# SILVOPASTORAL SYSTEMS WITH POPLAR IN THE LOWER DELTA OF THE PARANA RIVER, ARGENTINA

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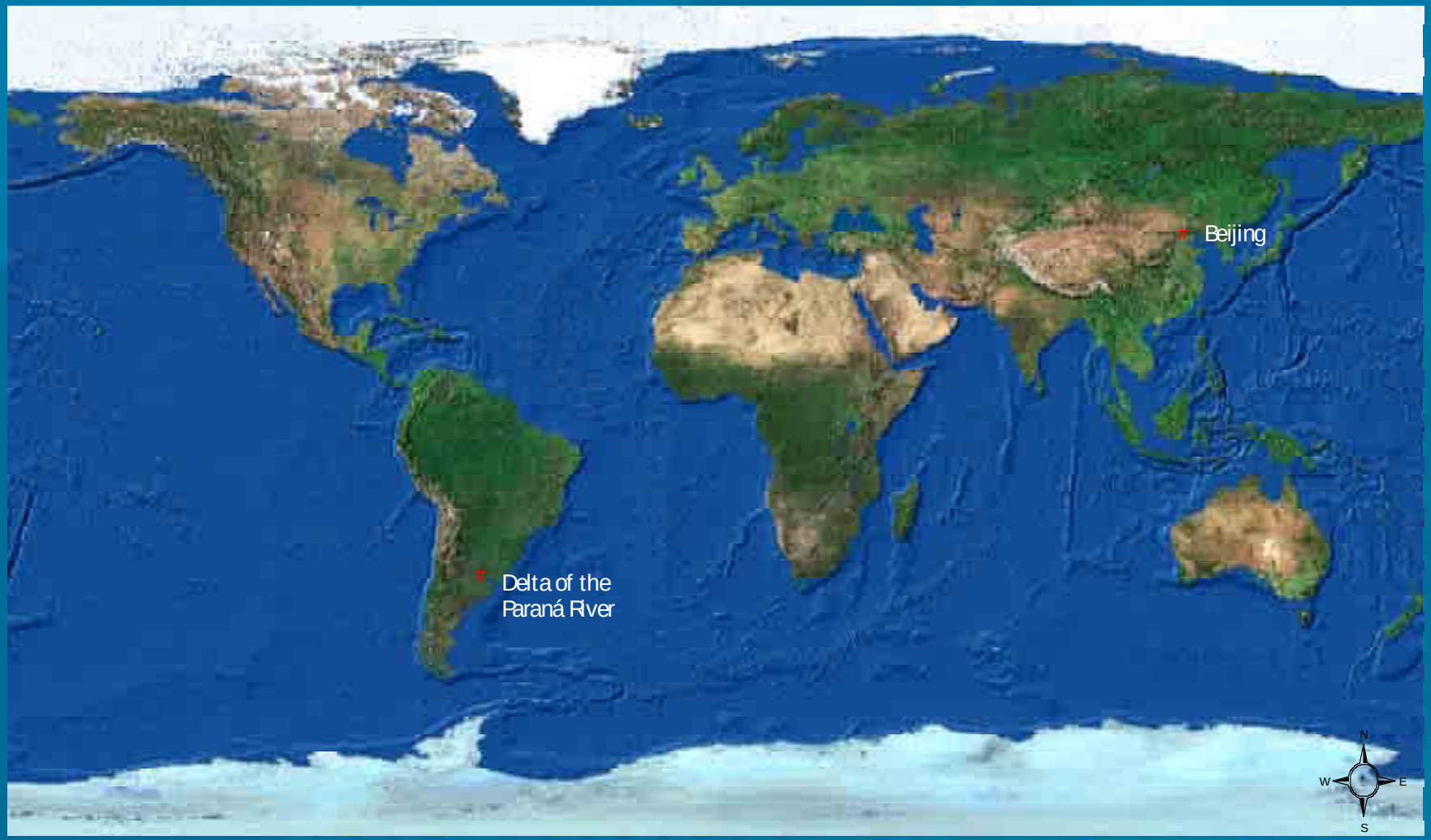


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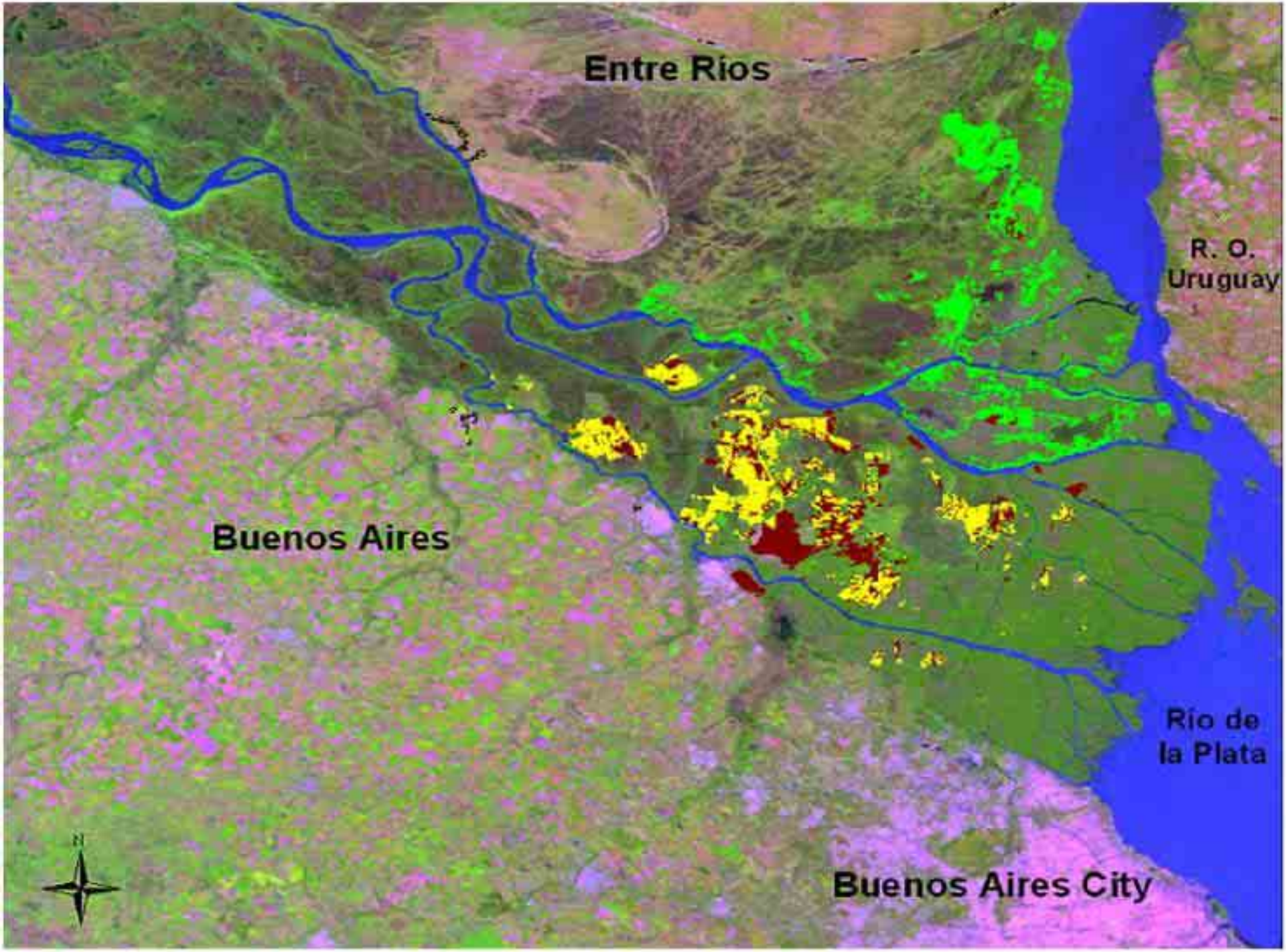
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Beef cattle has always been a good ally with forestry in the lower Delta of the Paraná River, to minimize the high volumes of spontaneous natural grasses that grow beneath the young plantations of *Populus deltoides* Batr., and the possibility of occurrence during the autumn-winter season of wildfires, especially in periods of prolonged droughts.

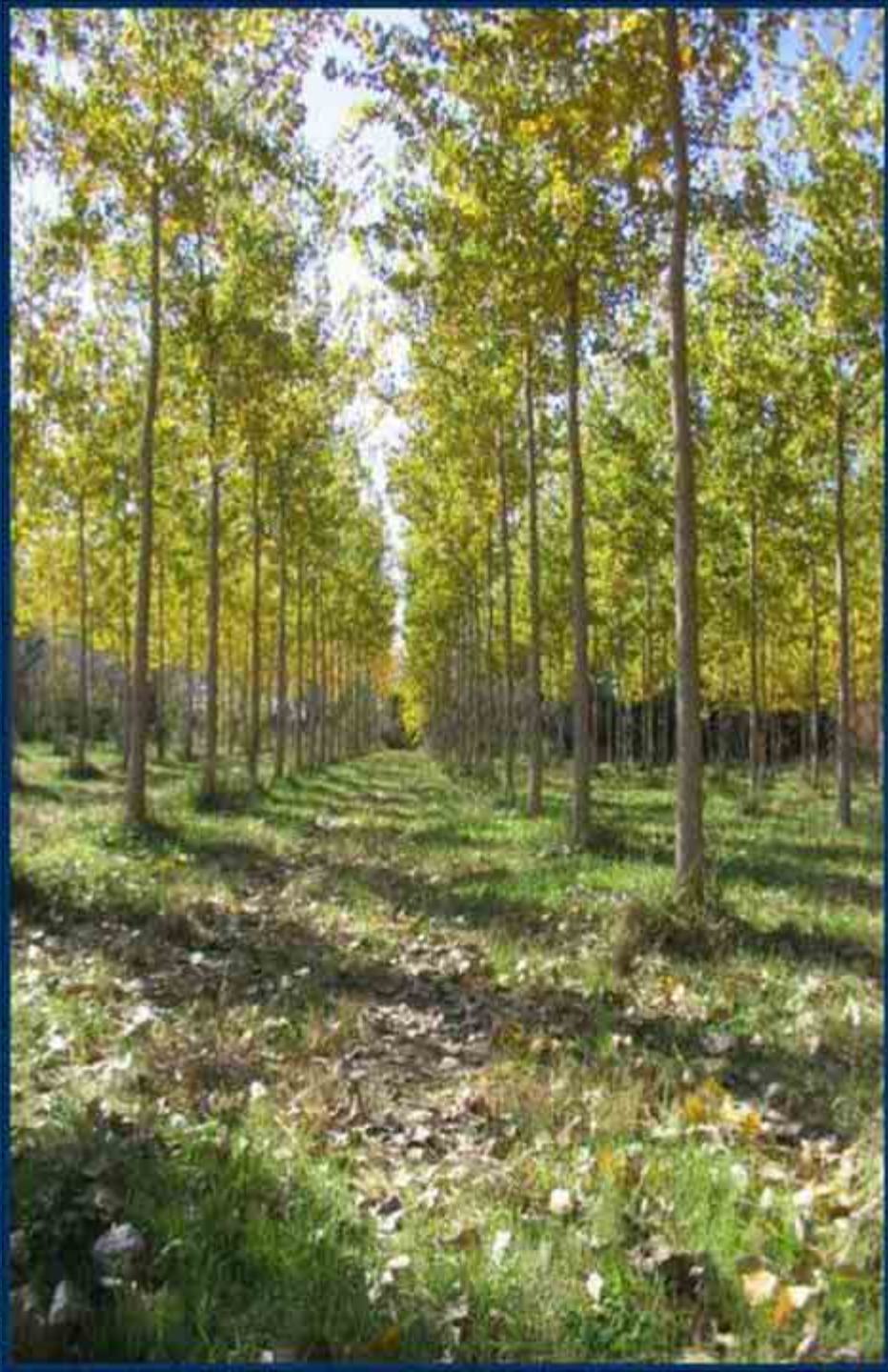
Currently Silvopastoral Systems (SSP) are an growing productive alternative in the region due to the expansion of soybean cultivation (*Glycine max*) to regions of the country traditionally used for cattle raising.

The SSP begin to be designed with the aim of producing quality wood for veneer, sawing and to a lower extent for crush and cellulosic paper industry, in addition to providing shade, shelter and fodder for cattle, and produce beef according to the demand of national and international standard markets. This form of diversification is a good productive alternative for small, medium and large producers in the region.

The increasing presence of cattle in the Delta determines the need to change the traditional forestry, for a more intensive forestry aimed at the simultaneous production of timber, grass and meat.

# The new forestry

From the point of view of the forestry there is a change in the use of new spread materials (the one and the two year old pole cutting, without root, planted in deep) produced in nurseries with large distances between mothers strains (1 x 1 m),



Greater distances in planting these new materials in field (5x5 and 6x6 m), to control the water depth of the water table, to maintain clean the drainage networks avoiding the presence of stagnant water, favoring the discharge of rainwater in periods of intense rainfall (Eg. year 2007) and the entry of water from the river in times of intense droughts (Eg. year 2008), maintaining a good-quality of water for the animals to drink, for the good growth of pastures and trees.

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This new silviculture allows the entry of animals to the plantation the second year, diminishing the loss of benefits between the moment of plantation and the entrance of the cattle to the systems.

Facilitates early use of natural pastures and meat production of quality simultaneously with the collection of wood for various uses,

There is a greater individual plant growth, a greater uniformity of the crop, and a higher percentage of cylindrical shafts,

A higher planting period (may-august), and a lower percentage of losses of plants by late frost,

and a reduced risk of occurrence of forest fires because the volume of dry grass decreases, and as well as water is present in all the drainage networks and available for livestock.

A greater plant rooting per hectare, and a greater contact of plant roots with water from the water table,

An increased spontaneous forage beneath plantations for a better water management of the groundwater, and quality of wood by the presence of stains caused by excesses of stagnant water, fewer dead standing plants for the same reason,

Increases the animal and plant biodiversity, associated with the constant availability of water in the system.

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THANK YOU VERY MUCH