

**UNSUSTAINABLE PROPOSAL: THE PRODUCTION  
OF RAW MATERIALS FOR FUTURE BIOFUEL  
PROCESSING PLANTS IN ENTRE RÍOS**

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## **INTRODUCTION**

A number of international bodies, academic institutions and well-known civil society organisation are currently debating and ‘consulting’ on the sustainable production of energy commodities. Discussions on the establishment of standards, sustainability criteria and certification will give the production of raw materials for biofuels an air of acceptability. But the discussions have ignored all the existing evidence compiled to date regarding the devastating impacts that the intensive production of agricultural commodities (such as soya) has had in Argentina. The 16 million hectares planted with soya have destroyed the country’s traditional agriculture, which was based on extensive livestock rearing, the quality of which was of world renown. Traditionally, the agriculture and farming system created jobs for local communities without the need for pesticides and fertilisers<sup>i</sup>, but the turning point at which food security and sovereignty were destroyed in Argentina started to become noticeable from 1996, the year in which the dramatic expansion of soya production began.

Soya is considered to be one of the key raw materials for biodiesel production destined for European markets. In order to provide further information on the state of soya production in Argentina we visited the soya growing areas within the Entre Ríos Province situated 300 kilometres from the Federal Capital. We chose this province because it is renowned for having high natural diversity; it has a reputation for having implemented model production methods, and because it was one of the first provinces in which RRsoya was introduced in 1996.

During our two-day visit we were able to observe the negative impacts of soya cultivation. These included serious health problems caused by aerial and land-based crop spraying and the presence of silos and agrochemical stores within towns; the displacement of traditional agricultural systems, such as livestock and dairy farming, bee-keeping, and fishing; the expulsion of rural populations from their lands and their concentration in urban areas around the province; the encroachment of agriculture into native scrubland causing the loss of hundreds of thousands of hectares of some of the most biodiversity-rich areas of the country, formerly used as a recreation area of regional and national importance.

Many of the issues outlined throughout this report fall into the classification of human rights abuses. There was one particular incident where we experienced what it is like to live with the risks that these communities regularly endure if they protest in any way about the injustices and atrocities which are part and parcel of this agricultural system.

### **17 Agrofuels processing plants**

The Province of Entre Ríos is using national legislation for the promotion of biofuels which establishes an obligatory mixture of fossil fuels with 5% biodiesel or bio ethanol to promote the construction of 17 Agrofuels processing plants, that is one plant for each provincial department.

The new Governor of the Province will take up the post in December 2007. In May 2007 he stated: ‘With irrigation and biodiesel, Entre Ríos could be one of the most efficient agricultural foodstuffs producer in the world... All we need is for our producers and our Government to get organised to make the best use of resources and policy possible so that we can double the province’s agricultural production in just a few years’. This is an example of how politicians point the way towards subsidies from the Kyoto Protocol’s Clean Development Mechanism, assuming that intensive agriculture is of benefit towards mitigating the effects of climate change. ‘For each hectare used to produce clean fuels a ‘green voucher’ can be claimed as established in the Kyoto Protocol’. Neither the current unsustainable production, (particularly as it applies to soya) nor the proposed advances in agricultural production are areas of concern for the elected Governor<sup>i</sup>.

As a consequence, the inhabitants of the crop-sprayed towns of Entre Ríos are demonstrating and asking for a 5 year moratorium on the spiralling and undemocratic promotion taking place for the production of biofuels (see attached petition). Politicians in this particular province are promoting an agricultural model based on monocultures for the supply of raw materials to the EU and the USA, both of which have approved the policies for increasing production of this type of fuel.

## The land targeted for Agrofuels crops

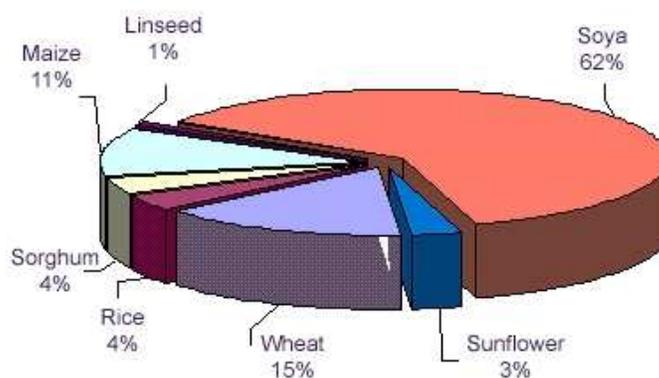
Entre Ríos is situated north of the Province of Buenos Aires, south of the Province of Corrientes, and east of Uruguay. According to the latest population census, inhabitants number one million one hundred and fifty eight thousand.

Maria Futerman, from the town of Paraná, describes the land between the two rivers (Entre Ríos) in the 1960s and 70s: ‘it was like a garden, with hills covered in wheat, with streams bordered by low-growing bushes descending from the forests of Montiel’.

The Salvat Encyclopaedia, published in 1972, describes livestock rearing as the main agricultural production in Entre Ríos at that time: “Agriculture and livestock make up the basic economy. Cereal production (maize, wheat, rice, oats), fodder (alfalfa, sorghum grains). Primary producer of linseed and spurge. Important producer of citrus (mandarins, oranges, lemons). The Delta region is rich in orchards and wood (poplars). Livestock is of prime importance not only due to numbers, but also for its quality. Of these, cattle are most prominent, followed by sheep and horses”.<sup>i</sup>

## Soya cultivation in Entre Ríos

Soya is proposed as the main raw material for biodiesel production in Entre Ríos, although 15 to 20 years ago it was practically unknown in the province. Since the 1990s soya cultivation has consistently increased in southern Entre Ríos. In 2007, RRsoya cultivation covered an area of 1.4 million hectares in Entre Ríos with an annual increase of 5% on the previous year’s harvest. Soya now occupies 67,7% of the cultivated area, of all grain crops, whilst in the 1990s it was not even 7%.<sup>ii</sup> In March 2007, a Paraná newspaper wrote: “The generous soya campaign that is spreading its dark green across fields and verges throughout the province”.<sup>iii</sup>



**Figure 1: Composition of the cultivated area in Entre Ríos during 2002-2003.**

Source: Rodríguez y Engler<sup>iv</sup>

AGRICULTURE									
CEREAL Production (thousand Tonnes)	1997	1998	1999	2000	2001	2002	2003	2004	2005
<b>TOTAL CEREALS</b>	2.174,3	2.750,4	2.663,7	1.847,9	1.986,2	1.621	1.916,6	2.557,9	2.819,1
Rice	668,5	667,5	860,8	505,6	410,2	254,9	344,2	451,4	390,2
Maize	723,8	1.176,1	1.049,8	686,5	801,6	888,7	1.107,3	1.451,3	1.625,6
Wheat	684,5	583,5	627,6	618,2	659,5	477,4	465,1	655,2	803,3

**SOURCE: National Agricultural Survey - ENA, INDEC/DEC**

<b>OIL PRODUCING CROP production (1000 Ton)</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>TOTAL CROPS</b>	750,7	943,6	1.022,8	598,0	1.521,4	2092,24	2.883,3	2.400,9	3157,06
Sunflower	192,3	153,0	222,5	80,2	59,0	43,64	63,3	64,97	67,4
Soya	494,4	731,5	735,9	504,8	1.458,5	2.046,18	2.809,0	2.307,33	3.053,86
Linseed	64,0	59,1	64,3	13,0	3,9	2,42	11,0	28,6	35,8

**SOURCE: National Agricultural Survey - ENA, INDEC/DEC**

## **Displacement of agricultural activities**

### *Other crops*

As can be seen from the tables above, the expansion of soya cultivation brought about a parallel reduction in the production of other crops. Production of linseed decreased by 44% and sunflower cultivation dropped more than 65% from 1997 to 2005. An impact on rice production can also be observed, with a drop of over 40% in production over the same period. Citrus fruit production dropped slightly. There was a significant decrease in the production of grapefruit and lemons.

<b>CITRUS Production (1000 Tn)</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>TOTAL</b>	719,0	790,0	531,6	590,0	791,9	602,9	481,2	607,3	674,4
Orange	400,0	477,0	257,4	310,0	416,9	291,9	233,5	260,7	378,2
Mandarin	241,0	249,0	216,5	230,0	310,1	263,6	202,9	315,2	265,9
Grapefruit	43,0	30,0	28,9	20,0	28,5	19,9	18,4	12,3	11,0
Lemon	35,0	34,0	28,8	30,0	36,4	27,5	26,4	19,1	19,1

**SOURCE: Entre Ríos Forestry and Citrus Fruit Management**

### *Livestock and dairy farming*

Even though there is no specific data on the impact of soya cultivation on the dairy industry, dairy herds have been displaced to islands to make way for intensive agriculture. Towards the end of February 2007, when floods were approaching Entre Ríos, the Director of the National Institute for Experimental Agricultural Technology for the Delta (INTA), told a local radio station: “The islands have been the recipients of the livestock displaced by the spread of agriculture onto solid land, and there are not sufficient barges with which to move them back again”. An Entre Ríos source from within the INTA said that, due to the flooding and the lack of pasture available, the livestock are being fed concentrated fodder which is increasing production costs considerably. Specialists from INTA in Paraná have stated that during a 10 month period during 2003 reduced levels of milk production in Entre Ríos continued, even though the area enjoys one of the nation’s best climates and prices paid to producers have returned to normal. The main reason for this situation is the serious competition from soya as a more profitable alternative for fertile lands, and a lack of foresight of the obstacles experienced by dairy farmers because of reduced prices for their milk. Professionals within INTA Paraná have commented that, along with other river basins in the country, the dairy farmers’ situation remained complex due to the advancement of soya cultivation because of the high rents contractors paid in the region until the agricultural campaign of 2004/5.<sup>v</sup> These professionals are aware of “a concern about whether there will be further reduction, or even the disappearance, of dairy farming. This is of particular concern to those who cannot maintain the high costs of production brought about by the higher quantities of concentrated feeds and reserves needed, and to those farms that do not have access nearby to hard roads”.

The conditions that dairy herds are kept in are also causing serious health problems. “In relation to health, the veterinarians consulted have noted an important rise in respiratory and gastrointestinal problems in calves (they have reported high mortality within this category), hoof problems (due to being kept in muddy ground), and mastitis in milking herds. This is due to the lack of space in which they are kept and competition for decreasing amounts of fodder.”<sup>vi</sup>

It is worth pointing out that in 2005 records showed a rise in national milk production. Daily milk collections rose by 7.7%, although during this same period, the number of dairy farms fell by 2.5%.<sup>vii</sup> In the first six months of 2007, milk production and its derivatives have dropped considerably, reaching a reduction of 13.8% in May. This is due to heavy rains and lack of pasture for the herds. The high prices of milk has increased are seen most clearly in dairy products within the retail trade.<sup>viii</sup> For this report we asked the Agriculturalist W Mancusso, who coordinates the Bovine project for INTA Parana:

- Can you explain the increase in milk production, whilst at the same time we are seeing serious pressure exerted on dairy farmers from increasing competition for lands from soya crops? Does this have any relation to the displacement of small dairy farmers, whilst the large farmers remain and increase their production by using intensive farming methods?

His reply was:

-The situation is more or less as you say. The pressure from soya production has forced many farmers to use part of their land to grow this crop and has also made owners of larger farms to rent land for growing soya. Around 20% of dairy farms have disappeared from Entre Ríos between 2000 and 2006. These were, in general, farms with smaller daily outputs (between 50 to 300 litres per day), with older farmers and lower production efficiency. They left their farms, rented their land to soya growers and have gone to live in nearby towns. Some large farms have also closed (I know of five cases). These were managed by inefficient companies who opted for the simplicity of soya over the complications of dairy farming.

Many of the dairy farms that remain have settled into a mixed agriculture system, taking advantage of the good profit margins of soya production, supplementing the dairy herds’ feed with greater quantities of concentrated fodder (because they had the good fortune of having access to enough capital to do this), and by increasing their daily milk production, even though there is less land available for pasture. Existing traditional dairy farms have made substantial improvements in their efficiency compared to the 1990s, and they have adapted well to the relationship between the cost of grain and the cost of milk, thereby allowing them to provide the herds with good quantities of fodder.

On average, today’s dairy farms produce a greater amount of milk per day with greater efficiency than a decade ago due to the adoption of intensive farming methods.

<b>LIVESTOCK</b>									
<b>Livestock (1000 head)</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Bovine	4.039,3	3.660,0	3.820,1	3.807,0	4.015,6	3.807,2	4.633,1	4.726,4	-
Ovine	457,9	-----	340,4	350,0	376,1	352,9	-	-	-

**SOURCE: National Agricultural Survey - ENA, INDEC/DEC**

<b>Milk Production (million litres)</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Production</b>	233,6	222,0	273,0	223,3	231,2	205,7	217,3	278,3	304,6

**SOURCE: IPROSA - Entre Ríos**

### ***Beekeeping***

Luis Banegas, a beekeeper, was asked if crop spraying affected honey production. His response was: “Yes, I think it affects it significantly, because the soya monoculture has to be sown on ‘clean’ land. The fenced area around the scrubland has disappeared. Because of Roundup, the wild areas we once had no longer exist. Monocultures have displaced us. Within the last ten years production from each hive has decreased by 20% in this area. We used to harvest 20 kg and today we harvest 16kg. The bees cannot find enough flower nectar compared to ten years ago.

On the 24th January 2006, Hector Facundo Camparo wrote a message on Basavilbaso’s digital noticeboard for beekeepers: ‘ In many countries with advanced agricultural methods and important areas of intensive cultivation, including direct sowing, traditional sowing methods which are pest-free, use of genetically-modified seed, etc. one of the major problems faced by beekeepers is the poisoning of the bees by herbicides’. He continues: ‘The importance of bees in agriculture is well known, as they fill an irreplaceable role by pollinating numerous crops, whether for the harvesting of seeds or fruits. Nevertheless, attempts to obtain maximum production and control the pests affecting crops or plantations have caused serious and possibly irreversible harm to bees and other beneficial insects. This is due to lack of knowledge, sheer irresponsibility, or inappropriate use of integrated pest control techniques’.<sup>ix</sup>

### ***Poultry and egg production***

During the period 1997 – 2005 poultry and egg production has risen noticeably. Entre Ríos has always been an important poultry producer. The widespread availability of soya as feed for poultry has facilitated a significant level of growth within the industry of intensive poultry rearing and egg production. The following table shows an increase of approximately 30% production in both industries. If Agrofuels production continues to grow in the province, there will also be a continued growth in poultry farming for export.<sup>x</sup>

<b>EGG AND POULTRY PRODUCTION</b>									
	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Poultry (million) (1)</b>	127,3	156,3	162,9	164,6	167,9	137,0	138,7	167,7	185,2
<b>Dozens of Eggs (millions) (2)</b>	69,4	70,0	70,0	-	-	-	95,3	98,4	-

**SOURCE: DIPRODESA - Entre Ríos**<sup>xi</sup>

### **Agrochemical use**

RRsoya cultivation resistant to glyphosate is closely linked to the intensive use of agrochemicals; even though this crop was introduced with the promise that one single herbicide would be able to control all weeds. This has not been the case, as today it is necessary to use a wide spectrum of herbicides, insecticides and fungicides. Weeds with tolerance to glyphosates have appeared, including the soya volunteers (germinating soya plants left from the previous harvest), as well as new infestations such as isopods and slugs.

The agronomist Delma Faccini from the National University of Rosario explained that:

“Modifications made to cultivation systems, such as the conservation farming methods (*direct sowing*) and the appearance of different varieties of GM soya are bringing about changes in the weed communities, not only in their numbers but also, and more importantly, in the emergence of certain species which were previously uncommon within these systems. For this reason, in the past few years there has been an increase in the number of requests for advice about weeds from producers, technicians and students. The aim of this guide is to describe the most visible characteristics of weeds which are currently making an appearance and becoming difficult to control within GM soya cultivation and in the fallow . prior to the sowing of summer crops”.<sup>xii</sup>

In their conclusions on weed treatment within soya cultivation and the strategies for managing weeds in areas left fallow for long periods, the Argentinean Association of No-till Producers (AAPRESID) stated:

“We will stop our analysis of the different chemical strategies available to enable us to have a clean fallow period. (...) One of the most commonly used alternatives is glyphosate with metsulphuron; (...) this treatment allows total control of present weeds and the remaining residue contributes to the destruction of broad-leaved weeds that germinate in the autumn-winter period. (...) It needs to be made clear that metsulphuron degrades through hydrolysis, and there needs to be more than 30 or 40 mm of rain between application and sowing of soya crops, thereby avoiding phytotoxicity problems in the soya crop.

A second option would be the use of atrazine mixed with glyphosate, (...) thereby achieving an excellent level of residual control of broad-leaved weeds. Long-term control is improved with metasulphuron, but the disadvantage is its higher cost (...) It is important to remember that with this mix of glyphosate and atrazine it is advisable to increase the dosage of atrazine by 25%, as some of the components within the atrazine formula make part of the glyphosate inactive”.<sup>xiii</sup>

Apart from the appearance of different weeds, the soya crop itself also becomes a problem. A Syngenta brochure states that soya is a weed, referring to the RRsoya that remains in the ground after harvest and which germinates outside the growing season. In order to destroy this wild soya the use of Gramoxone (paraquat) and Gesaprim (atrazine) is suggested. Both products are sold through the company.

To the battery of agrochemicals used in RRsoya cultivation, one should include the use of fungicides. On the 9th of January 2007 Reuters announced that:

“Industrial giants from the global agrochemical industry are supporting a promising new business in Argentina: the sale of fungicides to halt the advance of the devastating Asian rust fungus across the world’s third largest producer of soya. This fungus can reduce a crop by 80%, and although it had appeared in Argentina during the last two crop seasons, it is only in this season (2004/05) that it has appeared before the sowing has even been completed. Scientists are concerned that the fungus may expand within the next few months. At the end of 2004, Syngenta launched two products specifically aimed at controlling this disease. Bayer Crop Science also joined forces with the local branch of Nidera in order to commercialise two of its four fungicides for use on the fungus.”<sup>xiv</sup>

There is a wide range of herbicides, insecticides and fungicides, some of which are completely toxic. Their use, as aerial or land-based sprays has a negative impact on human and animal health, and on biodiversity. In the province of Entre Ríos there is legislation in place to regulate the use of agrochemicals. Nevertheless, this is not always adhered to, as we have been told by those interviewed in different villages surrounded by soya crops, for example: they spray until just a few days before harvest and there are agrochemical stores and grain silos inside the urban areas. Furthermore, existing legislation does not apply in some cases. There is an order against the use of herbicide 2,4D, but producers are allowed to continue using it until their stocks run out.<sup>xv</sup>

There is a lack of awareness on the part of the agricultural producers and the population at large about the disastrous consequences of the side effects caused by these agrochemicals. Only those that are directly affected are warning of the dangers. The bee keeper, Luis Alberto Banegas, who has lost 50 hives due to spraying in a neighbouring field of RRsoya, says “what the person who is driving the mosquito needs to remember is that he is sitting on a weapon.” Marta Cian, a resident of Libaros whose health has been affected by the presence of an agrochemical store next to her home, and who now suffers from respiratory problems, explains how in 2003 the village of Santa Anita first came together to complain about the impact of agrochemicals on human health. “The doctor had recently arrived, and she saw so many things that it frightened her. In the evenings, the boys would come home choking or with their skin looking like that of a leper. I have seen them. This doctor went to the authorities and they made her leave. They told me I was mad, and they also told her that she was “mad.” There are few doctors that recognise the symptoms of agrochemicals. Mrs Cian had to spend more than two years waiting for doctors who could diagnose the causes of her bronchial respiratory problems. They were caused by agrochemicals being handled in the store behind her house and the spraying in the fields around the village.

The Portillo family lived in a rural area in mid-Entre Ríos. They made their living from subsistence farming: vegetables, fruit trees and animals, such as a milking cow. With the soya expansion, the family’s home became surrounded by GM soya, which was heavily sprayed with crop spraying

machinery. As a result, during the last three years, three cousins of 2, 7 and 8 years of age died from suspected meningitis and leukaemia. The last one died at the end of 2006 and members of the family initiated a lawsuit demanding an investigation of the causes of death, as they suspect there is a relationship between water quality and the use of agrochemicals in the area. Maria Angeles told us that the last cousin to die had been prescribed antibiotics by the doctor...

R. Mascheroni, lecturer and researcher at the Faculty of Legal and Social Sciences at the National Littoral University stated in a recent article that a doctor colleague in the Province of Santa Fe, a major area for soya production and adjacent to Entre Ríos told him “both myself and many colleagues are detecting the appearance or increase of pathologies and problems, which are traditionally uncommon, sporadic, or at least, not as frequent as they are now.” The pathologies referred to include leukaemia, deformities, and miscarriages. Mascheroni’s colleague does not know what to attribute the causes of this rise in disease, and continues: “Although we have our suspicions, it would be irresponsible to risk a cause and effect relationship. We can confirm that percentages are increasing, and press reports seem to confirm these developments.”<sup>xvi</sup>

**EPIDEMIOLOGICAL DISEASE REPORTED IN THE PROVINCE OF ENTRE RÍOS WHICH MAY BE RELATED TO THE APPLICATION OF AGROCHEMICALS**

Illness type	2000	2001	2002(1)	2003	2004	2005
<b>Diarrhoeas</b>	15.472	11.560	24.411	27.327	30.368	37.652
<b>Pneumonia</b>	1.826	1.397	2.964	3.694	4.855	6.396
<b>Influenza</b>	21.434	13.437	26.160	35.716	45.539	55.637

**SOURCE: Entre Ríos Ministry of Health – Epidemiology Centre, Department for the Observation of Epistemology. Epidemiology and Laboratory División.**

On the 1st of June 2007, MERCOSUR – the Information Agency – reported that cows had died in San Ramón, (a department of Federación, Entre Ríos) after having eaten pasture which had been poisoned with endosulphan that had been used to spray RRsoya by a company in Concepción del Uruguay. The owner of the dead cows, Domingo Comparín, said that the case was already in the hands of the legal system. The report added that in July 2003, the researcher María Isabel Cárcamo reported that 60.000 inhabitants of central Entre Ríos, particularly around Villaguay, suffered adverse effects from the application of endosulphan on GM crops. She explained that the most notable symptoms ranged from diarrhoea that was almost impossible to treat, dizziness, an itchy sensation all over the body, headaches, nausea, and breathing difficulties which brought on asthma attacks. The report also stated that around the same time in Villaguay, some children who had bathed in lakes and rivers bordering land which had been sprayed with endosulphan by a crop-spraying plane. The children had fungus-like marks on their skin. Dead fish were seen in many streams and lakes, and hares and other wild animals were seen dragging themselves along before dying. The researcher Isabel Cárcamo reports that around that time there were also an above average number of cases of congenital deformities in newborn babies. Endosulphan is used by the larger producers of GM soya to deal with *Nezara viridula* (chince verde) and with *Anticarsia gemmatalis* (lagartas), but it affects all other types of insects, as well as cold-blooded and warm-blooded animals. Hares, for example, become white in colour and are found dead in the fields. And, of course, it will also affect bees.<sup>xvii</sup>

**Fertiliser use**

Experts from INTA state that soya production will put the future of the soils at risk, and they urge the doubling of fertiliser use on commodity crops such as maize, and wheat. In Argentina, current fertiliser use is approximately 3.000.000 tons, and if the recommendation is adopted this figure could rise to at least 6 million. We could compare this proposal to one made by a drug trafficker to an addict: the greater the loss of nutrients, the greater the need to use fertilisers, therefore more business.<sup>xviii</sup>

Some time ago, the agronomist Adolfo Boy said:

“The people from INTA/AAPRESID are not interested in having ‘soil’. All they need is support for the plant roots. An inert substrate would probably be better for them, as it would not have any disease or pests!”<sup>xix</sup>

## **Impacts on biodiversity**

In 2003 ECOSOL, a local NGO, stated: “There are a number of children who have bathed in ponds and streams near the crops. They have lesions on their skin as if they had been covered with fungus. There are dead fish in many of the streams and ponds. There are also hares and other wild animals lying dead across the countryside.” During our visit to the area we were able to confirm this through various interviews. The same people who are celebrating the economic success brought about by RRsoya production, such as the hotel owner and the agronomist, who work with the sowing teams, now recognise that there are no longer the number of fish or wild animals to hunt, that there used to be in the region. But they are dismissive of associating this phenomenon with intensive agriculture. The National Institute for Agricultural Technology (INTA) based at Gualaguaychú published a report in May 2007 in which it recognised that the “increasing and out of control” use of agrochemicals within the Province is the major cause of fish mortality”<sup>xx</sup>

Crop spraying has caused the owls, who are the predators of rats, to disappear. The urine of these rodents is causing a major epidemic of leptospirosis in Entre Ríos, with the consequent infection of animals and human mortality. The journalist Estela Gigena documented the disappearance of the owls, as well as partridges and herons. She adds:

“These are times of plenty for the soya growers. They are reaping huge profits and consuming thousands and thousands of litres of gasoil, to the point where it is becoming difficult to supply enough of this fuel. They are all looking for chemicals to make soya harvests free of pests. The deeply worrying issue arising from this is the price that society has to pay, particularly when the consequences of these actions mean the extinction of owls and the consequent proliferation of rats in the countryside. This is leading to an increase in cases of leptospirosis, with animals being infected, and so far, the death of two people – and this only refers to Gualaguaychú.”<sup>xxi</sup>

As in other parts of the country, the advancing boundaries of the soya industry have affected native scrublands and pastures. An article in the newspaper La Nación on the 1st October 2003 reported that the felling of forest was prohibited in the Province of Entre Ríos. The environmental emergency came to light through a report on deforestation written by the National University of Entre Ríos made it known that the uncontrolled felling of recent years had caused the deforestation of around 1,2 million hectares and that only 1 million to 800,000 hectares of land that could be considered unspoiled remained in the Province. In total, there are 4 million hectares of forest and pastures at risk, along with the resulting extinction of flora and fauna. In this case, the deforestation is attributed to the rapid advancement of soya in this Argentinean province. Faced with this threat, the Government of Entre Ríos ordered a halt to felling within natural forests and riverside forests, whether these are on public or private land, for a period of six months. This decree threatens severe penalties for offenders, including the expropriation of lands and machinery used for felling.

The newspaper article continues explaining that not only is there concern about the indiscriminate felling and deforestation, but also because of the agrochemical contamination and its harmful effects. According to the Minister for Production in the Entre Ríos Province, soya’s overwhelming advance has led to an expansion of this crop from 600.000 hectares in 1994 to 1.200.000 hectares in 2003. There is evidence that deforestation involves pulling up trees which are several hundred years old, piling them all up in a heap and setting them on fire. This is being done to make way for agriculture. The Entre Ríos Minister for Agriculture stated that 30% of this type of agriculture is being carried out by *pools* or teams of foreign sowers. When the land has been eroded as a result of the methods used by these companies who are only looking for instant profits, they will go elsewhere and find another area to farm, and Entre Ríos will have become a desert.<sup>xxii</sup>

Four years after the public criticism and the six month moratorium, the felling of native forests in Entre Ríos continues, and there are still no measures in place to slow down deforestation. When we interviewed Marta Cian, she commented: “They fell and sow. they are felling towards Santa Ana for soya crops, and they continue to fell, even though there is a law that says that they cannot fell any more trees. They carry on with no regard to the law. They have deforested the Selva de Montiel, the Yatay palms and the other native trees. In the last few days they have felled a hundred hectares of native palms in a natural reserve and nobody has said a thing.” She suggested fighting against the planting of soya in the deforested areas. But she added: “We fight against the soya today, but it will

be the same if they plant maize, because the maize is also GM. It's exactly the same. Because it is GM, the same growing methods will be used as are used for soya."

## **Rural Exodus**

The annual statistics for 2005 for the Province of Entre Ríos show that in 2001, a massive 82% of inhabitants lived in urban areas, and only 18% lived in the country. In contrast, during the 1960s, the urban and rural populations were distributed in equal measures. The changes in population increased towards the 1990s as the introduction of intensive agriculture became more widespread.

Reasons for this include a lack of basic infrastructure (energy, drinking water), absence of State institutions (postal services, schools, health centres), the dismantling of the railways, lack of maintenance on roads, the advance of agri-business bringing with it higher prices for agricultural equipment and materials, technology which does away with the need for manual labour, reduction in livestock herds and smallholdings, environmental problems, a search for better opportunities in urban areas, to name a few. Currently, agri-businesses are increasing their lands through land purchase and rental from small and medium-sized producers, deforestation and uncontrolled spraying. We have been told that landowners that have rented to agri-businesses do not want to return to their land. An ex – farmer who now works as an independent taxi driver in the town of Colon told one of the authors of this report "my land is my taxi now."

## **Human Rights Violations**

Marta Cian, from Pueblo de Libaros told us:

"We know of many people who are having problems with the crop spraying, but it is only lately that people are beginning to talk about it. They fear the threats and the aggravation." Marta herself has been the victim of threats since the end of the Montiel deforestation. Marta tells of Inés Piñeiro, a doctor who came to work for a time at the hospital in Santa Ana. When she arrived she began to see people who were suffering from respiratory and dermatological symptoms that resembled leprosy. This doctor also spoke to the media. She was branded as 'mad', just as Marta had been when she started to speak out about the problems. "They found a way to get rid of the doctor. They would not let her rent a house where she lived and they ensured her life was full of complications so that she would leave..."

The interview continues:

"Doctor Piñeiro told us in a meeting: be careful with leukaemia in children. And this is happening now. There are cases beginning to appear in Santa Anita. Be careful with heart problems. Now everyone is suffering from heart attacks. All this in the last 3 years. It affects those who live near soya and can only watch as the crops are being sprayed, right up to a few days before harvest, so that the spray will dry off and they will be able to harvest. The Doctor is no expert, but it is easy for her to work out that some of the spray has to remain on the crop."

When one travels through crop-sprayed villages throughout the soya provinces of Argentina, Marta Cian's story is repeated almost word for word by people who have never met. What they have in common is that they are all suffering the consequences of the same agricultural system for the production of raw materials, basically RRsoya and RRmaize, for livestock fodder. Today, the production of these crops continues to increase hectare by hectare, and there is economic motivation to add the agrofuels 'for export' business to the sale of forage commodities.

During the last military dictatorship, those in power would mock victims of oppression with the slogan "We Argentineans are right and human". They also called the Mothers of the Plaza de Mayo "mad women". Today, it is the turn of the agro-export model, which Martinez de Hoz tried so hard to impose when he was at the peak of his power. The champions for the agro-export model for livestock fodder and agrofuels remind us in many ways of the mockery of the dictators during those oppressive times. This situation gives us cause for concern, given that they are the ones who control the dominant ideology of 'progress'. One of the champions is Héctor Huergo, the editor of the rural supplement within the daily newspaper, Clarín. When he referred to biofuels in an speech, he expressed:

“In Jesús María, Huergo made it plain that there is no doubt that soya is the destiny of agriculture in Argentina, if we want to stay prominent and compete efficiently with the rest of the world’s primary production markets.”

Huergo sentenced: “We have to fell forests wherever possible and plant soya. We need to be more efficient with livestock and change from a transhumance system of livestock farming to intensive and more efficient systems. We should make as much use of space as possible to capture the sun’s rays and transform them into energy, such as biofuels,”

Biofuels are the main focus when looking at alternative energy and potential for industrialisation of raw materials in Northern Argentina, and “our country should prepare itself for this. I personally believe we are in a position to do so.”<sup>xxiii</sup>

Héctor Huergo and his contemporaries defend this model with vigour. They are the voice that is heard within the lobbies of FAO, UNEP, the EU, etc.

Marta Cian and the other victims of this system are suffering insults and threats for speaking out about what they have to endure each day of their lives. Their experiences are being broadcast by some local media sources. Marta told us that people are now beginning to talk, but there is still fear of threats and harassment. This situation is not unique to Libaros. It is being reproduced all over the country. Threats are administered through a repressive system which, although virtually invisible, is evident everywhere. It has had the desired effect. It has created an auto-censuring mechanism with which to silence rural inhabitants and the scientists who can see what is happening but are afraid to be tarnished as ‘mad’ or become marginalised within their social and professional environment.

During our journey to Entre Ríos, this oppression became real for us and took us back to another time. Our experience took place after having filmed the Portillo family and a silo which is situated in front of their house. The activity at the silo created clouds of dust particles which were being blown towards the village houses. The journalists who accompanied our group were putting away their filming equipment and we were preparing to leave when two unmarked cars pulled up in front of us. Two uniformed policemen alighted from one car, as well as another man pointing a machine gun towards us. Aggressively, and without any explanation, we were told that we had to go with them to the police station at Gilbert so that they could take our personal details and those of the vehicles we were travelling in. We told them that they could do this where we were and that it was not necessary to go with them to the police station, since we had not committed any crime, and had only interviewed local people and documented the activity of the silo from the street at a distance of 200 metres without trespassing onto private land.

We were unable to reason with them. No argument we could provide would sway them from arresting us and making incoherent threats towards us that bore no relevance to our situation. One of the policemen got into one of our cars. They took, as a hostage in their car, one of the youths from Basabilvaso who was accompanying us as a local guide and who was also a representative of the victims of crop-sprayed villages. In a dilapidated building which acted as the police station, they took our details while the plain-clothed policeman with the machine gun continued to threaten, accuse and attempt to provoke us. He would not allow us to be released, even though we told them that we had other interviews scheduled with people from the crop-sprayed villages. The situation came to an end when two higher ranking policemen appeared. We were able to make them understand the unreasonable nature of our experience, which we had endured for over an hour. Before we left, the plain-clothed policeman told us quite clearly that the machine gun was not his only weapon. He raised his shirt and showed us a pistol which he wore at his waist. This was done in full view of the senior policemen. Whilst all this was taking place, those within our group who carried mobile phones telephoned lawyers and human rights groups to let them know what was taking place, as for a few moments during that time we were not sure what was going to happen. This experience gave us a real insight into the risks faced by people living within the crop-sprayed areas who are beginning to speak out and defend themselves.

Article 25 of the United Nations Universal Declaration of Human Rights, dated 10th of December 1948, states:

“Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.”

## **Conclusion**

The situation in Entre Ríos which is described in this report is repeated in many other parts of Argentina. The expansion of RRsoya has brought with it the violation of basic human rights. It began with the production of livestock fodder for China and Europe. Today, there is additional demand for this crop for the production of biodiesel to supply the needs of wealthy countries so they can continue to increase their energy use. The car manufacturing and petrol industries have been allies of the agro-fuel industry and have found a new niche market. Their only concern is to find new arguments for marketing the product in order to increase their profits as quickly as possible, whatever the cost...

This report focuses on the Province of Entre Rios and aims to describe in detail what is taking place in the regions of Argentina, where people are living cheek by jowl with soya plantations. The anti-democratic nature of the process is evident by looking at who decides what will be planted on our soils – namely the strategists of the global market.

We can still take steps to reclaim our sovereignty. The answers to our needs cannot be found in the unrealistic proposals for “sustainable biofuels”. We need to return to growing our own varied and healthy food crops on our own soils for our own people, and abandon the production of forage commodities. We need to oppose the production of agrofuels destined to feed the cars of the wealthy societies of this planet.

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## **APPENDIX:**

### **PETITION FOR A MORATORIUM ON BIOFUEL PRODUCTION**

#### **In view of:**

- The overwhelming promotional campaign being conducted by those in power and those seeking power within our province, founded by the strong demand for fuel from the European Union and the USA (both have approved policies for expansion of this type of fuel);
- The lack of consultation taking place relating to monocultures for biofuel production;

#### **Considering:**

- That this promotion is taking place despite the devastating environmental, social and economic impacts which have already been caused by monocultures on soils, wetlands, native woodland, and rural/urban populations;
- That each day new cases come to light demonstrating the negative impacts caused by the implementation of an industrial agriculture based mainly on GM soya monocultures; the relation between the health of the population and agrochemical use; the rural exodus caused by the concentration of land ownership; the contamination of water courses; the destruction caused to other agricultural production, such as livestock rearing, bee keeping, chicken and dairy farming; the cutting down of the last remaining remnants of native woodland; and the fact that these impacts will increase with the increase in monocrop demand;
- That, in order to minimise global warming, the alternative for substituting fossil fuels with biofuels will not provide a solution, considering the way that production and use has been planned biofuels will only aggravate the problem;
- That the damage caused by monocultures throughout Argentina is verifiable, particularly in Entre Rios (see the INTA article), and this damage will increase when the proposal to produce non-food crops is adopted;
- The disturbances caused in other countries where similar measures have been taken to increase biofuel production through monocultures are real and undisputable (for example, Malaysia, Indonesia, Ecuador and Colombia);

#### **The undersigned request:**

That a five (5) year moratorium is placed throughout the province for the installation of biofuel production plants utilising biomass derived from monocultures of any type.

*Neighbourhoods of the crop-sprayed towns of the Entre Rios Province*

## LETTER TO THE GOVERNOR

Libaros - Dpto. Uruguay - Entre Ríos - 04 of June 2004

Sir,

As an inhabitant of an area rich in agricultural produce, for a long time and on a daily basis, I have observed the improper use of agrochemicals for crop spraying; I have seen the land-based sprayers, also known as 'mosquitos', pass through the streets of the town (or have seen them stationary) at all hours of the day, spilling chemical products –whether herbicides, plaguicides, fungicides, etc. Pulling up outside shops to buy food or cigarettes and then driving off again. The operators of these vehicles eat, smoke, go to work, spray, return and then park them outside their homes in the town without any regard for safety.

Also, no safety procedures are followed for the handling of these agrochemicals. One can find them stored in any shed, and even in the garages of houses in the town, where they are prepared and transported in open containers on vans. Their contents are spilled as the vans are driven, and when the containers are used up, they are discarded in the fields. When crops are sprayed, no attention is paid to wind direction. Soya plantations a hundred metres from schools are sprayed, as are crops growing next to neighbourhoods where people live. Those who drive these machines, sometimes precariously, do not use any protective clothing, gloves or face masks. When spraying from the air, they circle over the villages in order to return to the area they are spraying. As you can see, neither the planes, the people spraying, nor the land-based machines are adhering to any basic rules or recommendations to protect the workers doing the spraying or the town's inhabitants from the toxic effects of these chemicals (some of which are banned). Everyone is aware of the consequences that these practices have had on the area: dead fish in the streams and lakes, serious problems within the beekeeping industry and the poultry industry, the deaths of all types of wild birds as well as kept birds, dogs, sheep. Most importantly and of greatest concern are the problems caused to human health: all kinds of skin and eye allergies, respiratory symptoms (bronchial spasms culminating in intensive therapy), intestinal problems caused by serious poisoning, cardiac problems, and cases of leukemia and non-Hodgkins lymphoma in persons involved in agrochemical spraying.

Even though all of the above is taking place, no authority in the area is taking any measures against it, although there is legislation within the Government of the Province of Entre Ríos: Plaguicide Law N° 6599, ratified by law N° 7495, with a further decree 4483/95 MEO YSP– Paraná–October 1995. The above legislation explains everything relating to the use, transport, and storage of plaguicides. Furthermore, there is decree N° 4371 SEPL proceeding N° 0244254– Paraná– September 2000.

The Governor has decreed through 13 Articles how to handle plaguicides, and this is very important for those who are in direct contact with these products, as well as the consequences for the environment. My question is: If there are so many problems in this area and this legislation exists, why do the authorities in the area not know about it? Or is money and power more important than human life?

LET US THINK ABOUT THIS.....

Marta Cian

DNI N° 5.206.373