IFMA 19
TRANSFORMING AGRICULTURE

19th IFMA CONGRESS
(The International Farm Management Association)

AACREA

FARMER PEER GROUPS IN ARGENTINA

DAVID HUGHES

CREA
En movimiento.
Siempre.

CREA Henderson Daireaux, 1957

An idea that might work...

AACREA was constituted on the 3rd of March of 1960, at Don Roque, Pirovano.

What is a CREA group?

It is a peer group formed by agribusiness executives that have the **willingness to share** their experiences and make the most of each **individual skills** in order to reach **solutions to their problems** and **improve decision making** in their own businesses.

CREA

- CREA group
  - 8 to 12 farmers and 1 adviser
  - Monthly meeting
  - Adviser´s monthly visit
  - Annual Work Plan
  - Field Test evaluation

CREA Advisors (Consultants) Congress

"Being at the field and seeing"

- Objectives
  - Capitalize skills and individual knowledge.
  - To promote the technological and managerial development of its members
  - To improve farmers´ business efficiency (Generate Solutions and improve decision making)

CREA Group

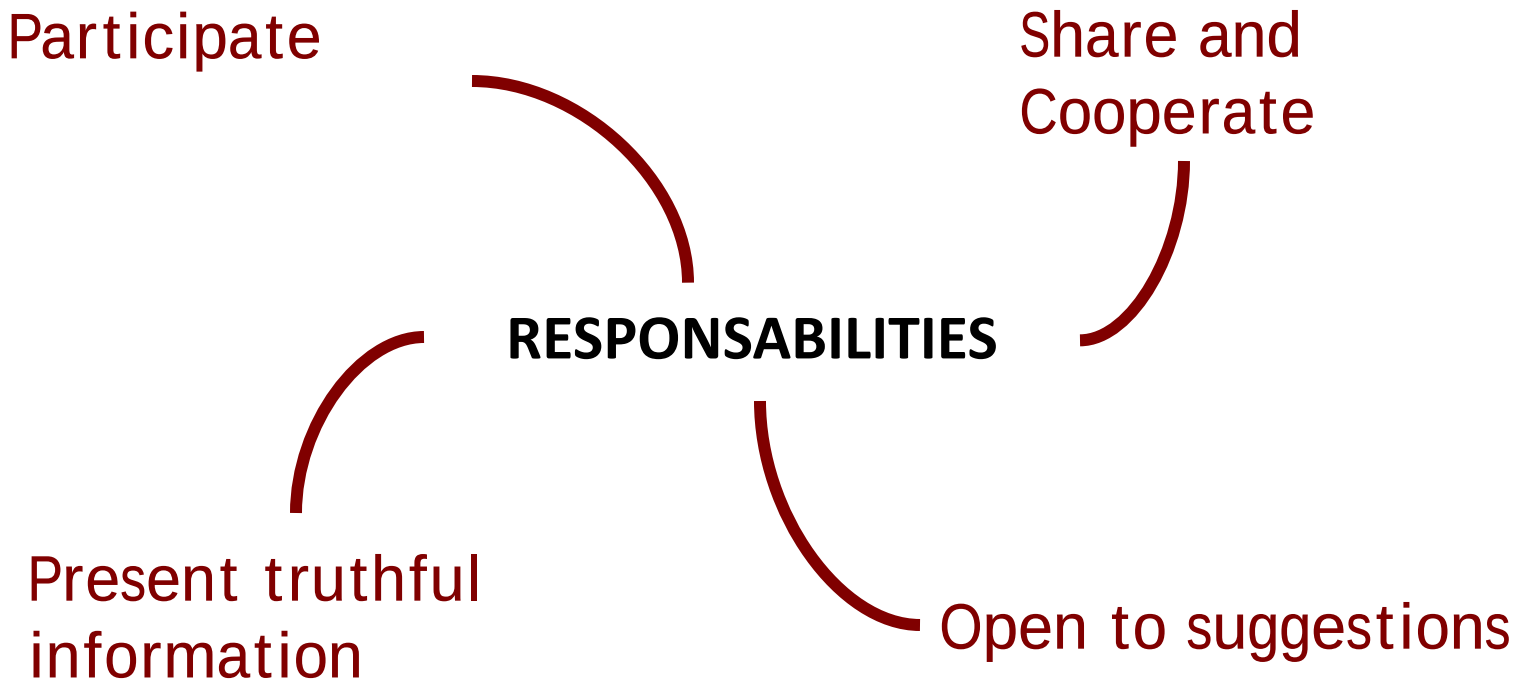
Continuous exchange of:

Information, Knowledge,

Ideas, Experiences and Opinions.

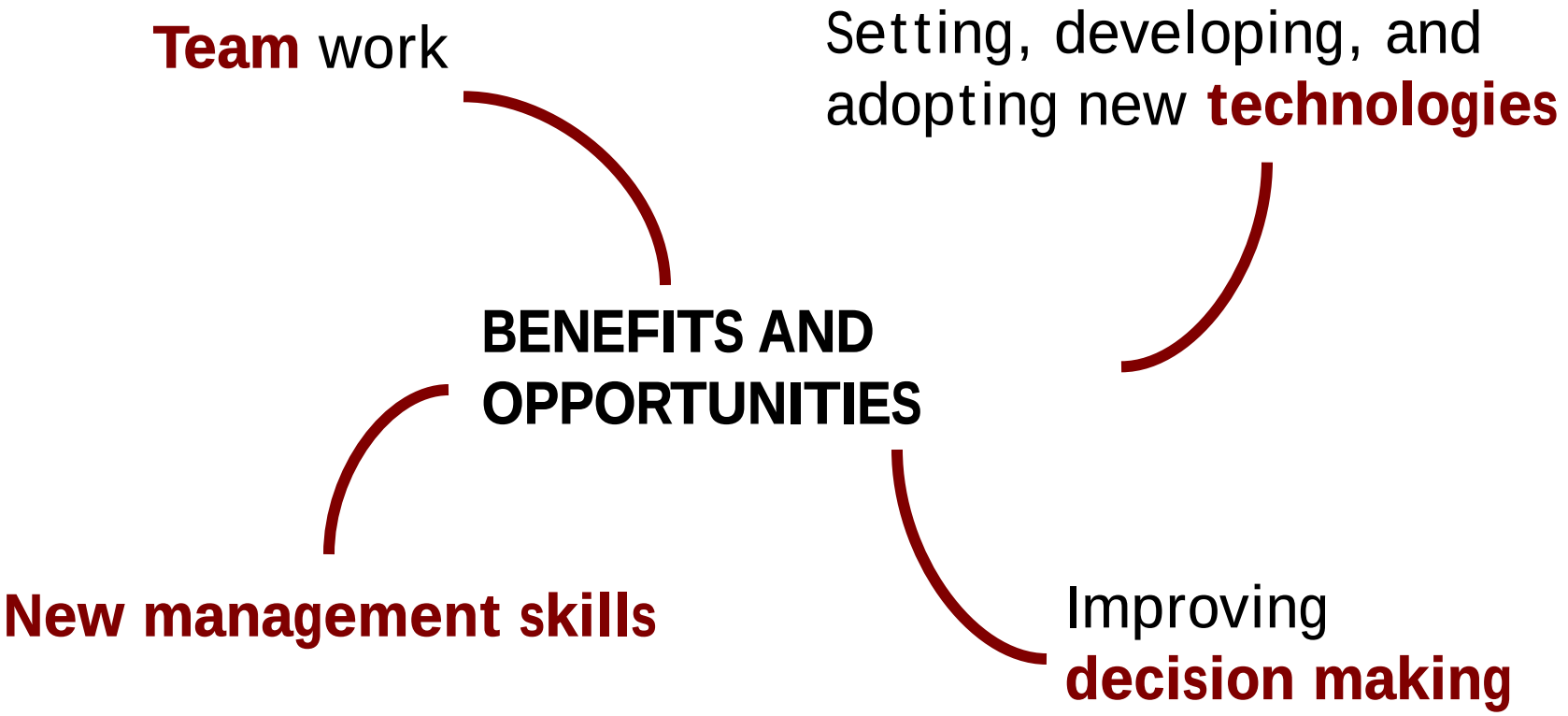
Each member contributes to the progress of the group, which in turn enriches each member.

Commitment



Gentleman's Agreement

Benefits and Opportunities



AACREA

Non profit Association that gathers all the CREA groups of the country.

AACREA is formed by

all the executive agricultural producers of the CREA groups

that gather together in order to do what they can't do on their own

AACREA

(Argentine Association of Regional Consortiums for Agricultural Experimentation)

- Non-profit organization
- Founded in 1960. Mother organization of about **200 CREA groups.**
- Organizes the collection and analysis of information produced by CREA groups.
- Coordinates research and development projects in answer to specific requests of CREA groups. (demand driven)
- Government often seeks it for technical information

CREA - The mission

To promote the *integral development of farmers*, achieving *sustainable and profitable business*, testing and updating technology and *transferring it to the community*, thus *contributing to the growth of the ag sector and our country*

CREA Philosophy is like our DNA: present in each action

RESPONSABILITY
SHARED EXPERIENCE
TRUST
CONSENSUS
INTERACTION WITH THE COMMUNITY

AACREA Objectives

- Promote Technological and Managerial Development of its members.
- Improve the business efficiency of the farmer, through educational and training programs in planning, decision-making and control.
- Undertakes activities and services which the individual CREA groups are not in position to execute on their own

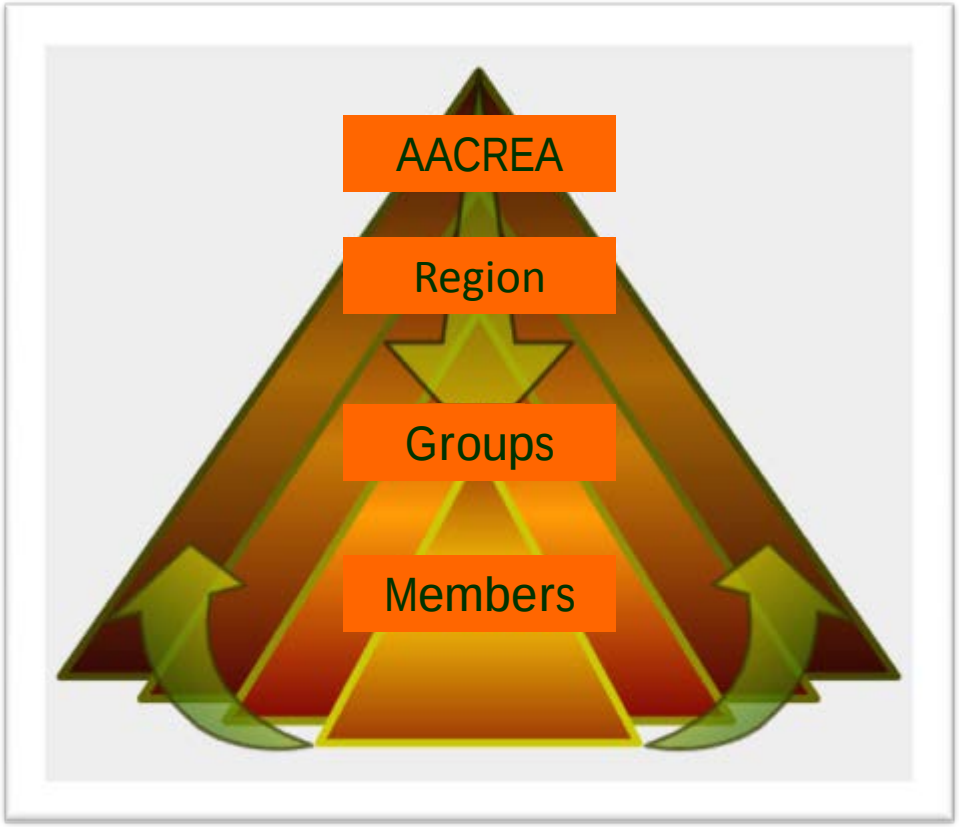
AACREA Objectives

- Organizes and benchmarks information produced by CREA groups and regions (trials, reports, physical data, etc.)
- All technological research and development projects organized by AACREA are an answer to concrete requests and suggestions originated in the CREAs and regions (demand driven)

AACREA

- The essence of the movement lies in its methodology of teamwork, of small groups of farmers and technicians known as **CREA groups**.

How are we organized?



AACREA

18 Regions

Board of Directors (farmers)

General Manager

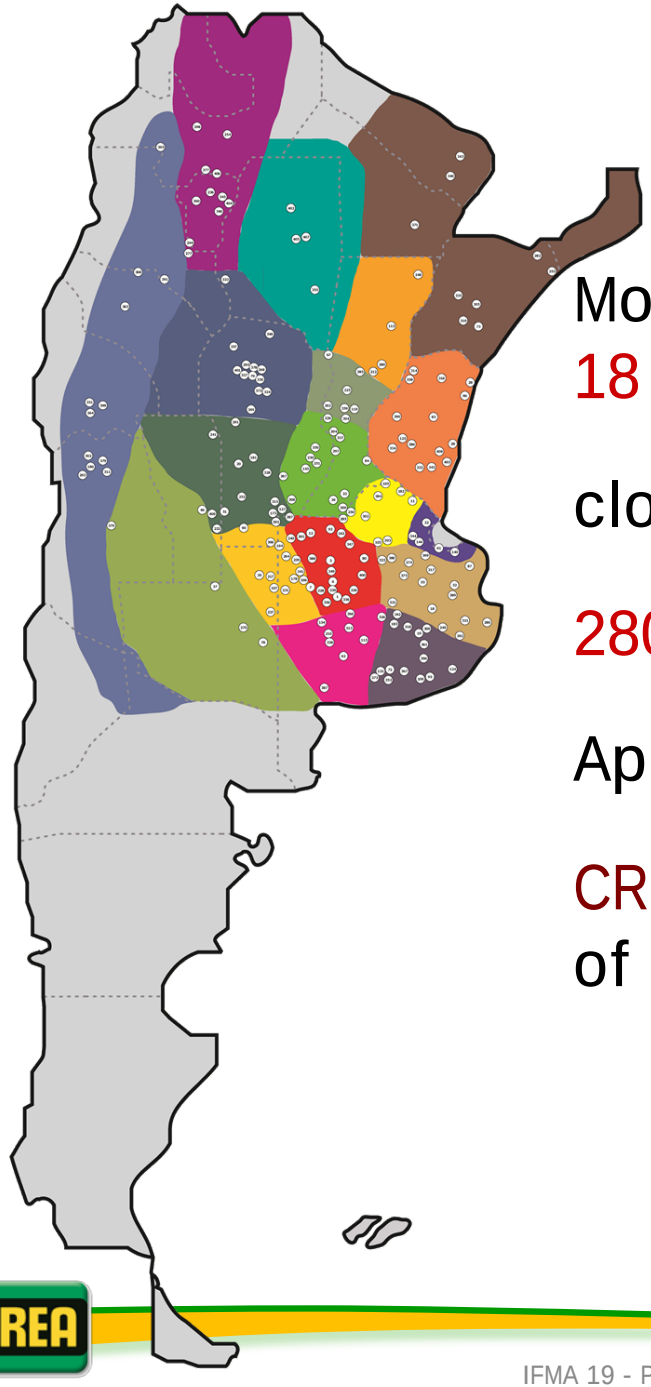
Region

11 CREA Groups (aprox) per region

Director (farmer) & Coordinator

CREA Group

10 members (farmers) + 1 advisor (consultant)



CREA

More than 200 groups
18 regiones

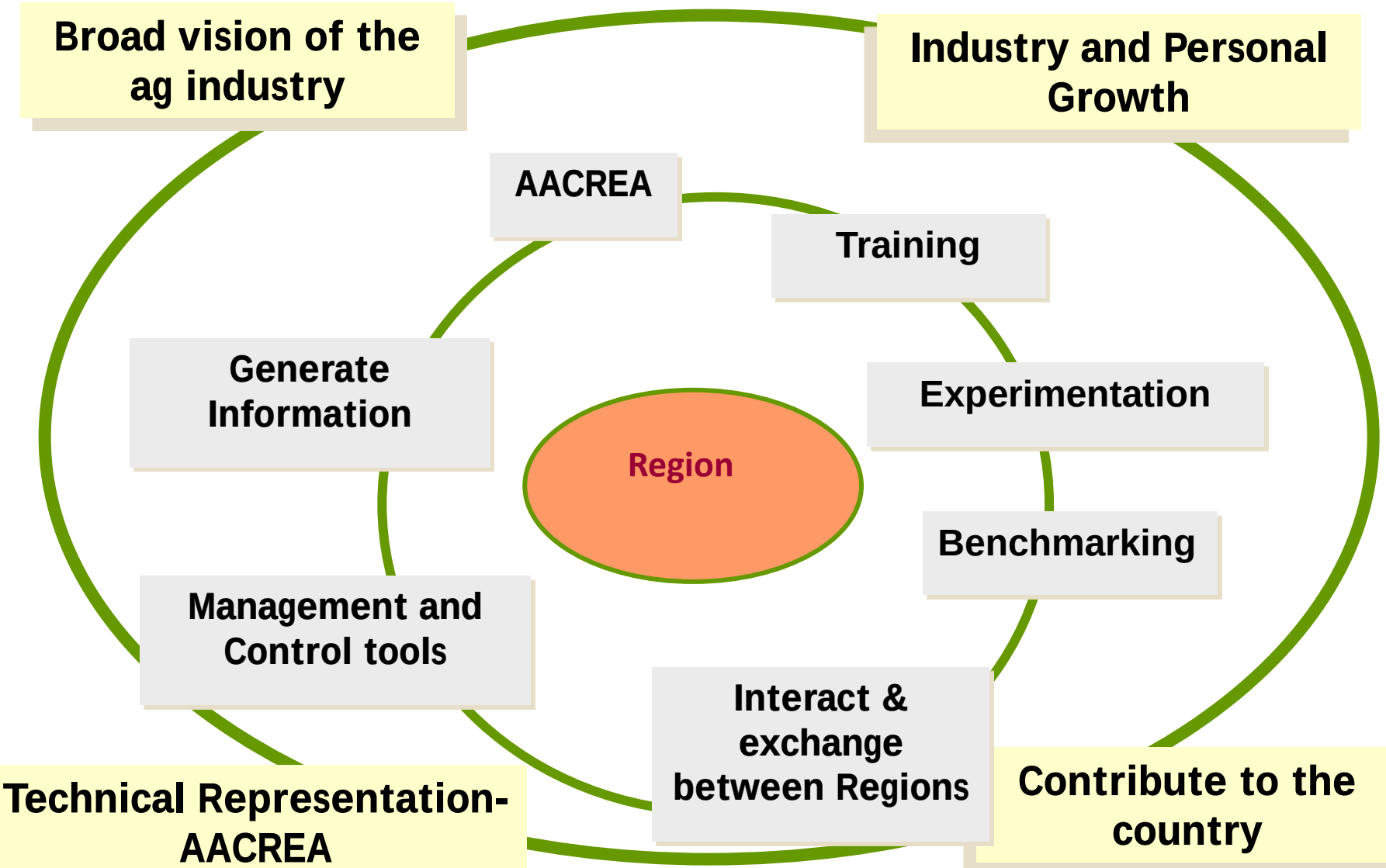
close to 2000 members

280 technical advisors

Aprox. 4.500.00 has. in production

CREA generates between 6 and 20% of the National Ag Production.

Dynamic Exchange Network



SOME EXAMPLES OF DEVELOPMENT AND IMPLEMENTATION OF TECHNOLOGY

En movimiento.
Siempre.

AACREA Technology Projects

- Agreements with companies, public and private institutions, national and international non governmental organizations for testing and adoption of new technologies

- The projects are based on real problems facing agricultural producers as businessmen, they are demand driven.

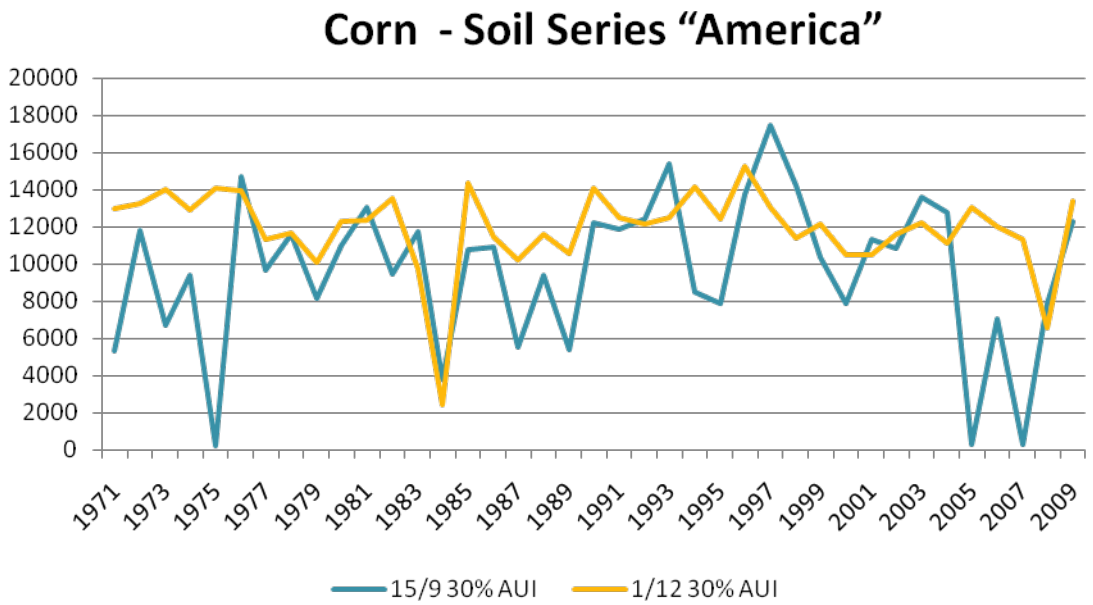
Some AACREA projects examples: Wheat fertilization, National Plans for Soybeans and Sunflower; Weather Forecasting Project; Beef Cattle Feeding Improvement (NIRS- NUTBAL)

There is a lot of field trials done at the regions levels. National plans objective is to gather all this information too.

Corn - Soil Series America (field 1) AW190

Yield (kg/ha) with different water content in soil at planting and different planting dates

	15-sep			01-dic		
	80%	50%	30%	80%	50%	30%
Mean	11217	9660	8112	12119	11912	11243
Max	17428	17428	17428	15260	15260	15260
Min	1261	233	300	6516	2395	1136
St. Dev.	3194	4045	4550	1818	2243	3016
CV %	28%	42%	56%	15%	19%	27%

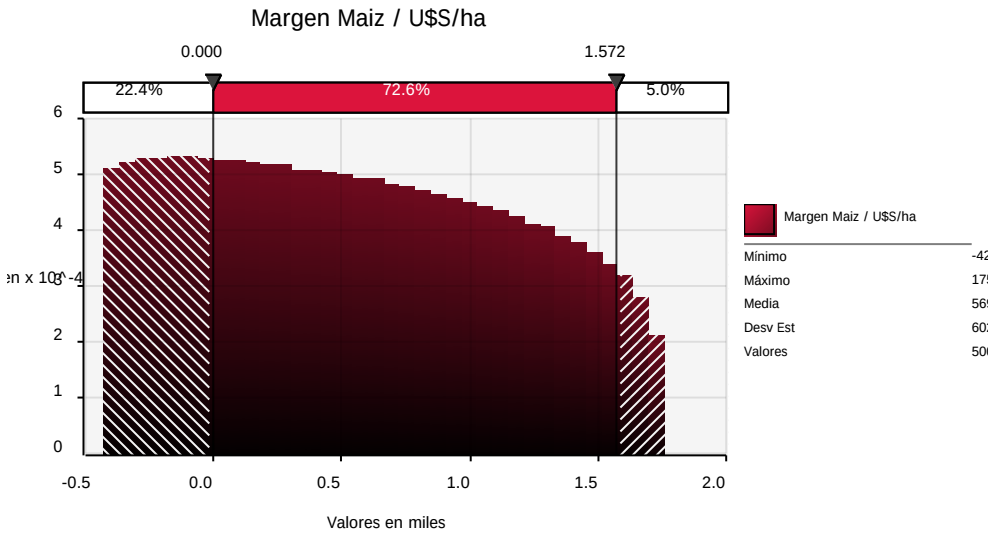


Soil Series America FS 15/09 30% AUi

	Bruto	Gastos Com	Flete	Neto
Precio	182.5	3.65	44	135

	Unidades	U$S/Unidad	U$S/ha
Siembra	1	36.28	36.28
Pulverizacion	3	6.05	18.14
Total Labores			54.42
Glifosato	5	2.2	11.00
Atrazina	2	5.5	11.00
Dual Gold	1.5	12	18.00
24D	0.7	6	4.20
Total Herbicidas			44.20
Cipermetrina	0.15	7	1.05
Dimetoato	0.5	7	3.50
Total Insecticida			4.55
Fosfato Diamonico	80	0.735	58.80
Urea	195	0.54	105.30
Total Fertilizantes			164.10
Semilla	160	1	160.00
Costo directo			427.27
Cosecha	6%		80.1
Costo Total			507.37
Ingreso			1076.73
Margen			569.36

Rinde Ton/ha	8.0



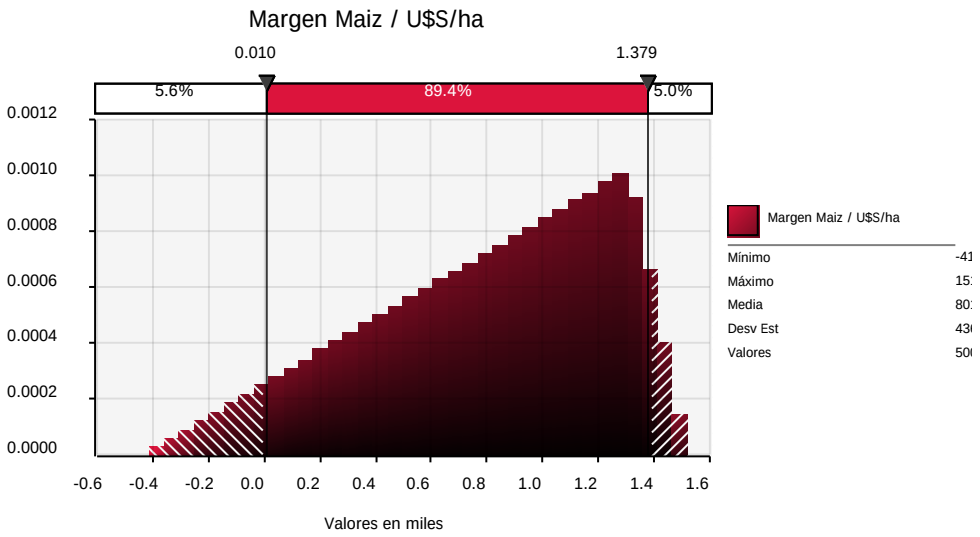
Probability of Gross Margin on first planting date – run with the last 40 years of climate data

	Bruto	Gastos Com	Flete	Neto
Precio	182.5	3.65	44	135

Margen Maiz 30% Aui al15/09 FS 01/12

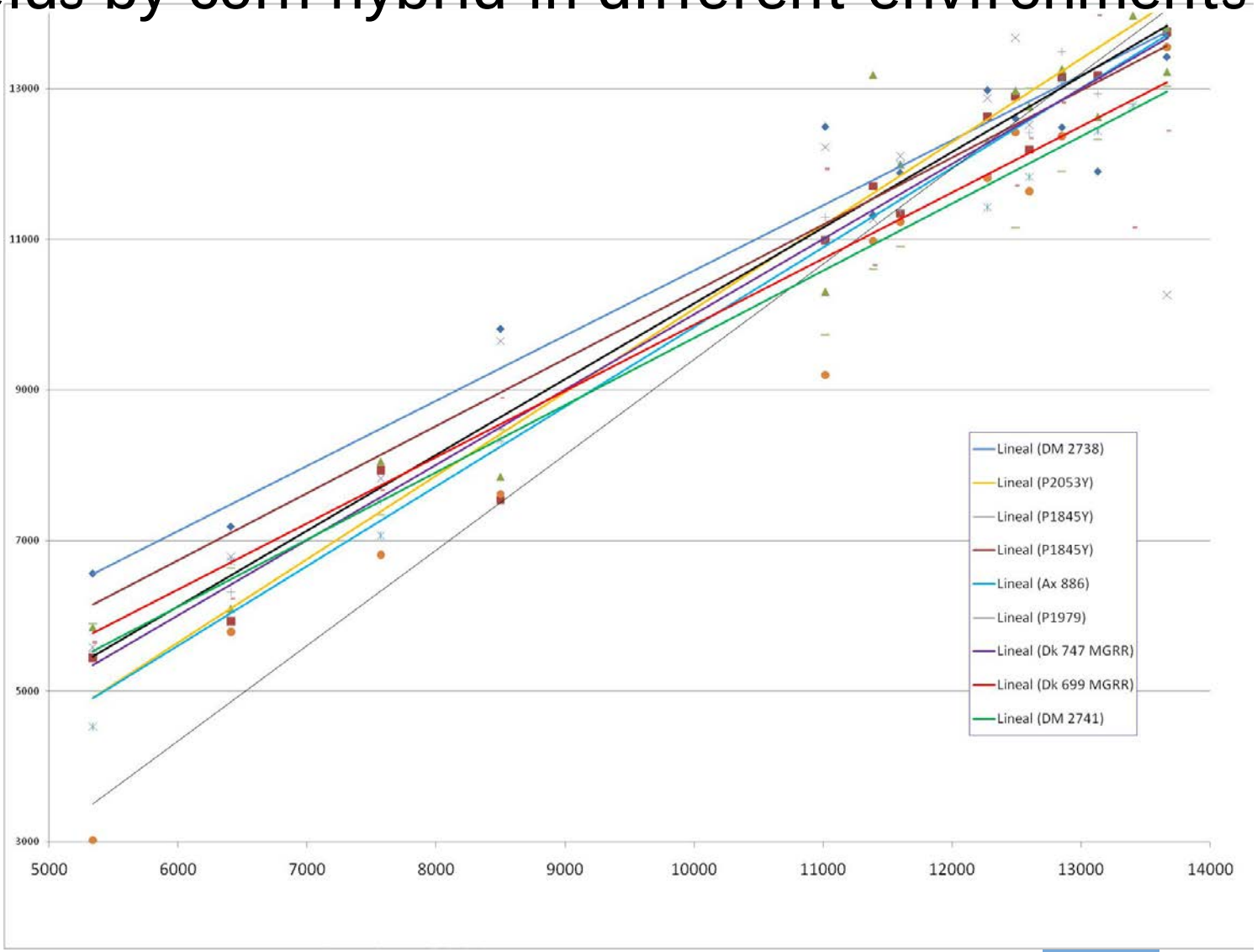
	Unidades	U$S/Unidad	U$S/ha
Siembra	1	36.28	36.28
Pulverizacion	3	6.05	18.14
Total Labores			54.42
Glifosato	5	2.2	11.00
Atrazina	2	5.5	11.00
Dual Gold	1.5	12	18.00
24D	0.7	6	4.20
Total Herbicidas			44.20
Cipermetrina	0.15	7	1.05
Dimetoato	0.5	7	3.50
Total Insecticida			4.55
Fosfato Diamonico	80	0.735	58.80
Urea	195	0.54	105.30
Total Fertilizantes			164.10
Semilla	160	1	160.00
Costo directo			427.27
Cosecha	6%		98.8
Costo Total			526.06
Ingreso			1327.95
Margen			801.89

Rinde Ton/ha	9.8

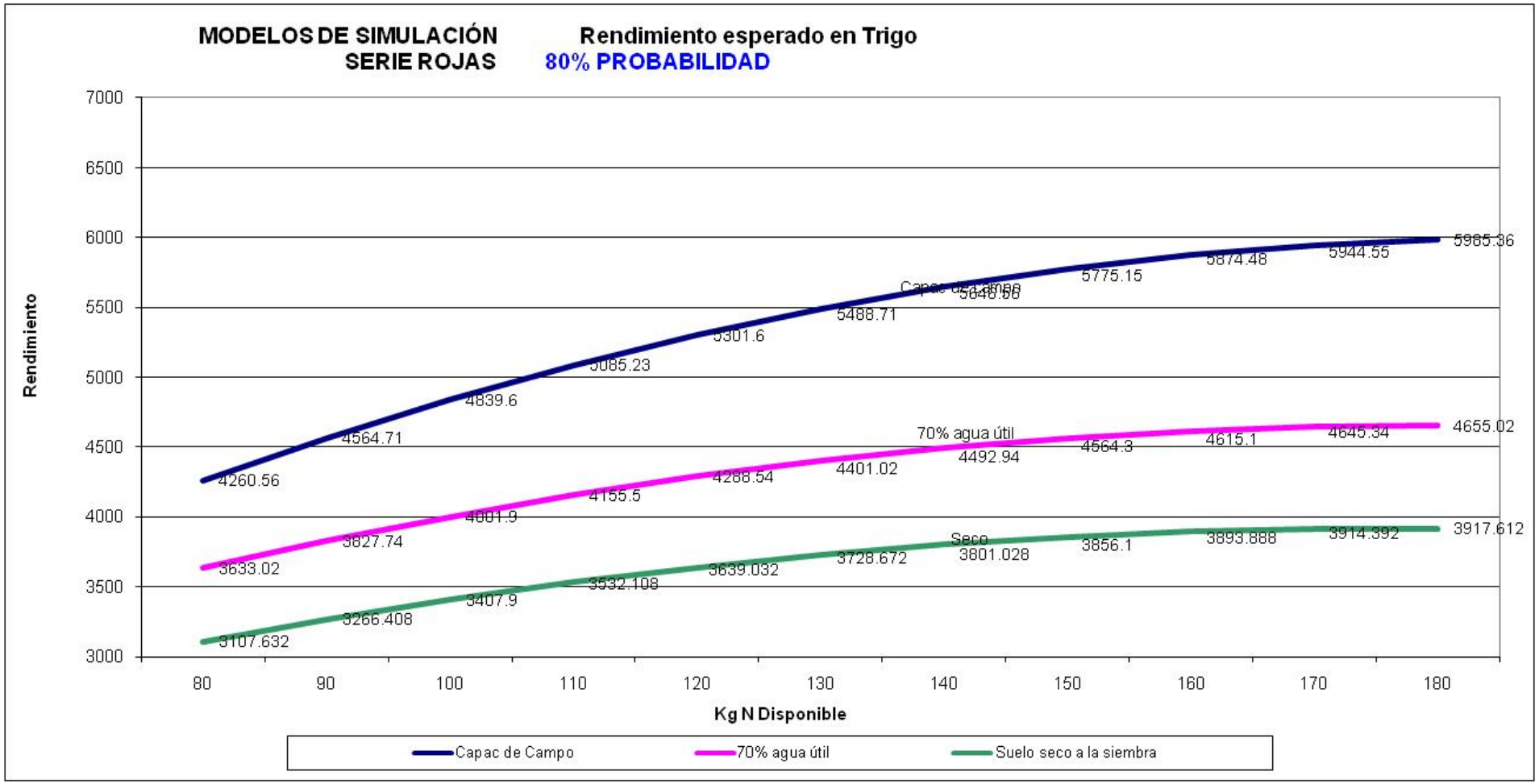


Probability of Gross Margin on the second planting date – run with the last 40 years of climate

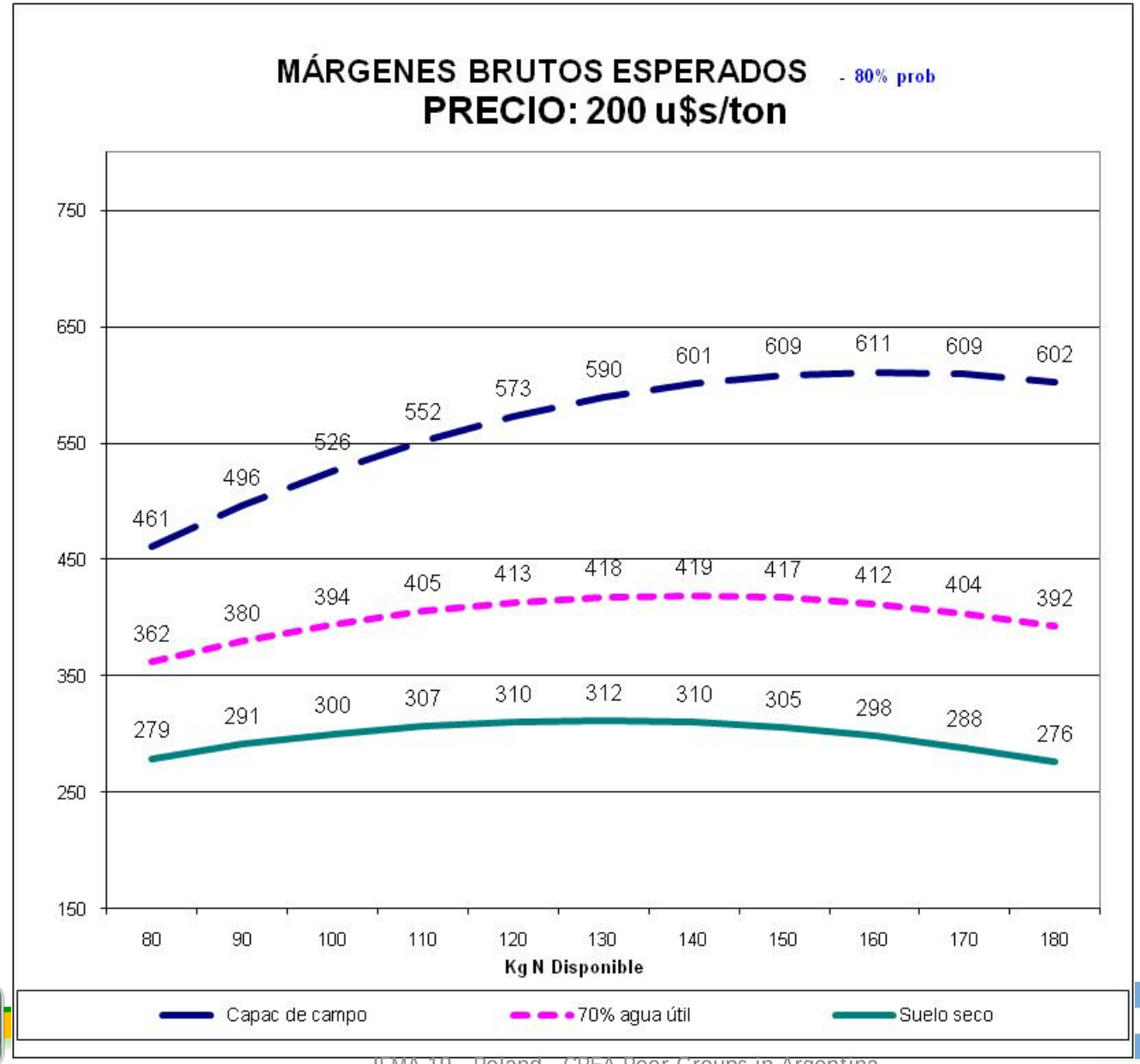
Corn Genotype – Environment Graph
Yields by corn hybrid in different environments



Wheat Yield Probabilities



Wheat Expected Gross Margins



AACREA – CRED – Univ. of Miami
2007 - 2010

- ***"Interactions between changing climate and technological innovations in agricultural decision-making: implications for land use and sustainability of production***

- ***Funded by the National Science Foundation (NSF) of the USA***

AACREA – CRED (Columbia Univ.)

The project CLIMA between AACREA and the Center for Research on Environmental Decisions (CRED) was funded by the National Science Foundation (NSF) 2004-2007

Decision-making course targets Argentine farmers and their technical advisors

Dr. Elke Weber taught an intensive two-day course on decision-making at AACREA Headquarters in Buenos Aires, 14-15 December 2006. The course was intended to allow farmers and their technical advisors to enhance their decision-making ability.

Transferring Knowledge to the Community

- All information generated is non proprietory and is public through the partners in the research and development
- CREA Magazine
- Technical Publications by activities/crops
- Software development (business performance and planning)
- Information offered to Congressmen, Union Leaders, other institutions

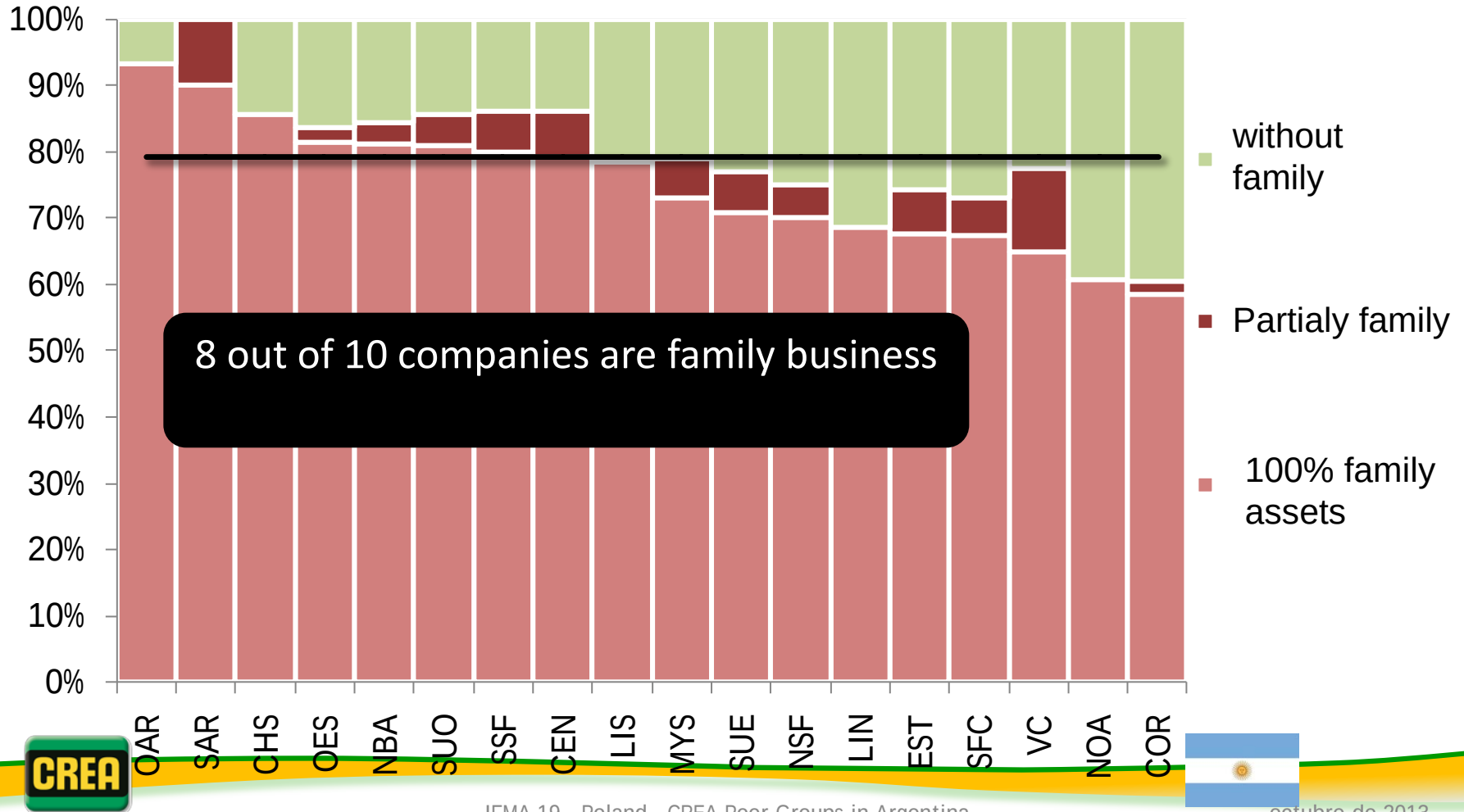
- Technical Update Seminars (28 seminars during the last year through all AACREA) open to all interested
- Seminar and Marketing Groups
- Agreements with important magazines and national newspapers in order to publish public information gathered by AACREA.
- Press team in AACREA to help release information of interest
- National and Regional Conferences

AACREA – R&D Department
Buenos Aires, Argentina.

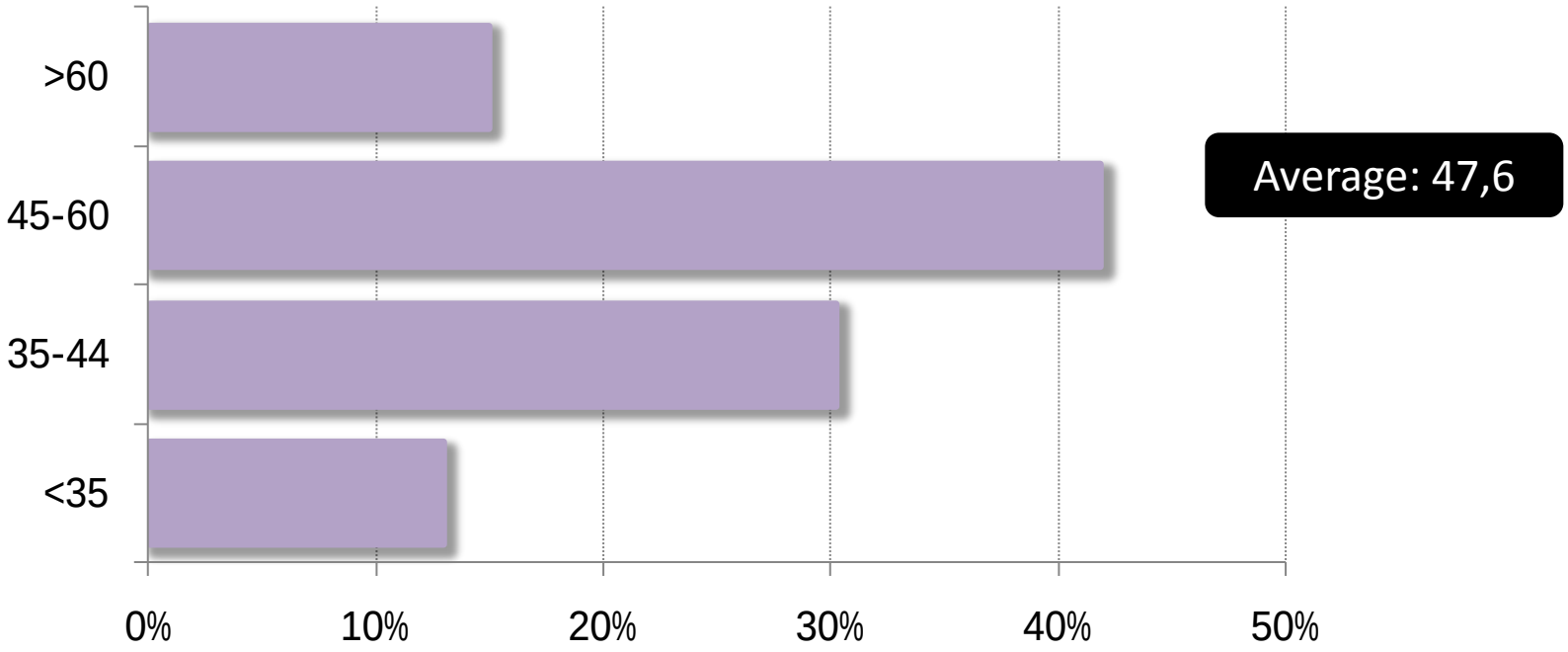
PEOPLE MAKE THE DIFFERENCE

En movimiento.
Siempre.

CREA Farm Family Business – by Region
(ownership of assets)



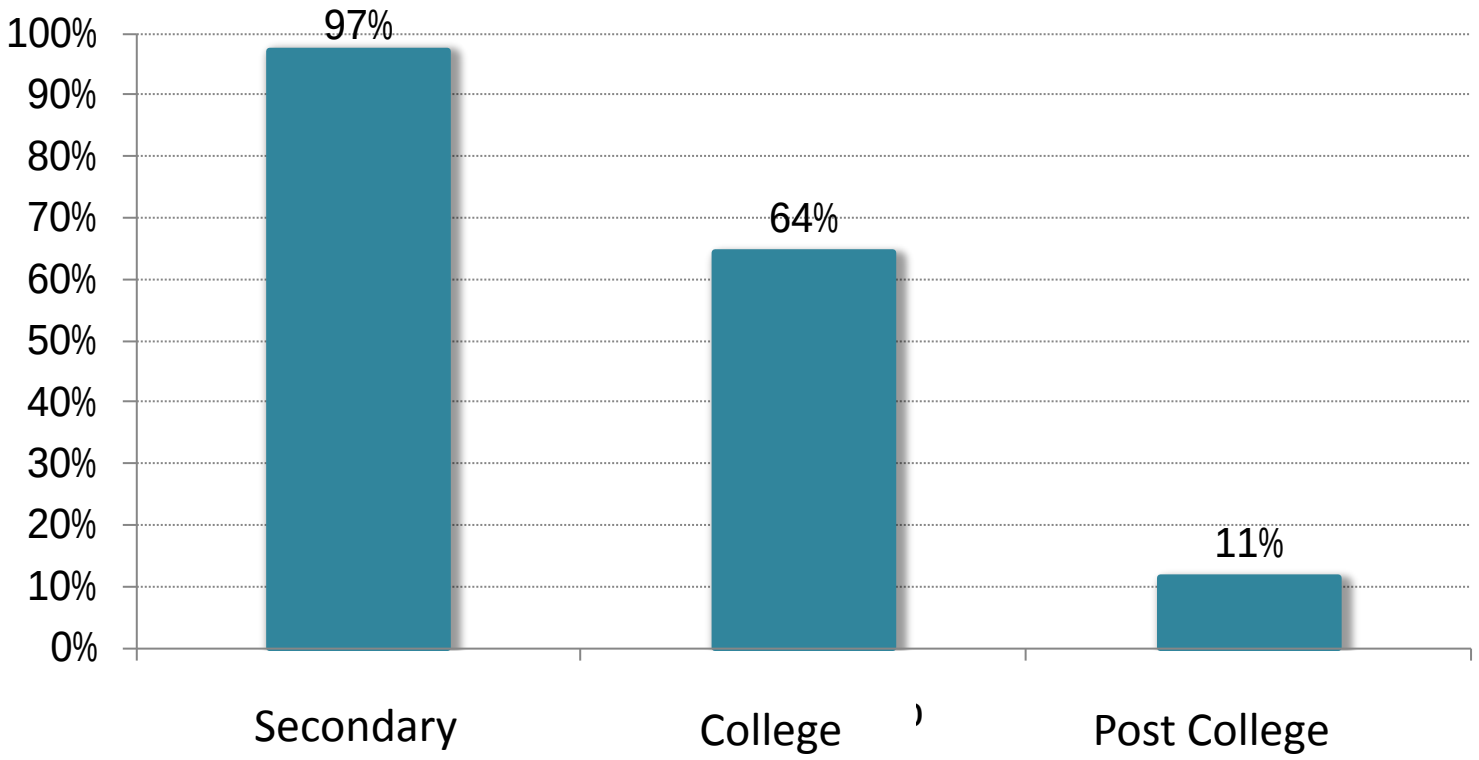
Age of principal CREA decision maker:



Benchmark:

AGE	CREA	Univ. Austral	USA (Purdue)
<35	12%	15%	5%
35-44	29%	33%	15%
Promedio	48	47	54

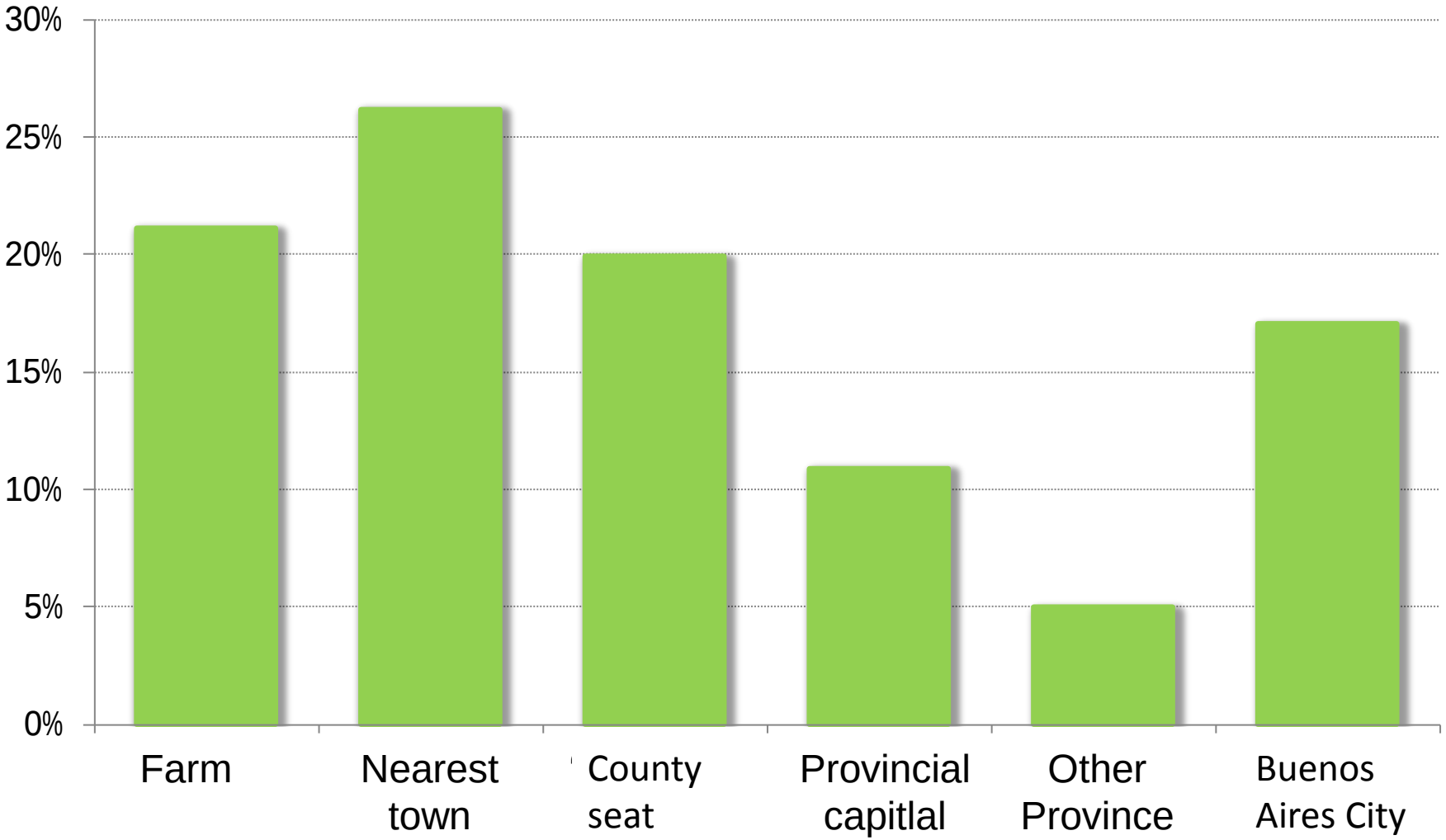
Education of principal CREA decision maker:



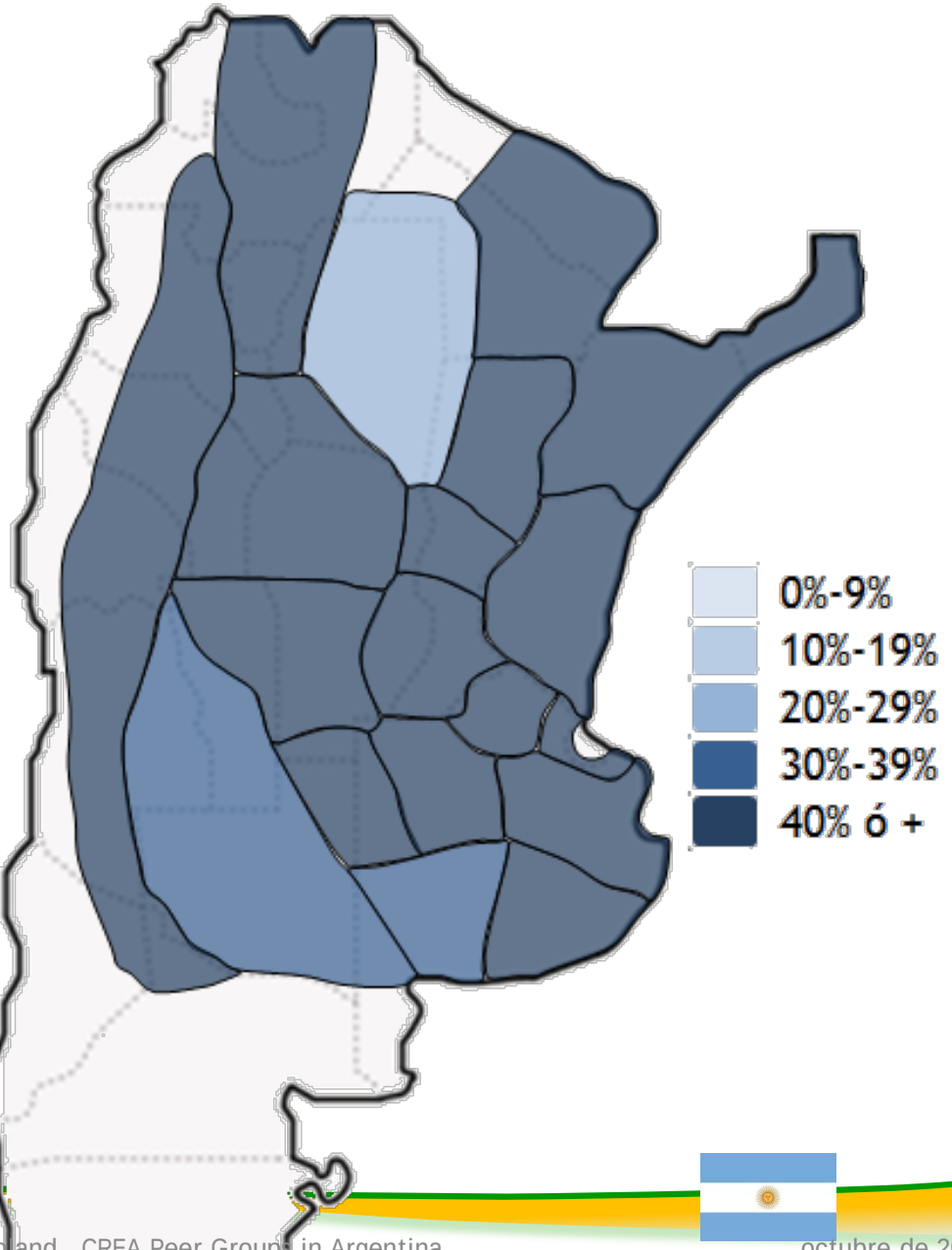
Benchmark:

	College	PostCollege
CREA	62%	11%
Austral	46%	10%
USA (Purdue)	25%	5%

Place of Residence of principal CREA decision maker:

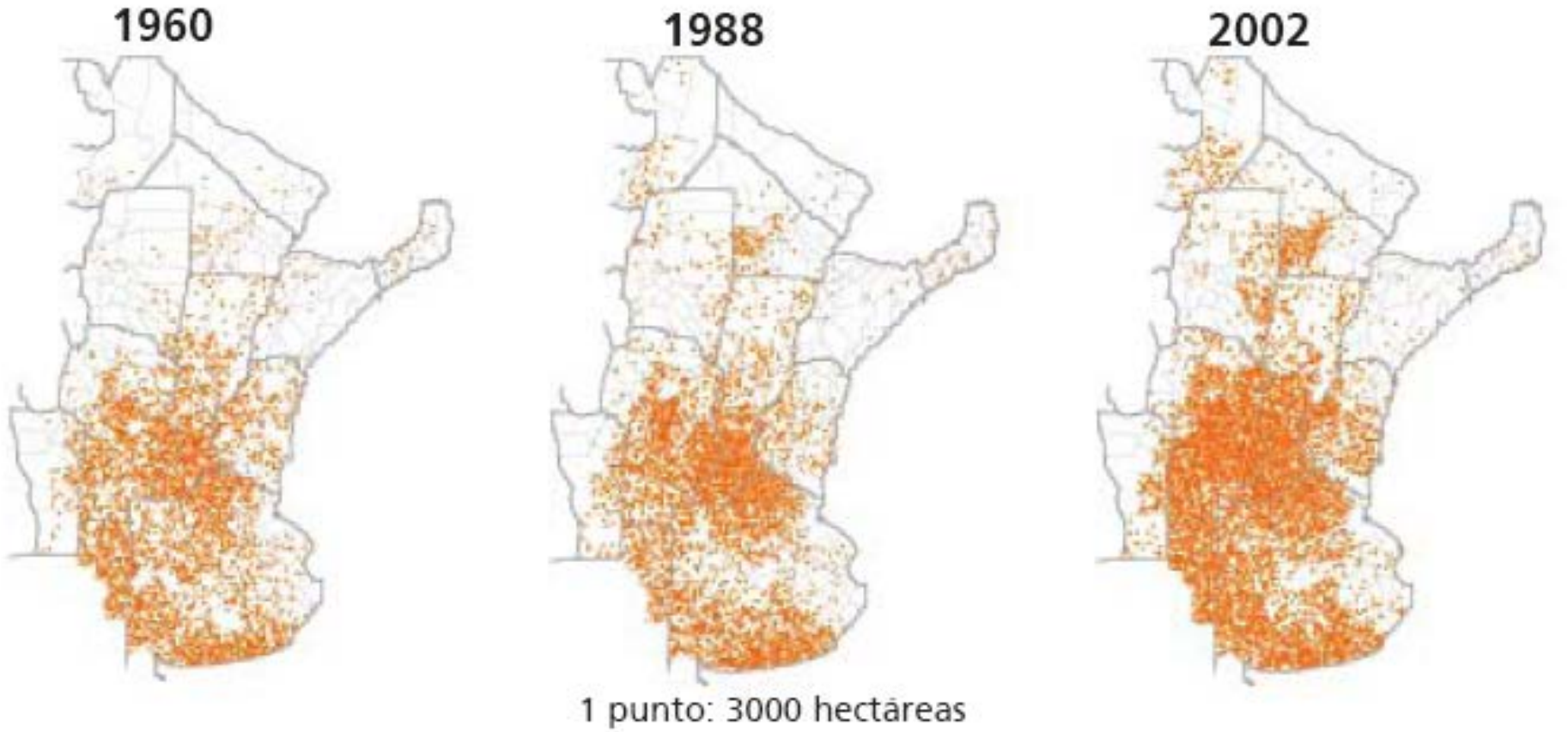


Members who Participate in Other comunity activities



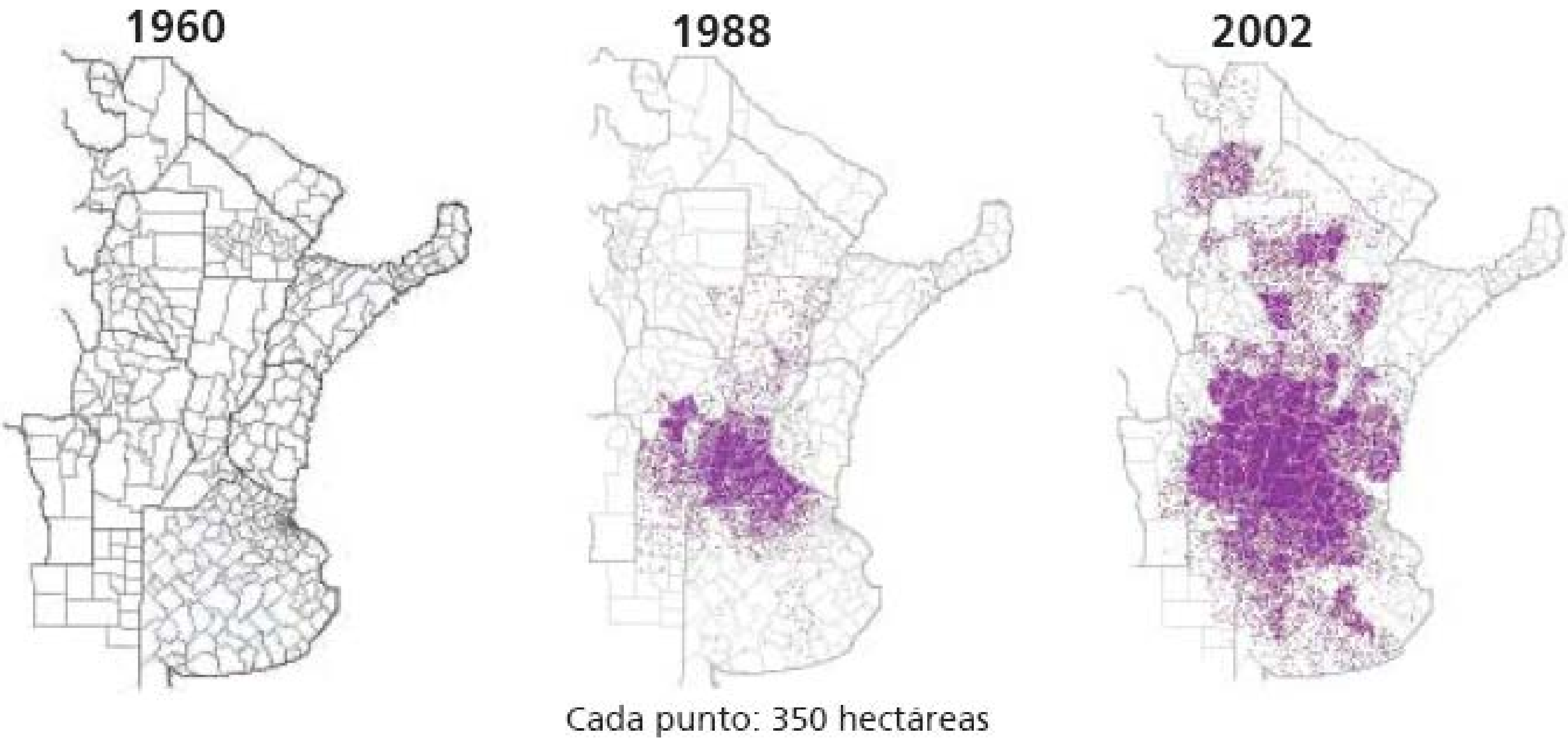
Sharing Knowledge: The fastest and most efficient way to grow

Agricultural area expansion



Fuente: Lorena Carreño y Ernesto Viglizzo

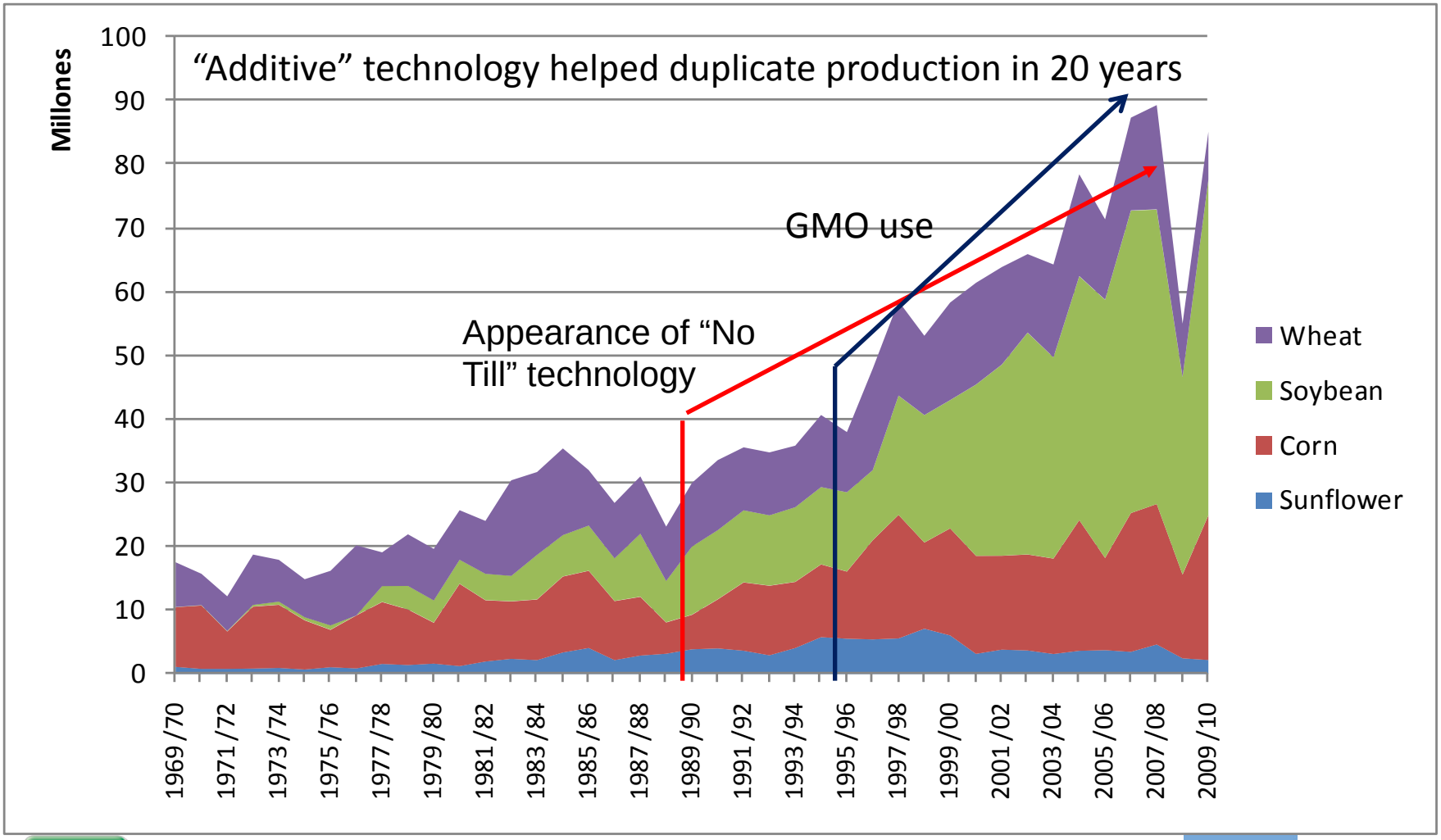
Soybean expansion



Fuente: Lorena Carreño y Ernesto Viglizzo

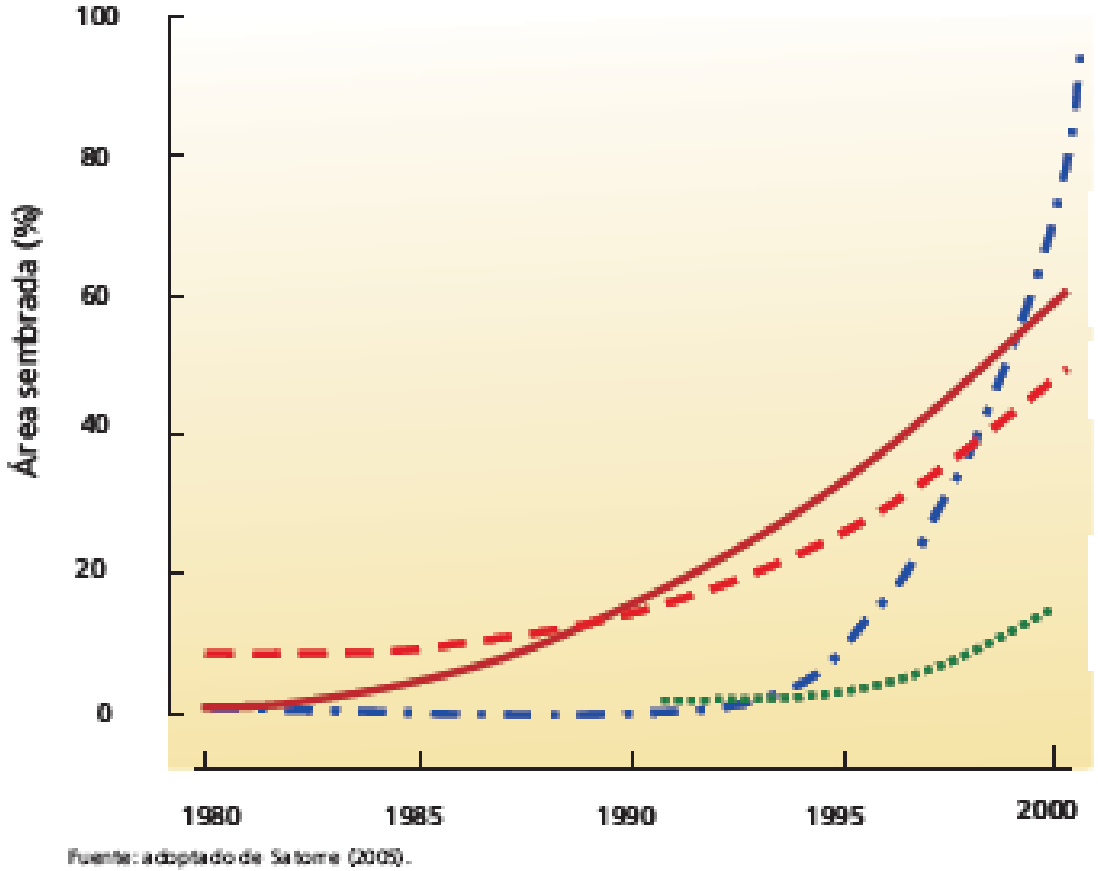
Production:

corn, wheat, soybean & sunflower (Mt)



Source: MinAgri

Technology Adoption in Agriculture



Fuente: adoptado de Satorre (2005).

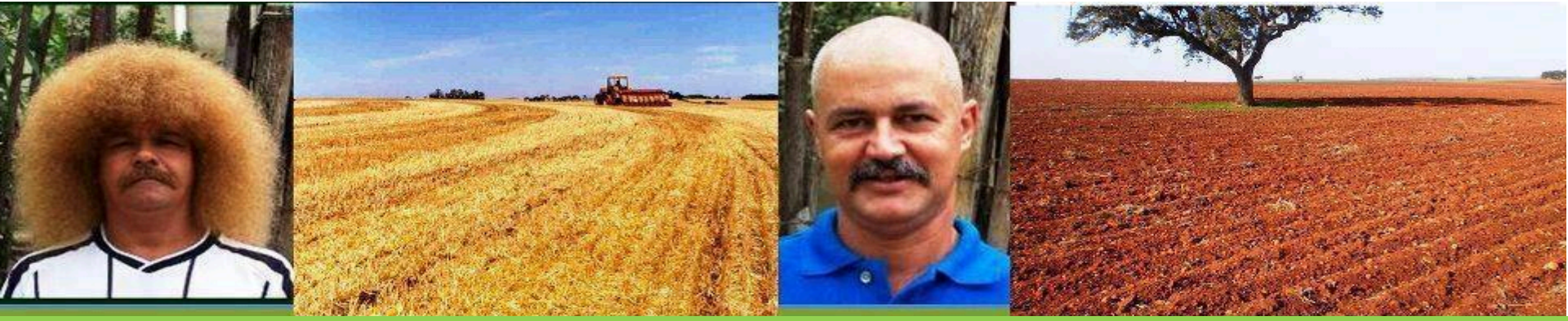
Conventional Till

No Till

No Till vs Conventional Tillage

	Consumption fossil energy (mj/ha/año)	Erosion risk (ton. sediment/ha/año)
No Till	8.157,8	4,96
Conventional Till	12.292,4	16,73

Example environmental assessment of the aggressiveness of different agricultural models (source: adapted from Frank 2006)



“Soft Technology”
No Till vs Conventional Tillage
An easier way to understand it!