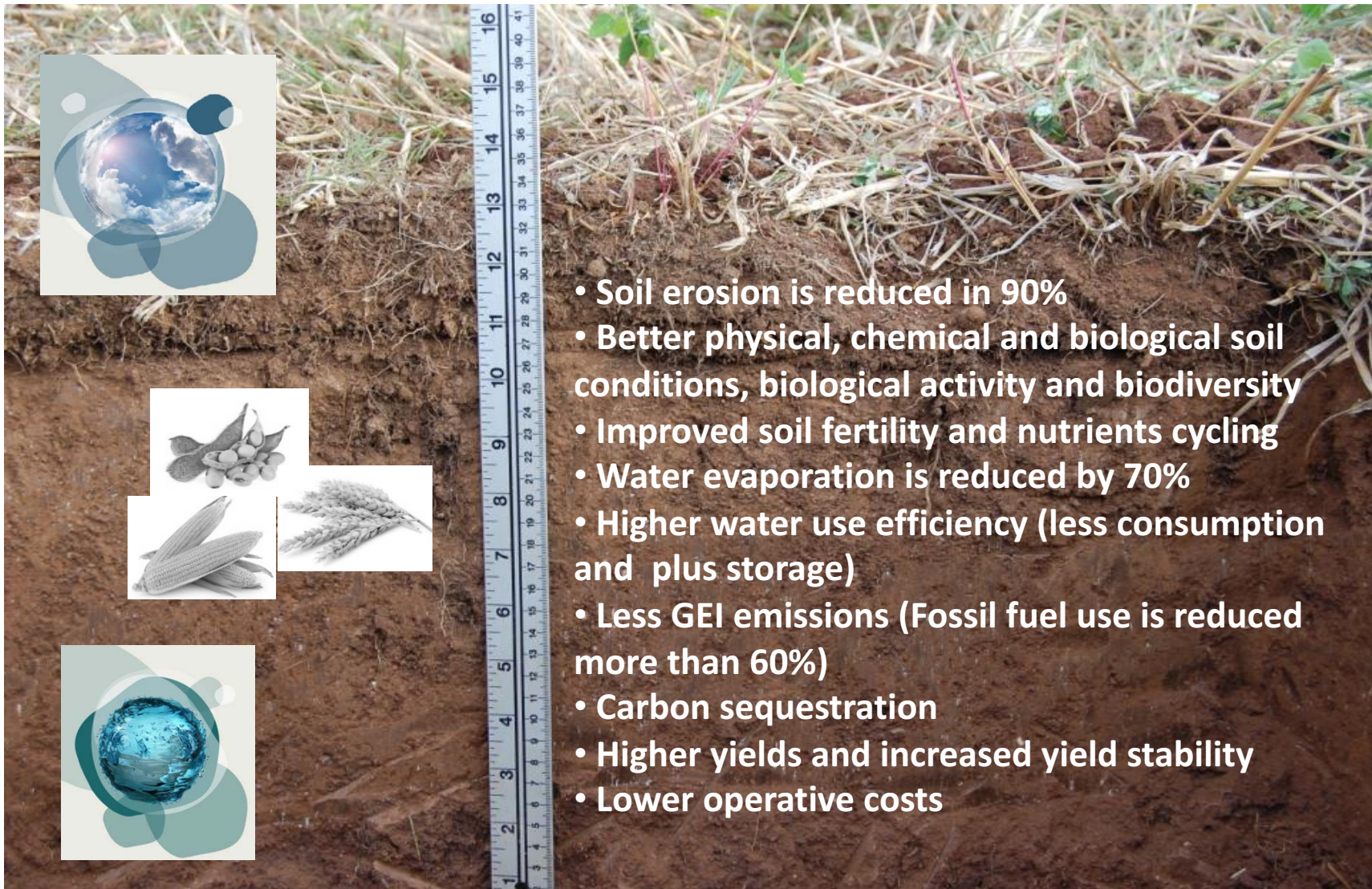




Cover crops: Hairy vetch (*Vicia*



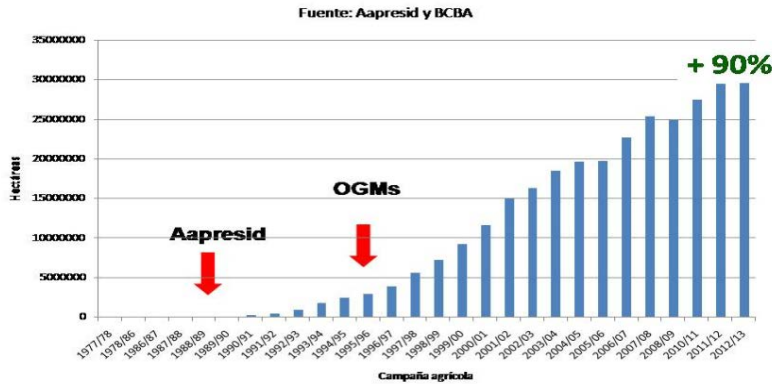
ACHIEVEMENTS IN THE LAST 30 YEARS...



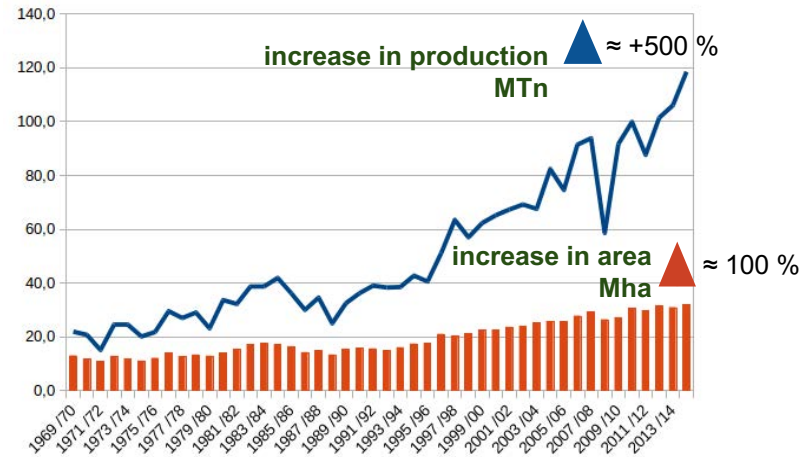
- Soil erosion is reduced in 90%
- Better physical, chemical and biological soil conditions, biological activity and biodiversity
- Improved soil fertility and nutrients cycling
- Water evaporation is reduced by 70%
- Higher water use efficiency (less consumption and plus storage)
- Less GEI emissions (Fossil fuel use is reduced more than 60%)
- Carbon sequestration
- Higher yields and increased yield stability
- Lower operative costs

GAP AND ADOPTION OF TECHNOLOGY

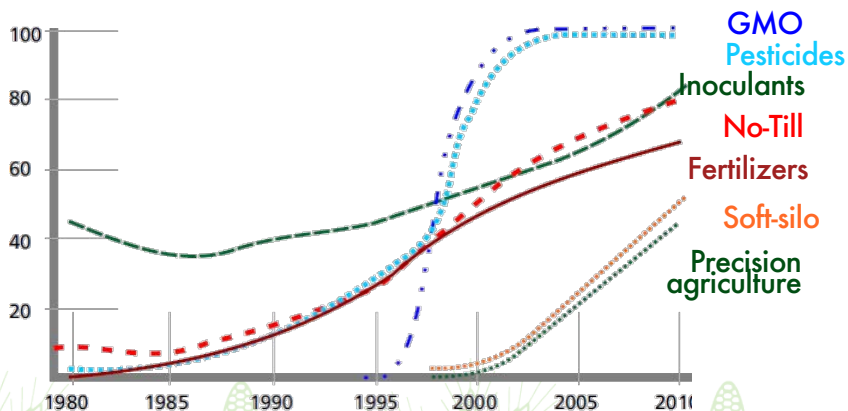
Area under no-tillage farming



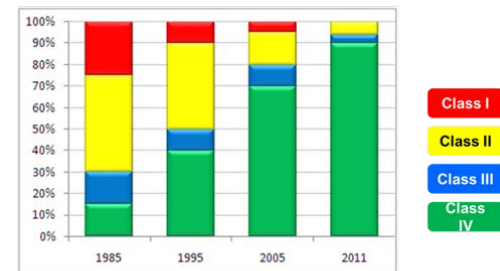
Growth in production vs. area



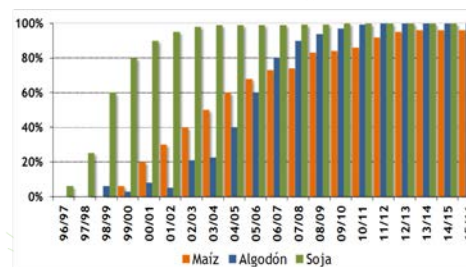
High penetration of diverse technologies



PESTS TOXICITY

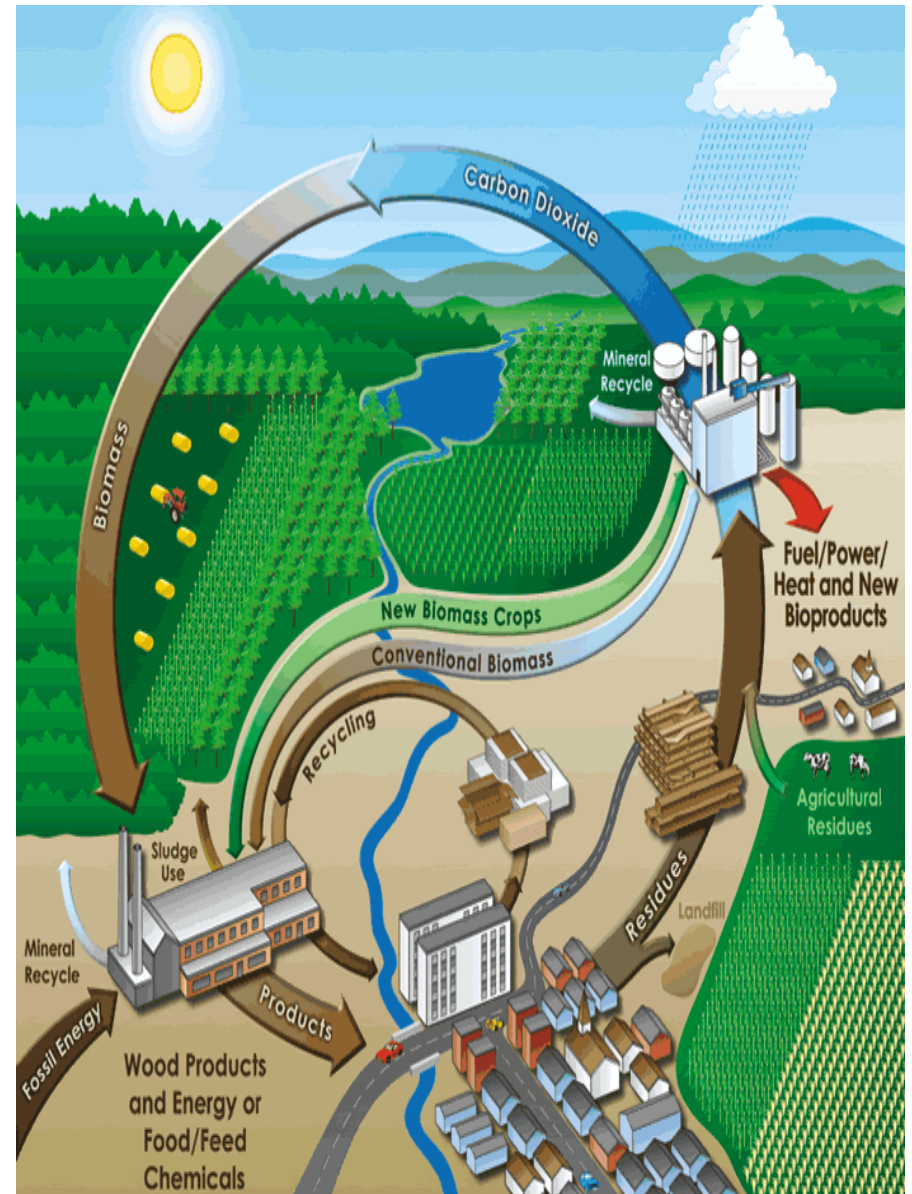


Argentina: area evolution of GMOs crops adoption (total % of each crop)



SOURCE: CASAFE

Source: ArgenBio



Aapresid's Mission



ARGENTINIAN NO TILL FARMERS ASSOCIATION

***To promote sustainable production systems
for food, fiber and energy sources, through
innovation, science and knowledge
management network.***

Prospectiva
Aapresid 

Sistemas
Aapresid 

Experiencia
Aapresid 

Comunidad
Aapresid 



Programas



Aapresid



DEL 6 AL 8 DE AGOSTO DE 2014
CENTRO DE CONVENCIONES METROPOLITANO, ROSARIO, ARGENTINA



TRANSPARENCY

SYSTEMIC APPROACH

CONTINUOUS IMPROVEMENT

TRACEABILITY

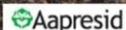


Agricultura Certificada

Quality products and certified process



Nexo Aapresid



Google earth
Fechas de imágenes: 4/9/2014 31°51'20.72" S 65°3'14.75" O elevación 722 m alt. ojp 2026.77 km



Argentina.gov.ar beta



Consejo Argentino para la Información y el Desarrollo de la Biotecnología



Ministerio de Ciencia, Tecnología e Innovación Productiva
Presidencia de la Nación



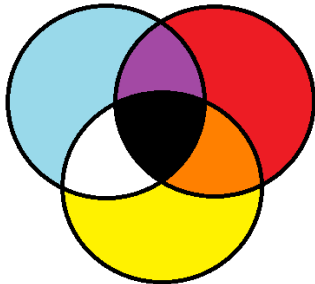
BIOlogía del **S**uelo y **P**roducción **A**graria **S**ustentable
(Soil Biology and Sustainable Agricultural Production)

Ministry of Science and Technology (MINCyT)

+ **1 NGO(AAPRESID)**

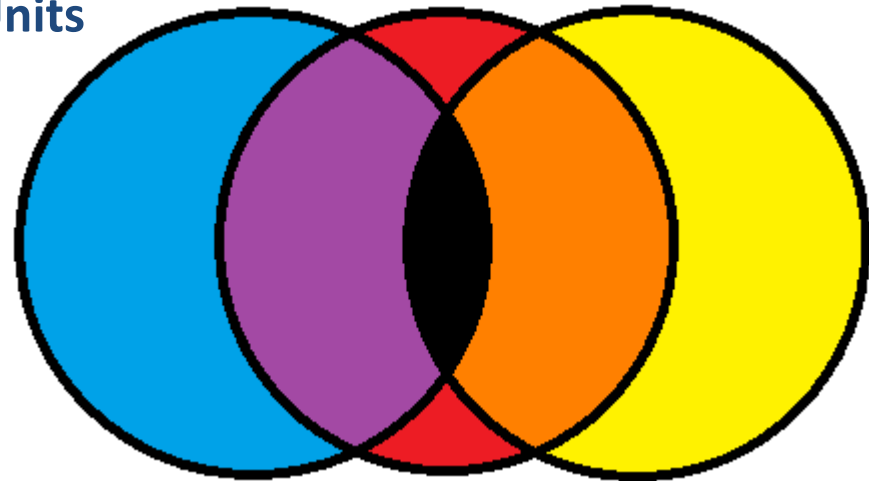
+ **2 Companies**

+ **12 Research Public & Private Units**



GAP

NSAP



CONCLUSION

**GAP is more similar to NE than NSAP
and it is in between those situations**



Challenges and Threats of Global Agriculture

Increasing world population

Raise on the demand of food and fiber
Shortage of plantable land

Less use of fossil fuels

Increasing demand of biofuels

Health and environment protection

Reduce carbon footprint
Sustainability and water management
Safer food

Climate change

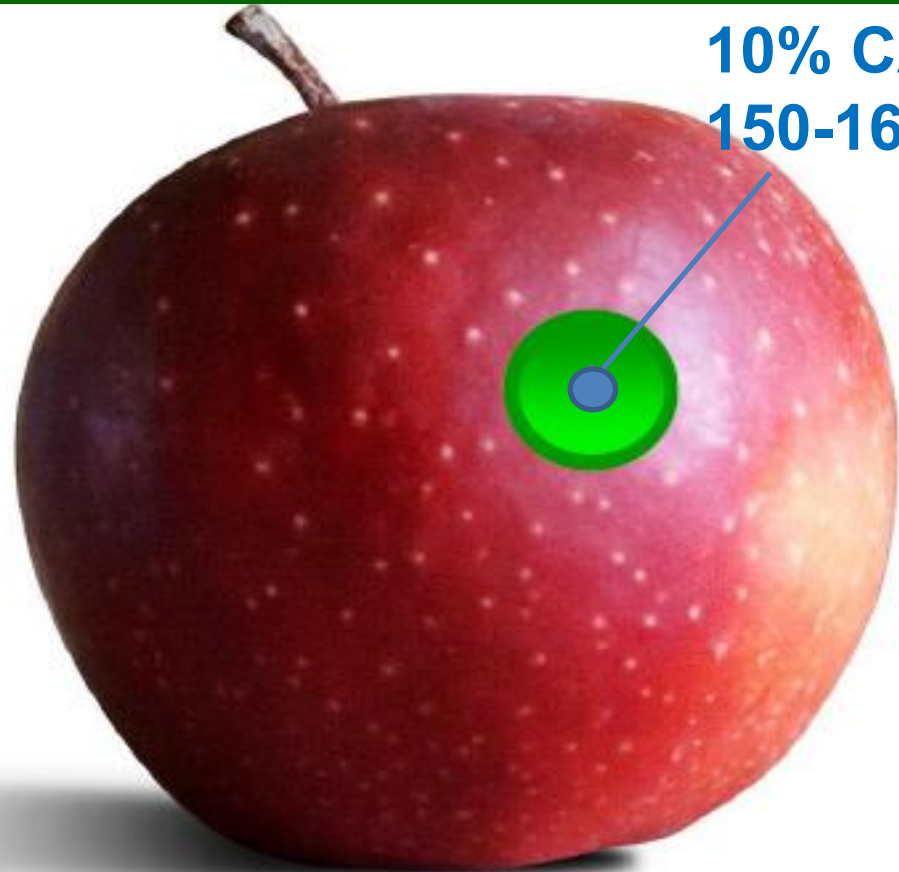
Lower yields due to climate change
Need to reduce GHG emissions



Anti-Science Movement

If this was the Earth (total area 50,9 billions of hectares)

+ 80 % in AMERICA
75 % South America

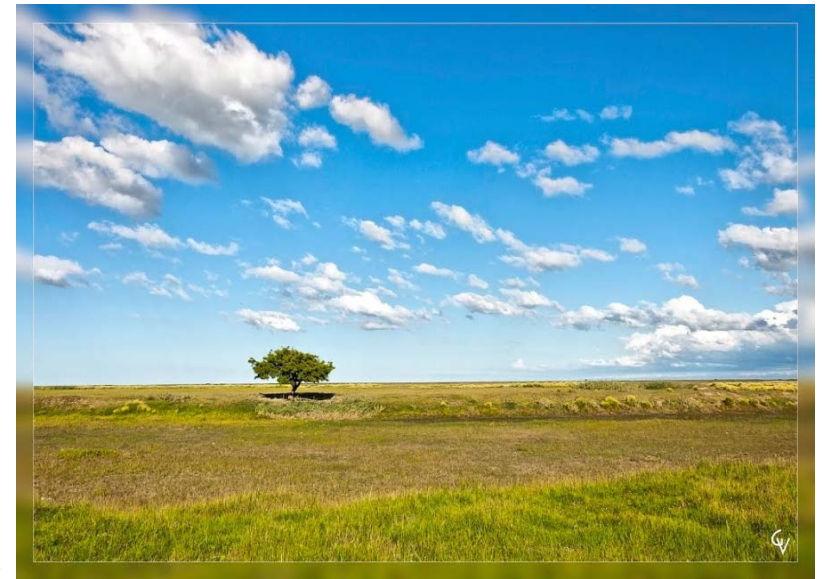


10% CA
150-160 Mha*

•Overview of global Spread of Conservation Agriculture,
•T. Firiedrich, R. Derpsch, A. Kassam, 2012

**Global agricultural area
(1,5 billions of hectares ~ 3%)**

Land use and environmental impact





Prov. Santa Fe 2008



Chacabuco, Prov. Bs As. 2008



Tartagal, Prov. Salta febrero 2009



Fotos: Aapresid Chacabuco (Bs As) y Motecristo (Córdoba) Agosto 2015



Chacabuco Agosto 2015

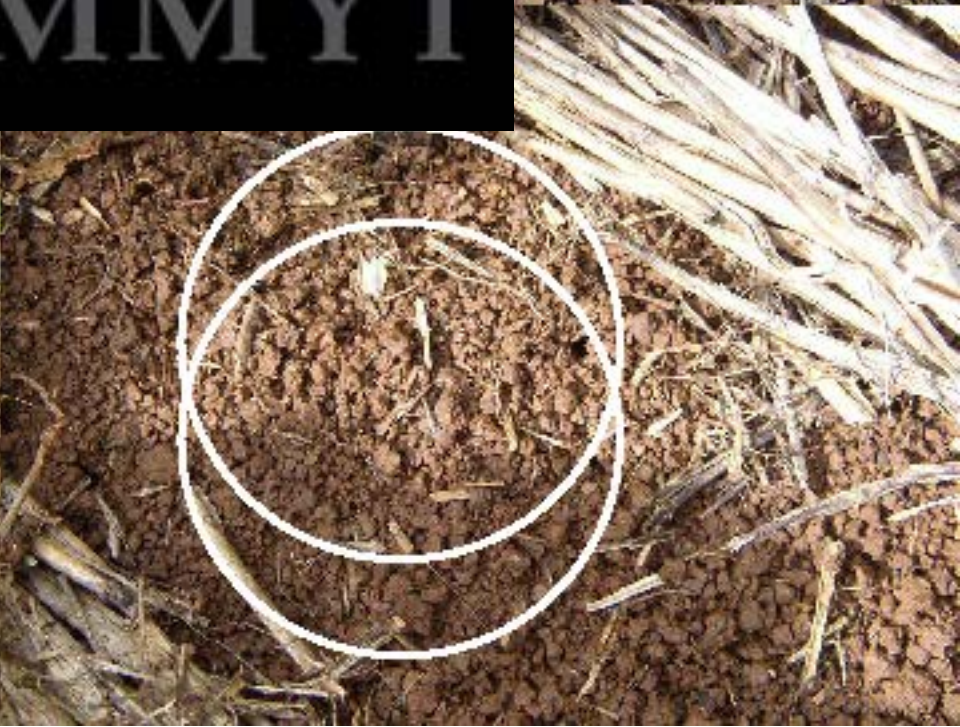


Partido de Carmen de Patagones
700.000 has afectadas por desertificación





50 1966-2016
CIMMYT



- ✓ It is not matter of size, extensive and intensive familiar farmers can adapt the system to its productie, cultural, social and environment situation
- ✓ Private-public interaction importance in national and international scale
- ✓ Interaction with Civil Society and Policymakers



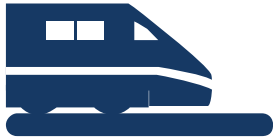
 **Aapresid**

www.aapresid.org.ar

THE NEEDS OF PUBLIC POLICIES...



Investment



Infrastructure

Financing

Insurances

Zoning, land use and others regulations

Food Safety & Quality

Legislation & Taxes



Good Agronomical Practices

Local Markets

Technology

International Markets





WORLD CONGRESS 7
on CONSERVATION AGRICULTURE
ROSARIO, Agosto 2017



GRUPO DE PAÍSES PRODUCTORES DEL SUR
Contribuyendo a la producción global sustentable de alimentos



www.aapresid.org.ar  **Aapresid**

#TOGETHER

THANKS... GRACIASS!!!

ING. AGR. María Beatriz (Pilu) Giraudó
giraudó@aapresid.org.ar pilugiraudó@gmail.com
@PiluGiraudó