## Title:

## Due to the climate change, cotton production (*Gossypium hirsutum L.)* has expanded in Argentina. Now it can also be cultivated in the Province of Buenos Aires, proving to be the most southern cotton field of South America.

## Abstract:

## So far, and since its inception, cotton has been planted in various parts of the world.

## This work shows that 20 million more hectares can be planted.

## In Argentina about 600,000 hectares are cultivated per year in 13 provinces: Formosa, Santa Fe, Santiago del Estero, Corrientes, Córdoba, Salta, Catamarca, Entre Ríos, Jujuy, San Juan, Tucumán, San Luis and Chaco.

## Cotton production in Argentina now can be extended to a part of the province of Buenos Aires located further south of the traditional planting area due to climate change in recent years in this region.

## The research was conducted in the district of Bragado, located in the Province of Buenos Aires, <https://www.google.co.jp/maps/place/-35.202343,-60.529335>, where cotton had never been cultivated.

## The frost-free period was extended from 160 days in the period 1903/1938 to some 190 days in recent years and the temperature in that period increased, with weeks of 27 to 37 degrees Celsius, which were decisive factors for the expansion of this crop.

## During the research period, cotton cultivation completely fulfilled its vegetative and reproductive cycle, despite sometimes being exposed to frost in the end of its cycle.

## Rainfall throughout the growing season, from November to May, are at about 700 mm.

## The investigations were carried out on a soil with the following taxonomic classification: Typical Hapludoll, loamy fine, mixed, thermal (USDA Soil Taxonomy V. 2006).

## It is a deep, light, well-drained, non-salty, non-alkaline soil, well provided with the nutrients required by cotton crops.

## During 5 years of research (2011-2015) 5 varieties were planted.

## Parameters were measured as: yield in kg/ha of raw cotton (in the trials ranged from 4,325 kg/Ha and 6,688 kg/Ha) and fiber (fiber yield in those tests was between 1,725 ​​kg/Ha and 2,508 kg/Ha); ginning percentage (between 35.9% and 41.5%) and fiber quality analysis by variety using the HVI Method (performed at the National Institute of Industrial Technology - INTI).

## Harvest was done manually.

## With the fiber obtained high quality garments were produced.