

COTTON IN ARGENTINA

Evolution During Last Years & Actual Situation

My name is Gabriel Ángel Lacelli. I´m from Argentina and I work for INTA (National of Agricultural Technology Institute). It is a governmental organization which aim is to develop the rural country areas. I´ve been working as an Agricultural Engineer since 1983 and I also got a Master in Agrarian Economy in 1994. I´m going to tell you about the evolution of Argentine cotton chain during the last years and the actual situation of it.

Argentina is situated in the South of South America. Its population is about 37 million and its income per capita almost reaches 5,000 u\$. The capital city is Buenos Aires, situated on the western coast of the Río de la Plata. The government is democratic, organizing itself as Federal Republic.

Its continental territory presents an extension of 2 million 800 thousand kilometers square. So, to have a clear picture of my country, in the scale Argentina is in the 9th place of the world because of its size. That total area represents 30% of the USA one. From that total area, approximately 15% are cultivable lands (40 million hectares).

Considering the land and climatic requirements of the cotton plant, Argentina has got 11.5 million hectares of potential land, that could be cultivated with this crop. The maximum seeded acreage in the last 100 years, took place in 1997/98 with 1.133.000 hectares.

The main cotton zone is in the coastal zone, the northeast, more precisely in Chaco, Santiago del Estero, Formosa, Santa Fe, Corrientes, Misiones and Entre Ríos provinces. There are some areas in the northwest that can be produced under the irrigation system country, in Salta, Jujuy, Catamarca and Cordoba provinces.

The potential capacity of gins is 2.57 million tons of raw cotton, considering 100 days/year average of work. Nevertheless the real installed capacity is over 2 million tons. On the other hand, the domestic fiber consumption has reached 90,000 to 110,000 tons annual. This level of consumption is equivalent to 350,000 to 400,000 tons of raw cotton. You can see that we have a high industrial capacity to satisfy the domestic market demand.

Let see what happens with the raw cotton production. Most of the times Argentina has supplied its own demand but occasionally has positive net exports. As a consequence of not having established exporting quantities, our country could never participate in the “big game” of the international fiber trade. Last decade registered wide oscillations, for example we find in it the highest and the lowest production that occurred since 1934.

Look at the few but significant indicators. They are annual averages between 1994 to 2001. The planted acreage was almost 800,000 hectares, whereas the raw cotton production was of 862,000 tons and the yield (on harvested acreage) was 1,270 kg/ha. The number of cotton farmers was approximately 30,000 and the land available to the crop was 24 hectares by farm.

Nevertheless, if we have a thorough look, we see that 15% of the farmers (the biggest ones), work on more than 900 hectares) producing 75% of the cotton. On the other hand 60% of the farmers (the smallest ones), work on less than 20 hectares, only producing 7% of the total (*see Figure 1*).

These data show that the fast growth of the raw cotton supply in Argentina depends on the big farmers' decisions. What elements will they consider at the time of deciding what crops to produce?

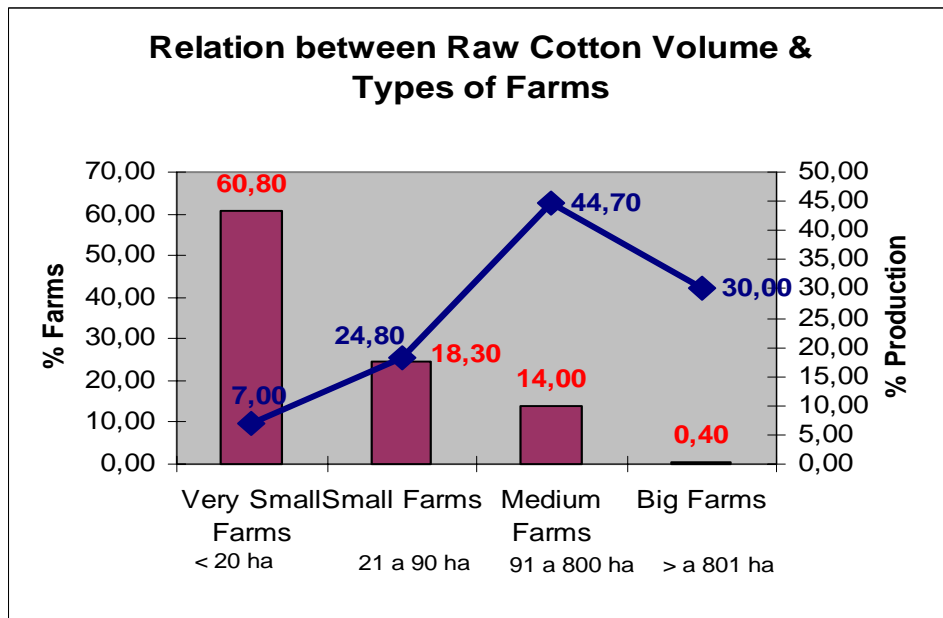


Figure 1

In the Figure 2 the blue line represents the seeded acreage. The red line represents the serial price, that was displaced one year. Until 2000/01 we observe a high positive correlation between the seeded acreage in the year with the price of the previous year. But from that year a structural change took place and the answer to the price increment did not correspond with similar increment in the cotton intention sowing. Why?

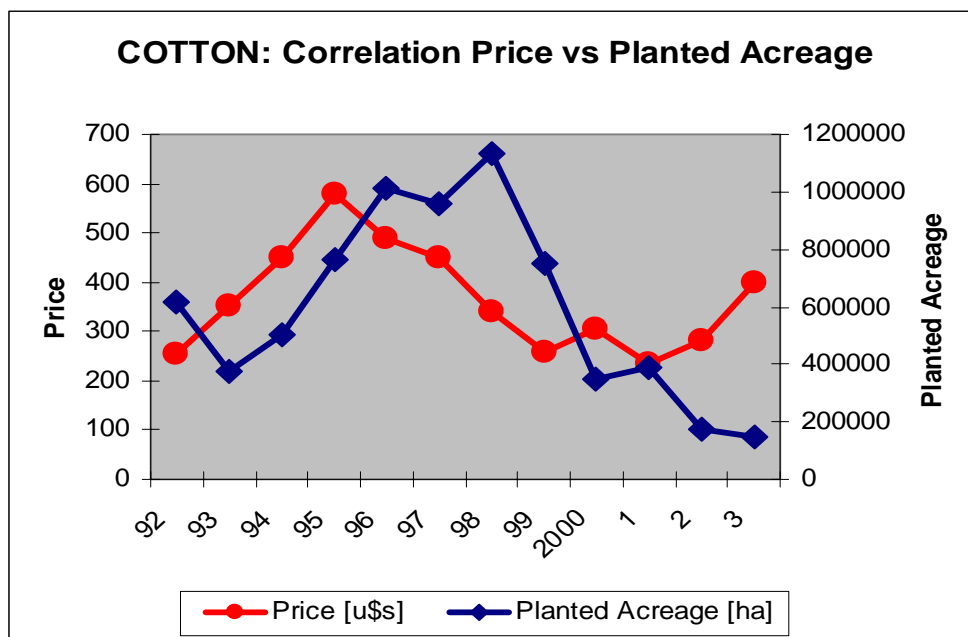


Figure 2

Some of us think that the main cause is the lossing cotton competitiveness in front of soybean. So, cotton has been displaced in the sowing decision of the big farmers. Only small farmers and some medium ones continue seeding cotton.

And, in that competition, soybean is winning by knock out. Why? Although more money can be earn sowing cotton, a set of factors is playing in favor of soybean. I call them asymmetries.

Cost Asymmetry. Operative cost necessary to make soybean is half of the necessary one to make cotton (112 u\$/ha against 227 u\$). **So, making soybean is cheaper.**

Financial Asymmetry. There are many actors in the productive, commercial and financial chain that are arranged to finance soybean instead of cotton. **So, getting money for soybean is easier.**

Harvest Asymmetry. Many companies have offered services of harvest grains, but only few of them to harvest cotton. The manual harvest is only possible in small acreages. In addition, the losses associated to rains at the harvest time are greater to cotton than to soybean. **So, harvesting soybean is easier and more foreseeable.**

Risk Weather Asymmetry. Insurance companies offers policies against climatic risks in soybean, but they are unwilling to do it in cotton. **So, investing in soybean is safer.**

Technological Asymmetry. Because of the genetic advancement, the technology of soybean production is much simpler that in cotton. **So, producing soybean is less difficult.**

Market Asymmetry. In Argentina there are future price markets with extensive trajectory to soybean, but they don't exist for cotton. **So, making soybean is less risky.**

And this is one of the reason I am here.

In order to finish I would like to tell you briefly about the unique experience in administration of prices that we have developed in Argentina. We designed it and we applied it, in my Province, Santa Fe.

The objective of this tool has been to stimulate and increase the cotton planted acreage and, also, reduce the uncertainty associated to prices and guarantee reasonable minimum yield. This project has been held thanks to public and private funds¹.

Every year at the planting time farmers obtain a kind of price insurance, paying a premium according to the assured tons. It fixes a maximum bound over the volume that each farm can assure. It also settles a minimum price, called "trigger". If at harvest time the raw cotton market price falls below this value, it "shoots" the indemnification.

But the indemnification is also limited, since in fact what it is settled, is a band of price to compensate. This calculation is based on the amount of money available in the fund and the volume of raw cotton to compensate it.

An example can be useful to clarify this subject. Let suppose that at the beginning of the planting-time the minimum price (trigger) is fixed in 300 u\$s and the band to assure in 50 u\$s. Therefore the stop loss begins to act when the price falls below 250 u\$s. At the harvest-time some of the following stages can occur:

1. If the Market Price is higher than 300 u\$s, the system won't operate.

¹ APPA (Cotton Promotion Association of Santa Fe) is the manager organization of that fund

2. If the Market Price is between 250 and 300 u\$, the indemnification will be until 50 u\$.

3. If the Market Price is lower than 250 u\$, the indemnification will be 50 u\$.

To conclude, I'll show you the results. This system started in 2000/01 year, but it was only necessary to apply it in that first year. The "trigger" was 250 u\$ and the assureable band was settled at 250 u\$ and 50 u\$, respectively (December 2000). The market price average during that harvest time (from March to May 2001), was 220 u\$. As a consequence 23,000 tons were compensated with 30 u\$ each one.

COTTON IN ARGENTINA

Evolution During Last 10 Years & Actual Situation

Ing. Agr. (M.Sc.) Gabriel Ángel Lacelli

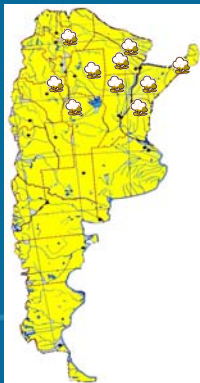
Argentina in the World



Cotton Zone

- Potentially 11.5 million hectares could be seeded with cotton
- However 1.13 million hectares was the maximum seeded acreage (1997/98)
- The main cultivated area is in the NE (dry land)
- Smaller areas are seeded under irrigation in the NW

1 hectare = 2.47 acre



Other Data

- The domestic fiber consumption is about 100,000 tons/year
- This amount is equivalent to 350,000/400,000 tons of raw cotton
- The installed capacity of gins is 2.0 million tons (raw cotton)



1 ton = 1,000 kilos = 2,200 pounds

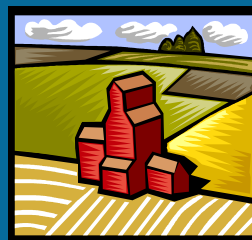
What about production?

- Most of the times Argentina has supplied its own demand
- Few times had positive net exports
- But never could be a permanent exporting country
- In the last decade the production displayed wide oscillations



SOME INDICATORS

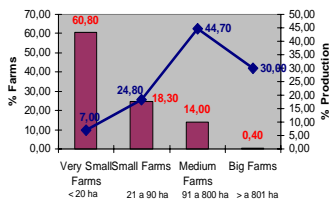
Averages 1994/95 - 2000/01



- Planted Acreage: 770,000 hectares
- Production: 862,000 tons (raw cotton)
- Yield: 1,270 kg/ha
- Farmers: 30,000
- Average acreage: 24 ha/farm

Some Indicators Averages 1994/95 – 2000/01

Relation between Raw Cotton Volume & Types of Farms



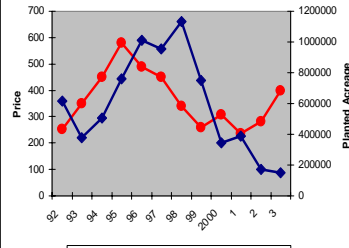
- 75% cotton was produced by less 15% farms, with land greater than 90 ha/farm
- 7% cotton was produced by 60% farms, with less than 20 ha/farm

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Something is changing?

COTTON: Correlation Price vs Planted Acreage



- Until 2000/01 a positive correlation existed between price (in "t-1" year) and planted acreage (in "t" year)
- But from that year a structural change took place
- Main cause is the soybean competition

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Soybean is winning by Knock Out

With Cotton, farmers earns more u\$/hectare, but other asymmetries exist...

- Cost Asymmetry. **Soybean is cheaper** : 112 u\$/ha vs. 227 u\$/ha
- Financial Asymmetry. **Soybean is easier** to finance
- Harvest Asymmetry. **Soybean is easier and foreseeable** to harvest

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Soybean is winning by Knock Out

- Risk Weather Asymmetry. **Invest in soybean is safer**
- Technological Asymmetry. **Soybean is much more easier** to produce
- Market Asymmetry. **Soybean is less risky**

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An argentine experience in Cotton Prices Management

Objectives

- To reduce uncertainty future prices
- To guarantee reasonable minimum yield
- To increase sowing area
- Designed and applied only in the Santa Fe province with a public/private fund

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An argentine experience in Cotton Prices Management

Method

- Farmers obtain a price insurance paying a premium
- It fixes a maximum over the cotton assured volume
- System operates compensating values below a value minimum ("trigger")

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An argentine experience in Cotton Prices Management

Method

- Farmers are compensated only when raw cotton market price is smaller than the value established like "trigger"
- In order to the amount of money available at fund and the assured volume, it calculates the maximun payment by ton (stop-loss system)



An argentine experience in Cotton Prices Management

Example

- Low Price (tigger): 300 u\$/ton
- Maximun Payment: 50 u\$/ton → the value of "stop-loss" is 250 u\$/ton
- 1. Price Market > 300 u\$/ton → system won't operate
- 2. Price Market between 250 and 300 u\$/ton → system will compensate until 50 u\$/ton
- 3. Price Market < 250 u\$/ton → system will compensate with 50 u\$/ton (stop loss)



Thank you very much for your
attention



An argentine experience in Cotton Prices Management

Results

- The system has applied from 2000/01
- It was necessary to apply only in that year: the average market price was 220 u\$/ton and trigger in 250 u\$/ton
- 23,000 tons were successful compensated

