

INTERNATIONAL FOOD & AGRIBUSINESS MANAGEMENT ASSOCIATION
19th ANNUAL WORLD SYMPOSIUM
Budapest, Hungary-June 20-23, 2009
“Global Challenges and Local Solution”

“THE EMERGENCE OF HYBRID FORMS IN ARGENTINA’S GRAIN PRODUCTION SECTOR”

Authors: Chaddad, F.; Senesi, S.;
Vilella, F.; Palau, H

Food and Agribusiness Program
School of Agronomy-UBA-Argentina



FOOD & AGRIBUSINESS PROGRAM

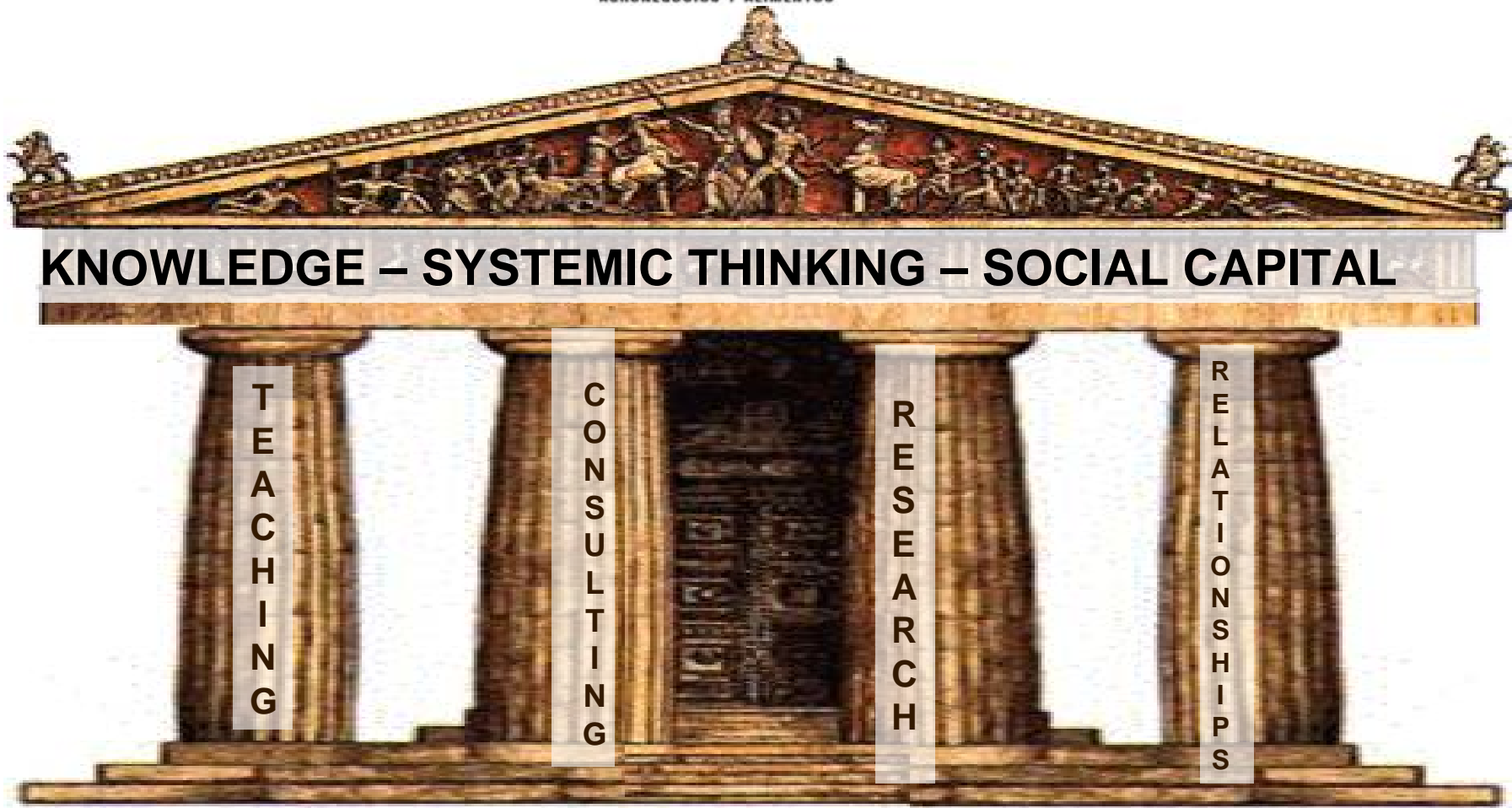
Contact e-mail: ssenesi@agro.uba.ar

TE/FAX: +5411-4524-2490/2499.

PROGRAMA DE



AGRONEGOCIOS Y ALIMENTOS







TOTAL QUALITY

Problem statement

- 1st soybean oil world exporter
- 1st soybean meal world exporter
- 1st sunflower oil world exporter
- 1st sunflower meal world exporter
- 1st lemon world exporter
- 1st honey world exporter
- 1st pear world exporter
- 1st concentrated lemon juice world exporter
- 2nd corn world exporter
- 2nd sorghum world exporter
- 3rd soybean world exporter
- 3rd dry milk world exporter
- 3rd concentrated apple juice world exporter
- 5th wheat world exporter
- 8th beef world exporter
- 9th cheese world exporter
- 10th wine world exporter

Problem statement

-  The paper focuses on the agricultural sector in Argentina.
-  1990s: Reduction of State intervention (export taxes, agribusiness costs, long terms business rules)
-  Technological innovations: no-till cropping systems, (rotation, fertilizers, agrochemicals), GMO seeds, GPS, custom management.
-  Organizational innovations: complex organizational arrangements and business relationships involving contractors, producers, suppliers, processors, exporters and individual investors (hybrid forms).

Problem statement

- Macroeconomic crises and institutional shocks starting in December 2001.
- Negative collective action, rent seeking behavior and contractual hold-ups became the norm. New players with no prior experience in the sector.
- Low micro transaction costs, high macro transaction costs after 2004.

Table 1. Planted area and production of four major crops in Argentina (1992-2008)

	1992	2000	2008	% Growth (1992-2008)
Planted area (in million hectares)	14.5	22.7	28.0	93.1%
Production (in million metric tons)	35.5	58.3	88.0	147.8%



No till system

Rotation: Diversity and Intensity





Balanced Nutrition



Integrated Pest Management/Control



Responsible agrochemicals management

Custom Management



Objectives

The objective of this paper is to explore and describe the organizational changes –in particular, the emergence of hybrid structures– in the Argentine crop production sector.

Procedures



Multiple case study methodology:

- a) Informal hybrid form;
- b) Agricultural trust fund (*fideicomiso*) which has both producers and outside investors as partners;
- c) Investor-oriented corporate structure; and
- d) Network of networks (many private nodes in relation with other private nodes including landowners, agronomists, branch managers, contractors, and service providers).



Primary data collection: personal e-mailed interviews using a standardized questionnaire with close-ended questions. A total of 8 experts and CEOs of the agribusiness hybrid forms were interviewed.

Theoretical framework



Transaction cost economics:

- Firms, markets, hybrids (governance structures)
- Make-or-buy decision (Coase)
- Attributes of transaction: uncertainty, frequency, specific assets (Williamson)
- Hybrid arrangements: networks, supply chains coordination, franchise agreements, partnerships and cooperatives (Ménard)
 - Three common features or “regularities”: pooling, contracting and competing.
 - The role of contracts in hybrid arrangements is crucial in coordinating partners and sharing quasi rents



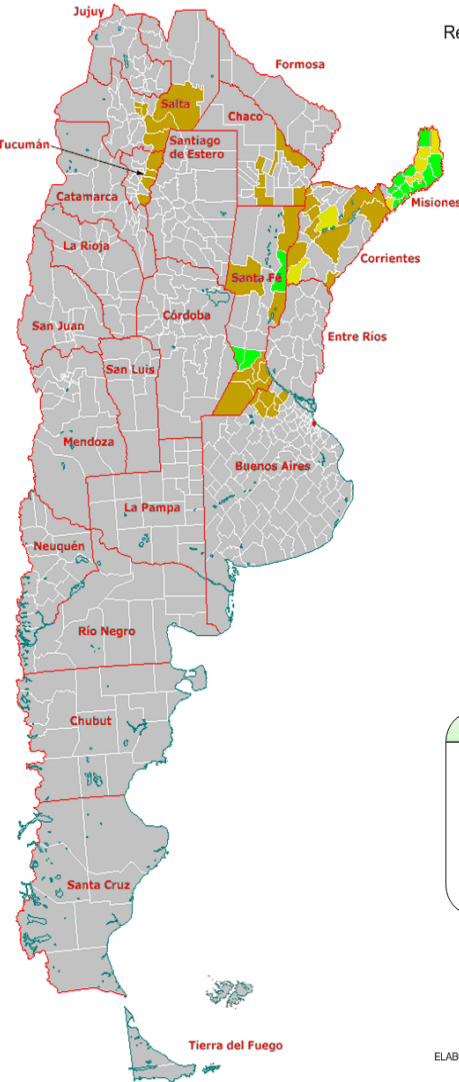
Organizational interdependence (netchain approach):

- integrates supply chain analysis (SCA) and network analysis (NA)
- Based in “interdependencies”: pooled, sequential, reciprocal

Preliminary Results

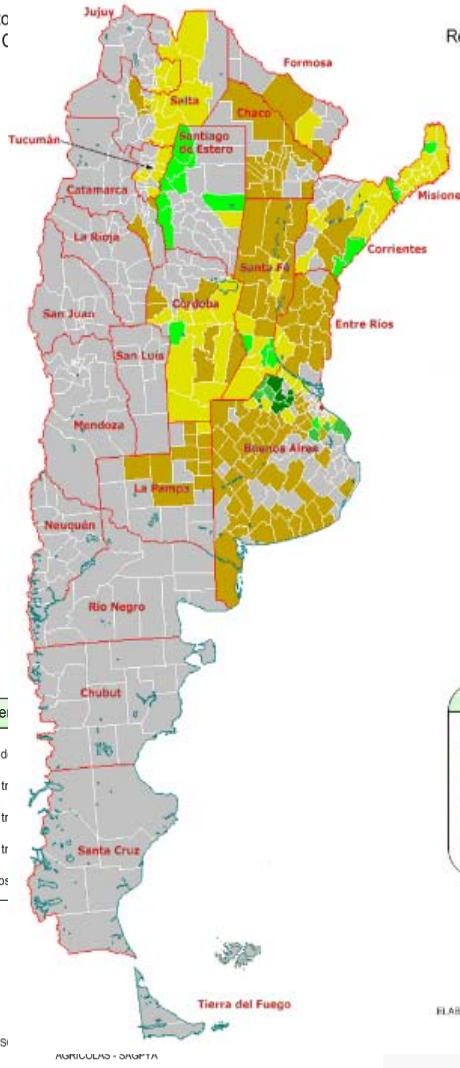
- First step of an ongoing research project involving FAUBA and the University of Missouri
- Describe the heterogeneity and complexity of emergent hybrid forms in Argentine agriculture

Argentine agricultural business



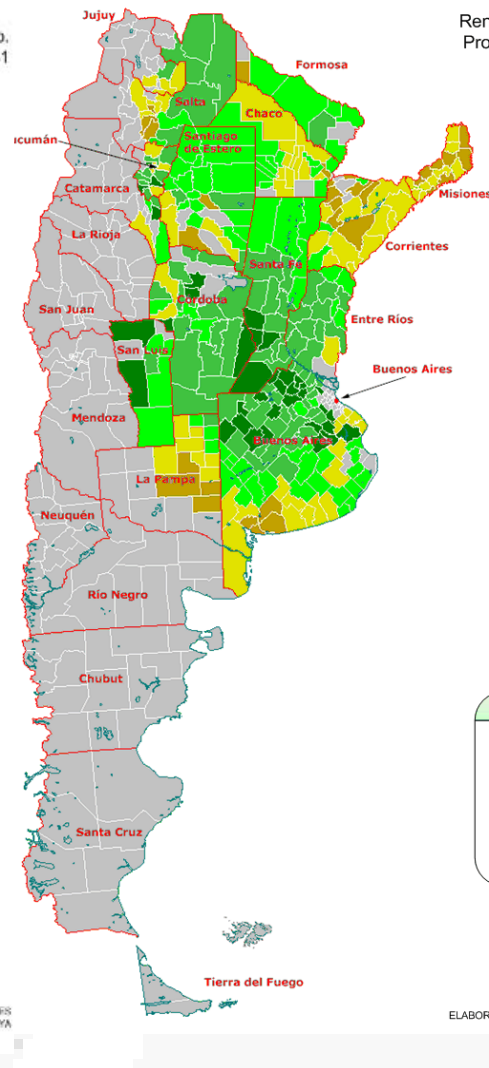
Rendimiento (t/ha)

ELABORACION PAA SI



Rendimiento de soja por partido. Campaña 1980/1981

ELABORACION PAA SOBRE DATOS DE ESTIMACIONES AGRICOLAS - SAGPYA

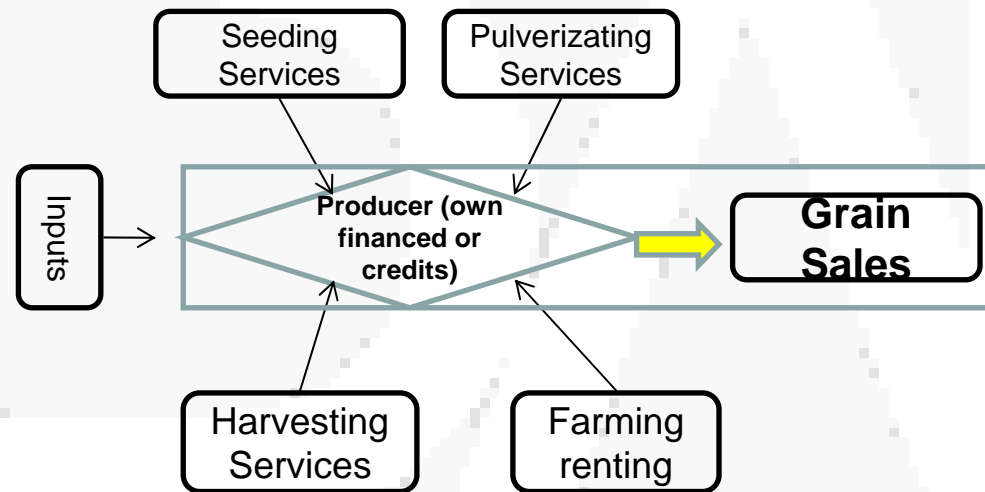


Rendimiento de soja por partido. Promedio ponderado campañas 1969/1970 a 2007/2008

ELABORACION PAA SOBRE DATOS DE ESTIMACIONES AGRICOLAS - SAGPYA

Informal Hybrid

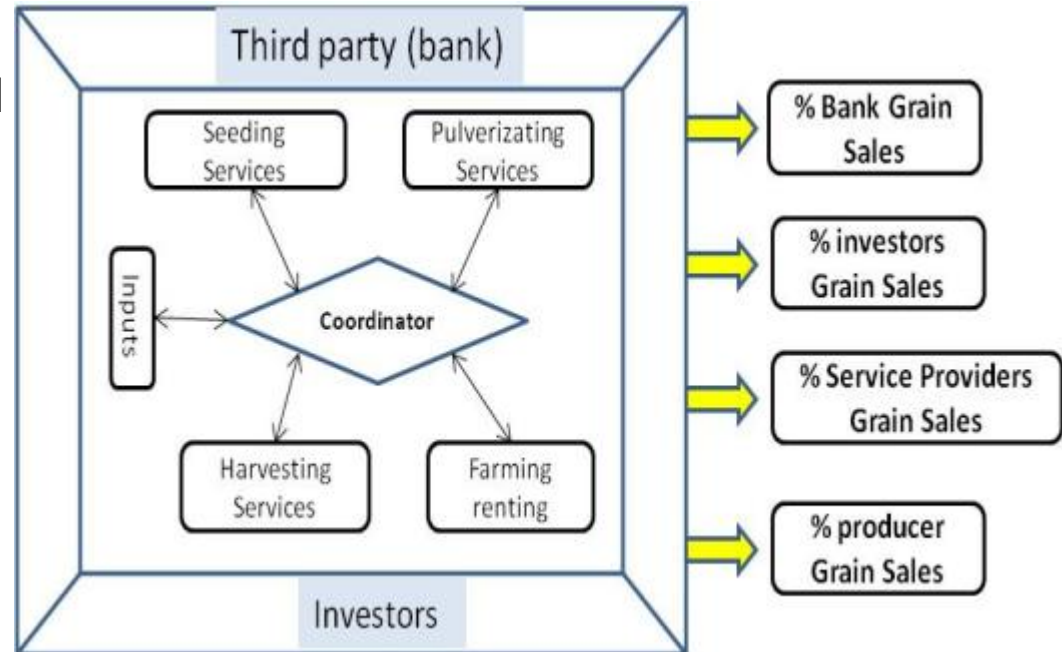
- First hybrid structure to arise - end of the 1980s.
- Pool of producers interconnected by formal or informal contracts of technological actions related to production
- The producer pays for the services needed
- Contractual forms: Prices based on a percentage of production (short term contracts)
- Informal character of the contract increases uncertainty
- Crop areas range from 3,000 to 10,000 hectares



Interfirm collaboration type: sequential

Agricultural Trust Fund (Fideicomiso)

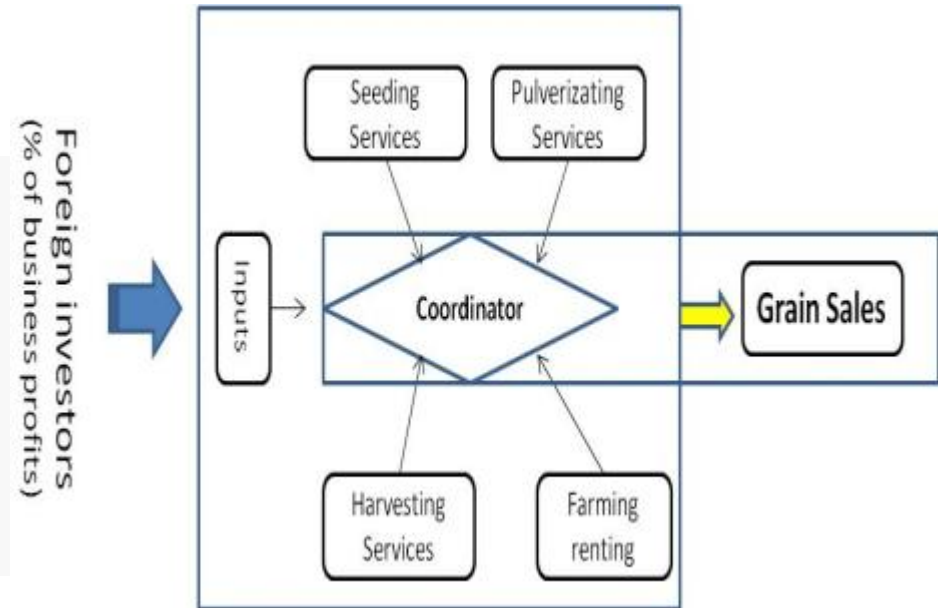
- Contractual arrangement introduced by Law 24441/95
- Important for financing
- Investor and a group of actors, linked to an investment capital receiver (the coordinator of the organization), and a third party (bank) to enforce the contract
- Coordinator => manage short term contracts and operations (seeding, harvesting, etc.)
- High level of information sharing (low level of uncertainty)
- Crop areas range from 5,000 to 10,000 hectares



Interfirm collaboration type: combined

Investor-Oriented Corporate Structure

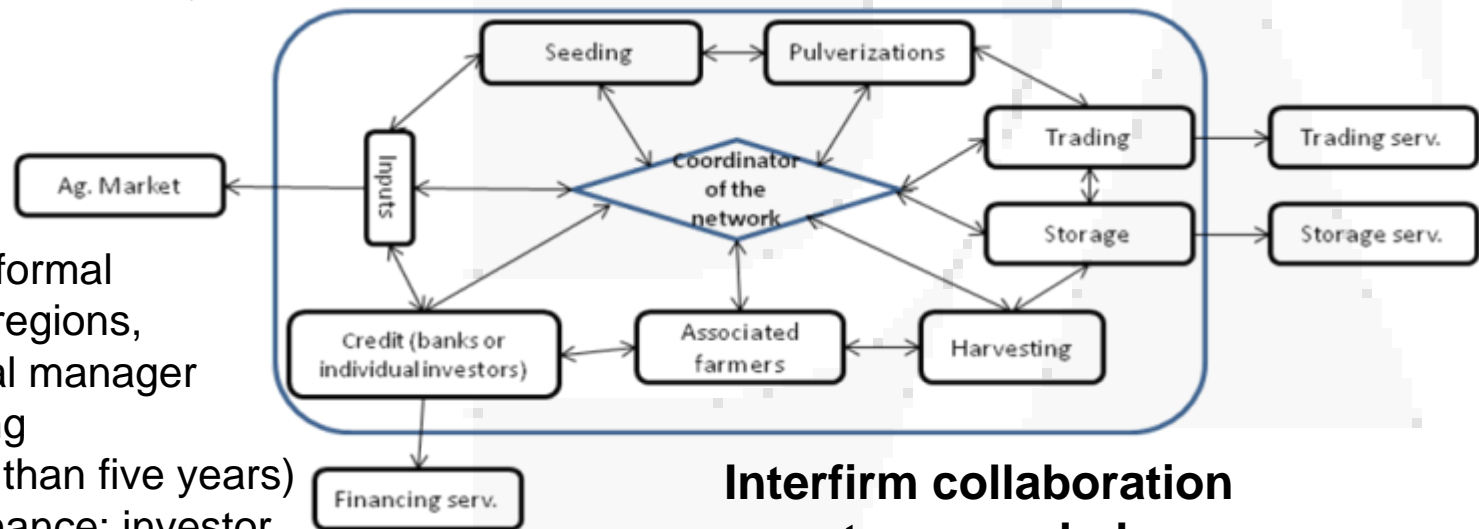
- Agricultural production funded by capital from several partners
- Investors receive percentage-based payment, (crop share) or they may participate in the future risks and benefits of the business.
- The coordinator of the system –often not a land owner– coordinates intermediate term contracts between service suppliers and tenants.
- Land leases: coordinators in general choose to pay cash in advance to landowners
- The coordinator's profit equals the difference between the income, on the one hand, and production costs (inputs, services, land leasing) and investor's participation on the other.
- Importance of trust for reduction of uncertainty
- Crop areas range from 10,000 to 100,000 hectares



**Interfirm collaboration
type: combined**

Network of Networks

- The strategy of this type of organization is based on creating a network of contractors with local, specific knowledge
- The coordinator “opens” business units in different regions similarly to a franchise system.



**Interfirm collaboration
 type: pooled**

- Set of formal and informal networks in different regions, coordinated by central manager
- Coordination by long term contracts (more than five years)
- Many sources of finance: investor oriented, trust funds, own sources, banks, equity markets, input supply companies
- Management is totally decentralized

Conclusions

- Starting with the innovations of the 1990s, producers and service suppliers developed a complex contracting system (hybrid forms) in order to expand agricultural production, gain scale economies, and produce in until then almost virgin areas.
- Following the Argentine crisis in 2001 and 2002, these actors also started to create alliances with other actors outside the traditional agrifood business circuit. Banks, financial organizations and even common people began to finance the agricultural sector.
- These different organizational forms suggest innovative ways to coordinate transactions and introduce outside capital in production agriculture in uncertain environment

	Informal hybrid forms	Trust fund	Investor oriented	Network of networks
Presence in the system	20 years	6 years	15 years	15 years
Type of contract	Informal	Formal	Formal	Formal and informal (trust)
Actors involved	Producers, services providers	Banks, lawyers, financial organizations, coordinator (administration company) of service and contracts with producers, services and inputs providers	Coordinator of services-contracts-inputs, capital investors, lawyers, accountant	Coordinator, producers, services providers, inputs companies, banks, investors, investors partners (infrastructure, technology, information)
Duration of contract	Short-medium term (one-three years)	Short-medium term (one-five years)	Short term (one year)	Long term (more than 5 years)
Share of information	It depends on the contract (generally little)	High/total	High/total	High/total
Average productive area (based in real cases)	3,000 to 10,000 hectares. Own and rented area	5,000-10,000 hectares. Rented area mainly	10,000-100,000 hectares Rented area	20,000-350,000 hectares Own and rented area
Financial sources	Owned capital and inputs companies	Financial arrangements with banks	Financial arrangements with external investors	Owned, banks and external investors, inputs companies
Frequency of transaction	Medium	Medium	Low (investors), High (service providers)	High
Level of organizational uncertainty	Medium	Low	Low	Low (importance of trust)
Level of trust / reputation	Not very important	High	High	High
Incentives and control	Low	High	High	Very high
Specific assets	Know how. Low level	Know how, reputation of actors. Medium level	Know how, reputation of actors. Medium level	Know how, reputation of actors, technology (innovations). High level
Joint or individual investments	Individual	Individual	Individual. In some cases collective	Collective
Interfirm collaboration (pooled, sequential, reciprocal)	Sequential	Combined	Combined	Reciprocal

Conclusions (cont.)

- Risks inherent to agriculture are coupled with Argentina's institutional risks.
- However, experts consulted state that these organizational forms are highly flexible and show a great capacity to adapt to the challenges of the knowledge society:
 - Hybrid forms constitute autonomous specialized nodes that work in a coordinated fashion assisted by modern information and communication technologies (ICT), trust, a shared vision, and the capacity to coordinate different agricultural processes.
- Currently, institutional uncertainty (related to export taxes, export control), international uncertainty (with increased commodity price volatility) and production issues (related to changing weather patterns) have generated a new paradigm in Argentine agriculture (financial restrictions)
- Perhaps a new form of hybrid organization in a sustainable way will arise.

INTERNATIONAL FOOD & AGRIBUSINESS MANAGEMENT ASSOCIATION
19th ANNUAL WORLD SYMPOSIUM
Budapest, Hungary-June 20-23, 2009
“Global Challenges and Local Solution”

“THE EMERGENCE OF HYBRID FORMS IN ARGENTINA’S GRAIN PRODUCTION SECTOR”

Authors: Chaddad, F.; Senesi, S.;
Vilella, F.; Palau, H

THANK YOU VERY MUCH



FOOD & AGRIBUSINESS PROGRAM

Food and Agribusiness Program
School of Agronomy-UBA-Argentina
Contact e-mail: ssenesi@agro.uba.ar
TE/FAX: +5411-4524-2490/2499.