# LIBRE, JUSTA Y SOBERANA

# FREE, JUST & SOVEREIGN

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Livio Giordano

## FREE JUST & SOVEREIGN

Since colonialism, Latin America has experienced growth based on a model of commodity exports. Proteins, minerals and energy are the main inputs needed by countries that have led the industrial revolution for two hundred years. But paradoxically, these resources are scattered and far from its borders.

The habitants of the countries from which these goods are extracted are concentrated in large cities that function as collection and management centers. An extensive cement barrier prevents administrators from seeing the consequences of their actions and a new lifestyle begins to silently impose itself on another, based on the desire for a better future and comfort. In turn, the main communication media function as opposing mirrors where the illusion of a single universe is multiplied to infinity, without opening a public debate about the risks of the new agriculture on food sovereignty, indigenous peoples and health.

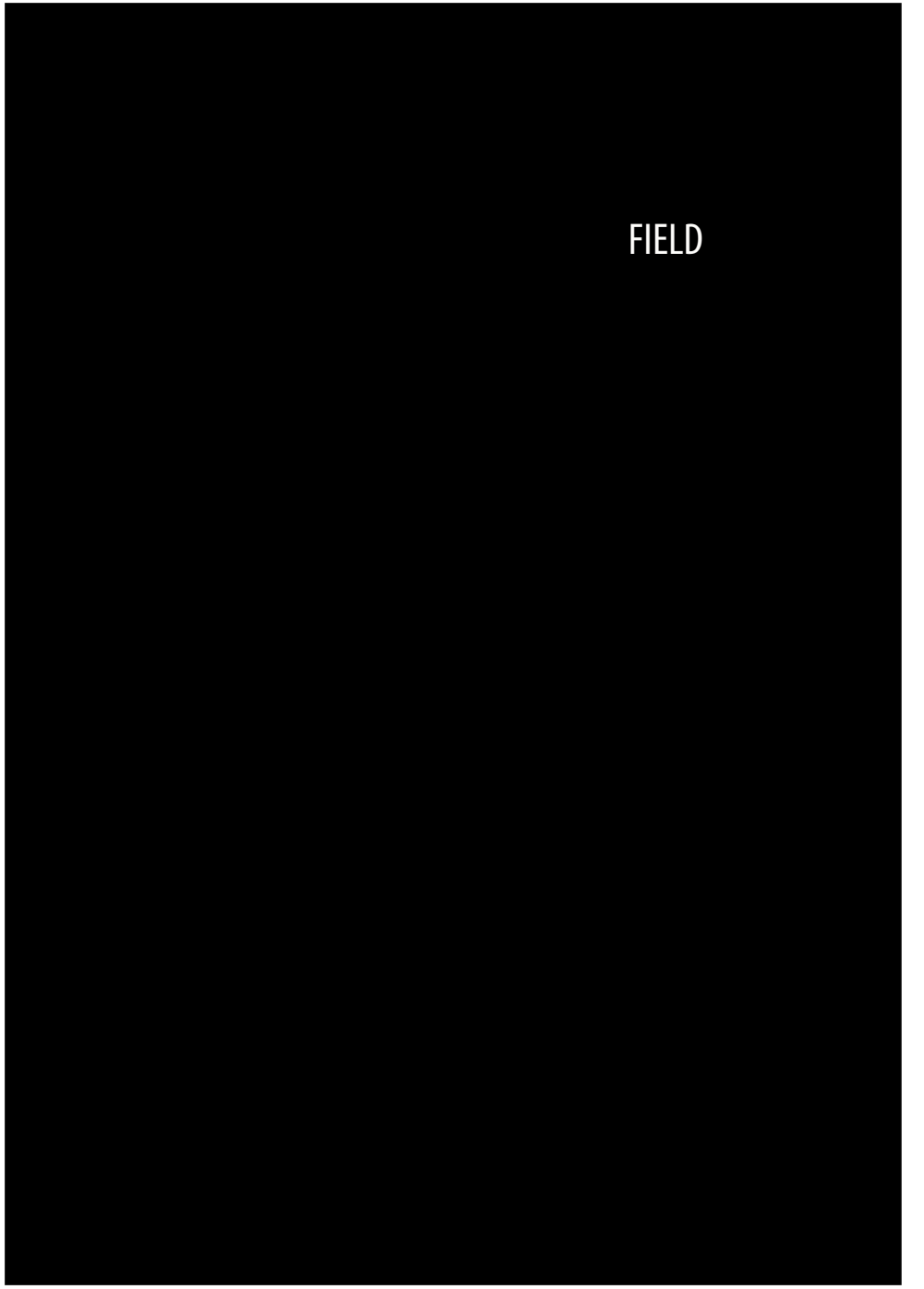
The so-called Golden Age is gone  where the welfare state grew in the shadow of the Soviet bloc as a form of counterweight. Once the wall has fallen, the winds of capitalism in its neoliberal phase begin to erode the old socio-economic model through financial speculation facilitated by digital accounting entries. Its tangible counterpart is one of the vital natural resources of man that has been buried almost to oblivion in our cities: the Land. Its importance has manifested itself in many ways. The native communities of South America see in her a deity: Pacha. The Physiocrats were inspired by it as a planning basis for early 18th-century capitalism, and contemporary architects assign it a monetary value per square meter.

It was in the conquest of mathematical, physical, and chemical laws; where the Renaissance found the spark of the demographic explosion of the 20th century. Explosion that has been boosted with energy from oil, guided by the economic-financial system established from the West to the world; and sustained from various scientific advances such as atomic energy.

In this way, the world population went from 310 to 8,000 million habitants in the last 1,000 years. This geometric growth has its correlate in a greater demand of food and shelter for subsistence. Under these circumstances, starting in the second half of the 20th century, the paradigm of science has quintupled the harvested on the same arable land. The essential factors for this productivity increase have been discoveries in the field of genetics, the use of fertilizers, improvements in planting techniques, greater homogeneity in the final product, control of crop cycles and resistance to pests and weeds.

As a counterpart to these changes in the traditional techniques, a blanket of suspicions and fears covers the production of genetically modified foods about the long-term effects on human health. Despite the fact that hunger in the world is a problem that can be solved politically, the world demand for grains begins to expand the agrarian frontier. Thus, the clearing and displacement of native communities has strong social and population consequences; productive and ecological.
Some of the actors that are at the core of these events argue that if the central countries demand the non-cutting of original vegetation; they should pay for the air they breathe, in order to give the habitants of these areas some resource to develop an alternative activity.

Investigations and counter-investigations, arguments, discredits, doubts, suspicions, games of subjectivities, the positions put forward by the parties to this conflict that has arisen in the first decade of the 21st century, can be supported with great arguments. Perhaps a way out of this problem would be to start asking why we cultivate in this way, instead of how. The developments of the green revolution have responded to population distribution schemes of high concentration in cities, whose habitants, for the most part, have lost the notion of the origin of the food they consume. Industrial food production must respond to performance requirements due to profitability criteria, which sometimes lead to the development of work methodologies whose consequences and responsibilities are shared between the producer and the consumer's habits.



## FROM FORGETFULNESS TO ANGER.

March 10, 2008 will go down in argentinian history as a key date. As of the application of Resolution No. 125 of the Ministry of Economy and Production, the four largest organizations that bring together the agro-livestock sector in Argentina will organize a lockout that will include a roadblock as a protest measure. This conflict will last for 129 days with various actions, until it puts at risk the supply of the main urban centers.

The confrontations reached such a proportion that public opinion in the big cities set their sights on a forgotten space: *the Filed*. *Although it is clear that the countryside and the city cannot exist in the same physical space, their temporalities are quite different:*

*The city and the countryside do not share the same present*.

Of the various historical ways of imagining the rural space, the average contemporary citizen has a number of isolated folkloric-productive elements, such as: the tractor; the plow; the mill; the Gaucho; the mate; the cow and other clichés. Ignoring more deeply the ancestral ways of life of the aboriginal communities; agricultural activity has become a kind of black box.

When did this mismatch start to occur?
When was it that "general opinion" "forgot" about the countryside?

Probably since the second half of the 20th century. Internal migrations from rural to metropolitan areas were accelerated in the Western world, from the industrialization processes of the main cities of each country.

Active population mobility from primary to secondary and tertiary sectors of the economy developed an urban lifestyle away from food production areas. . This fact occurred that some people have unconsciously naturalized that the origin of their food is found on the shelves of a supermarket.

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The combination of high international prices, highly competitive productive schemes, with good profit margins in net exportable resources, led the rulers of a highly indebted nation to take a double stance. The first will be to reduce the control of the productive forces without deeply addressing the deviations on the human and environmental planes. The second is to apply a tax measure that in the first instance will suffocate the situation of small and medium producers.

It is in the protest of the countryside for its own interests, where the consequences of the new order established by agribusiness will gradually become visible.

During the great conflict of 2008, the actors in the countryside raised their voices, hearing words such as: soybeans, exports, withholdings and foreign exchange. Inadvertently revealing the conflicts derived from the new agricultural-livestock production systems with words such as: agrochemicals, glyphosate, transgenics, clearing and illegal appropriations.

In February 1972 Richard Nixon will re-establish relations between the United States and the People's Republic of China, an event known as *The Week That Changed the World*. The investments made in the Asian country will promote the MADE IN CHINA brand. Since then, the Far Eastern country will be associated with toys, textiles, and all kinds of low-quality bazaar items.
Since 1979, a sustained growth of 9.8% for thirty years will make the *Sleeping Giant* the third world power. Its sustained demand for primary products was so great that it generated a rise in international prices; together with the wars for oil, oilseed grains tied their price to that of a barrel of crude oil.

Being 5 million centuries what it takes to nature produce all the oil on the planet, man only needed one to enter into a reserve crisis. First used as a substitute for whale oil to light the streets, its concentrated power of influence has been noted since the 19th century, when it put up strong barriers to the development of the first electricity distribution companies. Pressure that continued until it found use in the automobile industry as a fuel.

GÉNESIS.

At the beginning of the 20th century, the substitution of steam engines for combustion engines reached the arsenals of the European colonialist powers, generating a strong escalation in arms, giving rise to dependence on oil.

Sydney Pollack fictionally addresses this dependence in his film T*hree Days of the Condor* (1975), where the triggers of the wars in the Middle East of 1991 and 2003 can be found. Currently, for every six barrels consumed, only one is discovered. Reason why the search for clean alternative energies has been an active concern for the last 30 years. One of these will be born from the hand of the inventor Rudolf Diesel in 1900, who at the time of presenting his alternative engine prototype, also ensured its perfect operation from fuel obtained from peanut oil.

This need for alternative energies is manifested in an international order that has a confluence point in the year 2020. The goal of the Argentine Strategic Agrifood Plan is an increase of 50% in the tons produced annually compared to 2010. The 160 million tons of grains will be produced, increasing by 27% the area currently dedicated to this use.

In this process, the areas traditionally used for livestock, dairy production and other foods have begun to be displaced. Going from mixed schemes (animal raising plus agriculture) to its complete replacement by continuous agriculture; also advancing on hectares of virgin forests and lands of aboriginal communities.

Since the rules of the free market regulate the daily supply-demand, it is the guidelines of geopolitics that in the long term guide the gestures of the *invisible hand* to achieve objectives that go beyond the subsistence of 8,000 million people. persons. This paradoxical situation is manifested in *El Granero del Mundo*, where the records of cereal production still cannot resolve the nutritional deficits of some sectors of the population.

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Opening act. 2011 - Cañada de Gómez - Provincia de Santa Fe.

Media. 2011 - Cañada de Gómez - Provincia de Santa Fe.


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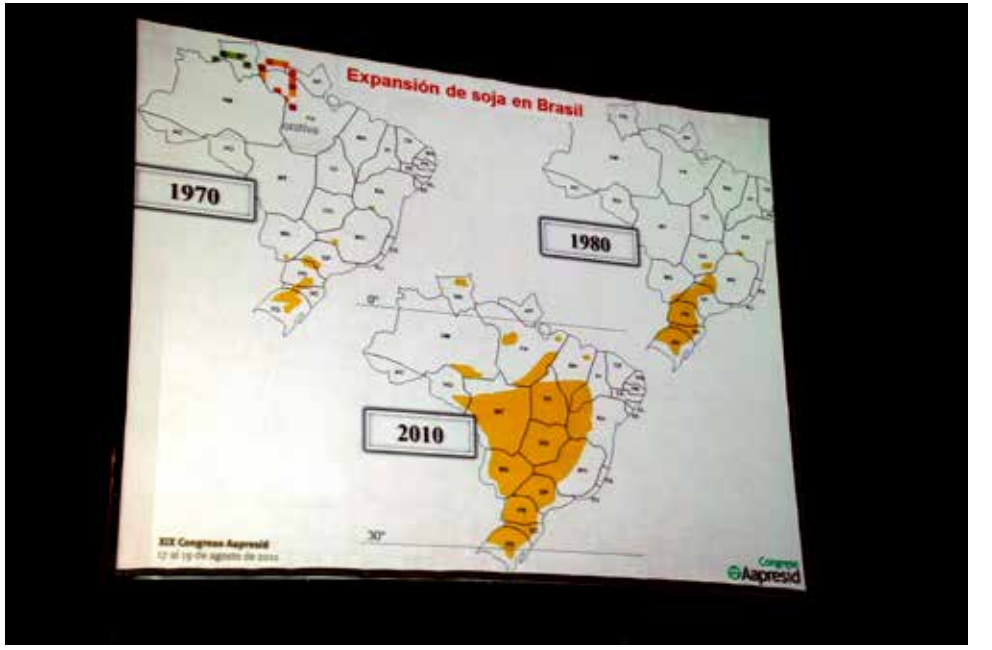
Headphones .2011 - Rosario - Provincia de Santa Fe.[6]




Soybean in Brazil between 1970 and 2010 - Rosario - Provincia de Santa Fe.[7]

Hotel Parking. 2012 - Tangará da Serra - Provincia de Mato Grosso - Brasil.

Soybean harvest. 2012 - Tangará da Serra - Provincia de Mato Grosso - Brasil

Hydraulic piston. 2011 - Cañada de Gómez - Provincia de Santa Fe.

Transgenic soybean at agrotechnical fair. 2013 - San Pedro - Provincia de Buenos Aires.

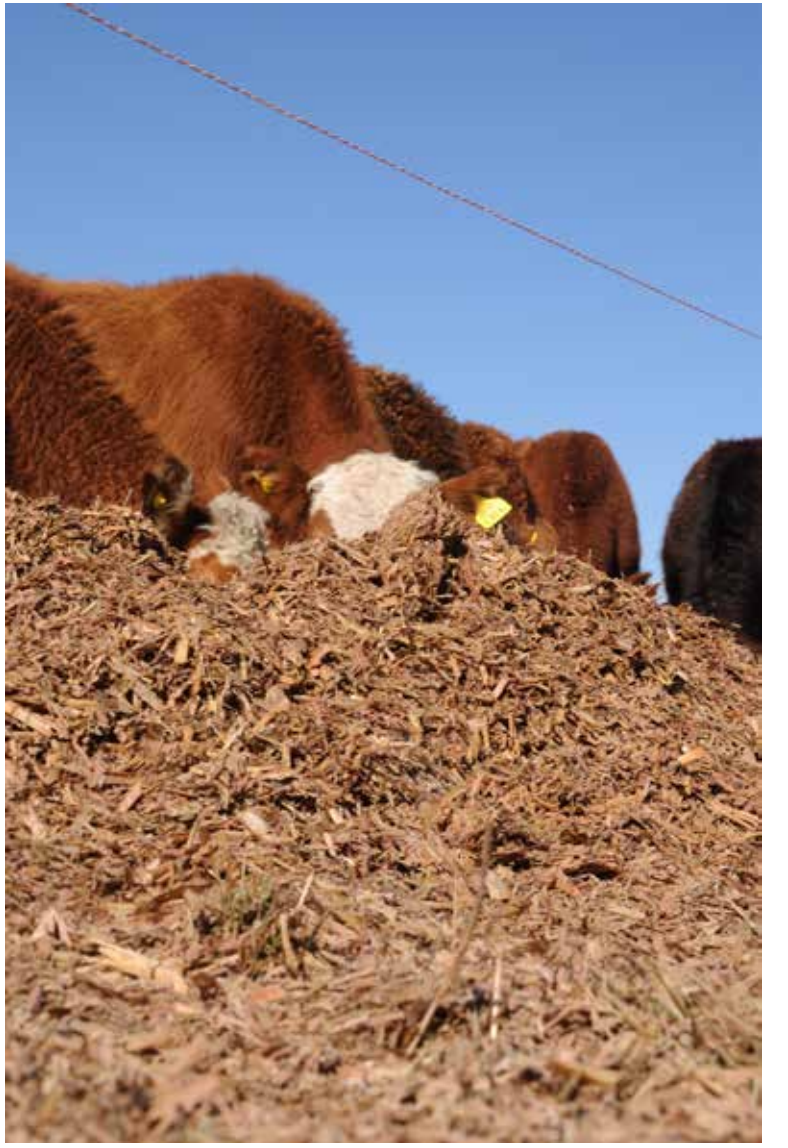

Official retailers. 2012 - Haedo - Provincia de Buenos Aires.

Ferrocarril Nuevo Central Argentino. 2012 - Río Segundo - Provincia de Córdoba.

Bulk ship 2013 - Zátate - Provincia de Buenos Aires.

Zhaocai Mao.  2014 - Barrio Chino. Ciudad Autónoma de Buenos Aires.

Grill. 2011 - Provincia de Buenos Aires.



Forage. 2011 - Mercdes - Provinvia de Corrientes.

[1] Picket of Agricultural Producers. 2008 - Autopista Rosario - Córdoba.

[2] Mao Tzedong and Richard Nixon . 1972 - White House Photo Office (1969 – 1974)

[3] Meida in Agricultural Producer's picket. 2008 - Autopista Rosario - Córdoba.

[4] Rearview mirror over field. 2011 - Cañada de Gómez - Provincia de Santa Fe.

[5] Video Conference. 2012 - Villa Bosch - Provincia de Buenos Aires.

[6] Since 1992, during the second week of August, every year the Congress of the Argentine Association of Direct Sowing Producers (Aapresid) is held. During 3 days, local and foreign speakers, together with companies in the field, share their expertise and visions for the future.

[7] Growth of the soybean cultivated area in Brazil between 1970 and 2010. Projection made during the XIX Congress of the Argentina Asociation of Direct Sowing Producers (Aapresid). 2011.

[8] Soybean expeller. The "advancement in the production chain" allows the conversion of soybeans into oil and later into biofuel. Soybean expeller is a by-product that can be used for animal feed. 2014 - Río Segundo. Provincia de Córdoba.

# TECHNIQUE

**TÉCHNIQUE**.

An Eurocentric materialist vision of the history of humanity tells that until the year 1,000 of our era, the administration of resources can be divided into two parts. The first is based on an administration of scarcity, and since the introduction of the cross plow towards the 10th century, a cycle of administration of surpluses begins.

This technological innovation allowed Europe to generate larger harvests, and these acted as the engine of population growth. Thus begins a cycle of four centuries where the tendency to deforest to generate larger areas of cultivation and the intensive use of the soil led to its depletion, threatening the subsistence of the population. Around the 18th century, Europe experienced another agrarian revolution with the replacement of *open fields* by *enclousers*, crop rotation, the use of fertilizers and the introduction of steam machinery.

Following the 1943 famine in India, population growth was brought into focus by the new transnational organizations. Population growth projections for 50 years spread a hopeless spirit towards said future; spirit of crisis that would be reflected in the Hollywood film *Soylent Green* (1973).

At this moment the *Green Revolution* will provide a solution to world hunger through a new planting scheme with hybrid crops, artificial irrigation, agrochemicals; and by the end of the 20th century, the so-called transgenics. Around 1950, Argentina began a thirty-year cycle of replacing the first open-pollinated crops with double hybrids. The main method of tilling the land was traditional farming. This type of farm uses plowing and threshing to remove weeds and make the soil more permeable. Its disadvantages are several: in this operation moisture is lost, the risk of erosion caused by the wind increases, higher fuel consumption; and the need to carry out five-year rotations with cattle in order to provide organic load and minerals (mainly phosphorus and nitrogen) to the land .

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It was in the search for soil erosion reduction and conservation of its humidity, that Direct Seeding also helped to simplify complex tasks in a short time. For this purpose, seeders were developed that in a single pass open the soil in fine lines to deposit the seed and immediately close them.

But in the face of this new sowing, weeds remained unremoved and became potential organisms that compete with growth resources. It is in this change where the chemical force of foliar herbicides replaces the mechanical work of the plow in order to obtain better control of the so-called weeds.

Parallel to these developments, genetics found a way to reduce the toxicity of chlorinated and aromatic agrochemicals traditionally used in extensive agriculture. Through the modification of a basic subsistence function of plants, organisms adapted to resist the application of an amino acid less toxic than bleach were achieved. But if they do not have this genetic modification, all plant life in contact with this amino acid will be eliminated. In addition to this passive resistance, the latest achievement of genetic transformations has put modified plants in an active defense role, by being able to produce the BT toxin that acts as a pesticide.

It is in this last frontier of science where the diffuse borders of different territories converge, such as ethics, ecology, legality, economy and sovereignty.

The new genetically modified seeds are part of a technological system that must be used as a whole to reach its final good. Thus, the developer companies have complemented the seeds with chemical products, machinery and a business system to keep their customers loyal.

Under the argument of a lower yield, the seed companies recommend not replanting the grains that each mature plant produces for its subsistence.

But in addition, in its latest developments, an additional billing of percentage system has been implemented at the purchase price as consideration for the improvements achieved. For this, the grain collectors act as auditors of the genetic origin of the seeds delivered by the producers after the harvest. Control genetic monitoring that allows traceability of origin.
Two great risks will arise from this new agricultural paradigm: the incompatibility of carrying out agriculture without genetic modification close to the application areas of broad-spectrum herbicides, and the potential detection of false positives of the genes under protection due to natural pollination. This entire system, governed by the economic-modern and scientific vision, has also begun to attack a tradition as ancient as agriculture itself: Seed Saving.

To this end, genetic engineering has developed sterile plants that once mature do not produce seeds. This technology called "Terminator" has not been implemented given the consequences of its use: the appropriation of an element of nature by private companies, and total dependence on them.
Until 100 years ago, the variety of food on the planet was achieved when the first farmers began to freely exchange wild seeds to adapt them to their environment and culture. But this tradition has begun to be threatened by the developments of biotechnology companies.

Argentina has modified its Seed Law 20,247 of 1973, aligning it with the UPOV '91 standards. Incorporating the concept of 'Object Breeder's Right' and the prohibition of saving seeds without paying royalties to the company that provided the original grain. In this way, a seed that was developed communally for thousands of years by a people, may be appropriated by a private party when introducing a characteristic and be patented.

The risk of an excessive expansion of the agro-industrial model represents a commodification of one of the basic human needs such as Food and a potential threat to animal and plant biodiversity.

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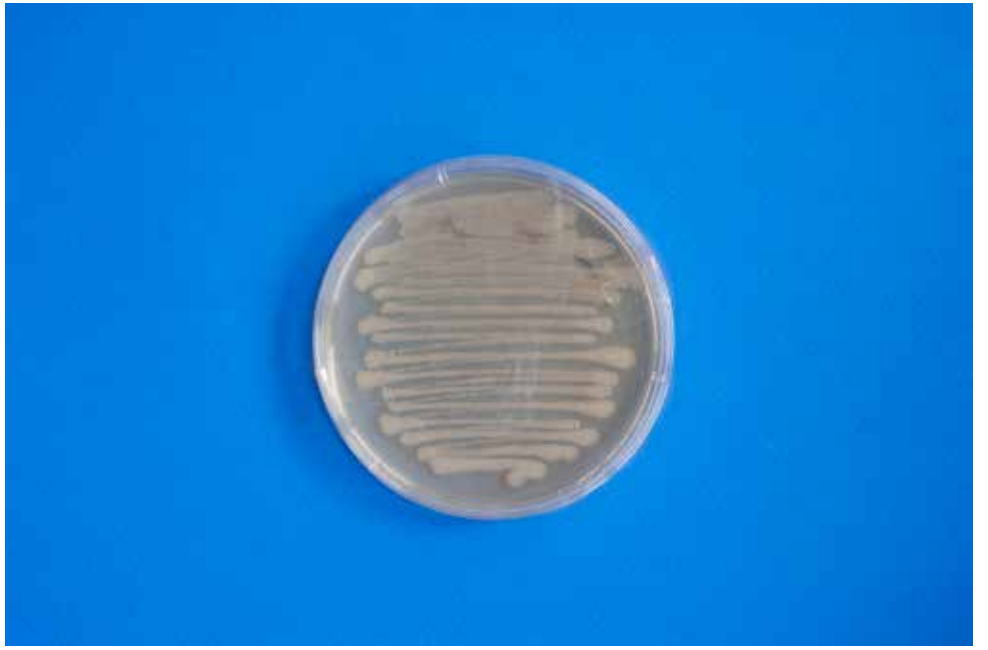


Petri dish seeded with Agrobacterium Tumefasiens. 2013 - Provincia de Buenos Aires.

Infected tree with Agrobacterium Tumefasiens. 2012 - Ciudad Autónoma de Buenos Aires.[14]

Potato culture on agar (Detail). 2012 - Montecristo - Provincia de Córdoba.


Transgenic soy. 2012. Rosario. Provincia de Santa Fe.

Greenhouse. 2013 - Concepción del Uruguay. Provincia de Entre Ríos.

Silo bag. 2011. Mercedes - Provincia de Corrientes.

Direct sowing machine boom. 2011 - Las Vertientes - Provincia de Córdoba.

Seed collector’s sampler 2012 - Río Segundo - Provincia de Córodba.

[9] Tractor disking- Archivo General del Nación.

[10] Direct sowing furrows. 2011 - Las Vertientes - Provincia de Córdoba.

[11] Apron in greenhouse. 2012 - Montecristo - Provincia de Córdoba.

[12] Potato culture on agar. 2012 - Montecristo - Provincia de Córdoba.

[13] Genetic map of transgenic soybean resistant to glyphosate. The nitrogenous bases of nucleotides are represented by the letters A: Adenine; T: Thymine; C: Cytosine and G: Guanine. Event 40-3-2.

Descripción de la Secuencia

| | |
|---|---|
| 0001- 0233 | original plant ADN |
| 0234 - 0529 | CaMV 35S |
| 0530 - 0745 | CTP4 |
| 0746 - 2114 | Cp4 epsps |
| 2115 - 2419 | nos |
| 2420 - 2673 | Cp4 epsps trunc |
| 2674 - 3206 | Unknown |
| 3207 - 3423 | original plant ADN |

Human's inclusion within the natural genome of the plant between positions 233 and 2673.
Source: GMO Detection method Database (www.gmdd.shgmo.org)

[14] Agrobacterium Tumefasiens. This bacterium found in the soil is used in genetic engineering to modify the DNA of plants. Through a plasmid that is naturally inserted into the plant cell, it can be used as a vehicle for a gene to be added to the plant.

[15] Ecran led. 2013. Rosario. Provincia de Santa Fe.

# RESISTENCE

## THE SHORE.

*"...to change land is to change mother..."*

At first they came from overseas, and then there were other decisions that crossed and transfigured the *United Provinces of the Sou*th.

Once the modern State achieved there form in the 19th century, the opening to the importation of manufactured products, the fence, and the railway emptied the *gaucherío*. With no other trade than riding a horse, killing animals and fighting alongside the *caudillo*, his natural agility would find refuge in the suburbs of Buenos Aires.

From the corrals of the north to the brothels of the south, it was in the *conventillos* where this *gaucho*, mixed with the European immigrant, inspired stories of marginality for Tango. Arriving on the shores of the "future", behind the backs of the big city, each wave of immigrants began to weave, between unemployment and aimless talk, the testimonies of a cultural transformation.

Since then, after industrialization and green revolutions, an incessant depopulation of rural areas transcends the American continent, as Jean Girault's film *La Soup aux Choux* (1981) testifies. In South America, the expansion of the agricultural frontier has been affecting, with its new practices since 1970, peasant families who are direct descendants of the original communities, livestock workers and dairy farmers. They are *chacareros, quinteros* or employees; in the Humid Pampas the number of *taperas* grows.

Together with this adaptation of livestock and dairy practices towards an extensive agricultural exploitation, the demand for larger surfaces move along (legal, and sometimes illegaly) on public lands. One hundred years after Tango, the social impact of the mutations in the countryside again originates displaced people who migrate to the cordons of the big cities, where the shore culture versifies the difficulties of uprooting and unemployment through new rhythms such as *La Cumbia Villera*.

As in an eternal return, the consequences of facing spaces and habits that are totally foreign to rural life find an echo in suburban dance clubs, where the transformations of one kind of life into another are witnessed.

**RESISTENCE** .

It was on an afternoon of November 2012, with the first mate, that a journalist asked his interviewee: And how do you see the issue of land clearing?

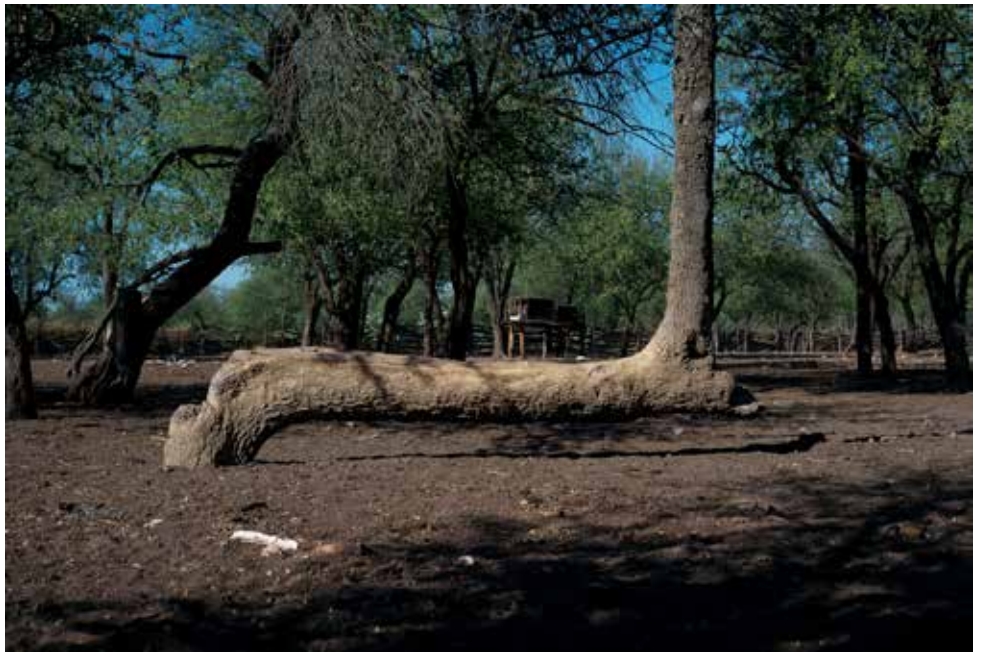
To which, the agricultural producer from Salta responded: Which ones? Here in Salta we clear since the seventies.

Paulo, a native of Pozo del Toba - Santiago del Estero, without knowing this brief dialogue, several kilometers away said:

*- We started in 1973, when they came and started with the binding wire to become owners; but the problem with the company began in 1983. We weren't part of the movement yet, it didn't exist. A company was already coming in '73, '74, but later it came stronger to want to evict in '83 and that's where the conflict began: they put the binding wire, we took it out. The company was called Bustos Paz. Later, Bustos Paz sold, in 1989 I think, to Zurbal S.A. from Buenos Aires. Zurbal sells it to those who are a Mochen, Reniero and Facioli company and with them the thing of evicting comes more difficult. In '92, '94 they make themselves known as new owners who had bought. They have raided houses, in the families' houses, in '95, '96, it was the hardest thing that came. We have been taken in jail many times*. [17]

Being the *Conquest of the Desert* the first advance of the Argentine State towards the territories that were under the domain of several aboriginal peoples. Among several objectives, these military campaigns meant the first expansion of the agrarian frontier in search of fertile land. In this way, a vast portion of territory was incorporated into the productive scheme that will strongly collaborate in the success of the Generation of the Eighties, through the establishment of the agro-export model of the large estates.

And just as the Gold Rush generated in the United States the concurrence of investors and migration of workers to rural areas. The profitability of soybean cultivation brought about a similar effect. Its incorporation since 1970 within the traditional Argentine crops, aroused the interest of some producers in more northern latitudes that were never imagined for crops.



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For 30 years a new *Desert Campaign* has been carried out in an atomized, silent and hidden way in the Provinces of Santiago del Estero, Salta, Formosa and Misiones.

Being the native forests the natural habitat of the descendant families of the native peoples, for the modern State these represent fiscal lands that can be sold at their need. But according to the Argentine Civil Code, a person is the owner of his land if he has the property title and effective possession. The Provincial States, when selling fiscal lands, can hand over the domains of such but at the moment of entering these they are occupied by families that have lived there for generations. It is under this situation where the different genres of life come into conflict.

In Argentina there are nine million hectares in dispute. An area equivalent to the province of Neuquén. Where 63,000 peasant and indigenous families are threatened.

In addition to this conflict, the shifting of the agrarian frontier towards the Nordic provinces has aroused the greed of the most unscrupulous. The lack of protection for indigenous communities and peasants has facilitated the action of armed gangs to intimidate families, signing sales tickets to illiterate people, ridiculous sales prices, spreading urea in the wild vegetation so that the animals die of indigestion , among other tactics to end the appropriation of land.

After the Black Tent of La Simona in 1998; The lack of coverage by the main national media has made the fatalities and persecution of members of peasant organizations invisible. Lack of social conscience that still deserves a public debate.

*"...The flower of the word will not die. The masked face which today has a name may die, but the word which came from the depth of history and the earth can no longer be cut by the arrogance of the powerfu*l..." [19]

March. 2014 - Monte Quemado - Provincia de Santiago del Estero.

Stage. 2014 - Quimili - Provincia de Santiago del Estero.

Silobag . 2014 - Monte Quemado - Provincia de Santiago del Estero.

Large tent. 2014 - Monte Quemado - Provincia de Santiago del Estero.


WEISBURD 43
PAMPA MUYOJ 63
MISTOL PAMPA 70

Balance. 2014 - Quimili - Provincia de Santiago del Estero.

116 Rode. 2014 - El Colorado - Provincia de Santiago del Estero.

Curtaine. 2014 - Quimili - Provincia de Santiago del Estero.

Lime cross. 2014 - Quimili - Provincia de Santiago del Estero.


Refrigerator. 2014 - Quimili - Provincia de Santiago del Estero.


Badge. 2014 - Quimili - Provincia de Santiago del Estero.


Service company. 2014 - Quimili - Provincia de Santiago del Estero.

Tapera. 2014 - Comunidad Indígena Lote 24 - Provincia de Santiago del Estero.

Police. 2014 - Comunidad Indígena Lote 5 - Provincia de Santiago del Estero.

Farmers. 2014 - Comunidad Indígena Lote 5 - Provincia de Santiago del Estero.

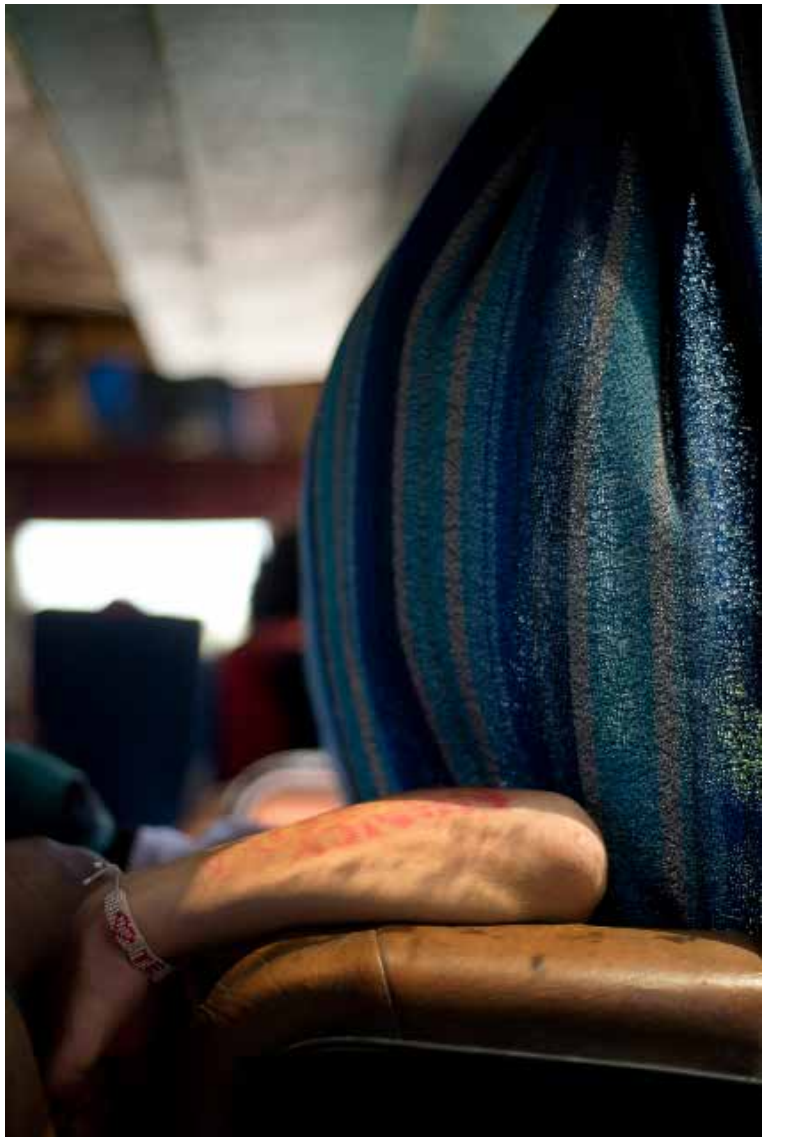
Shotgun. 2014 - Comunidad Indígena Las Lomitas - Provincia de Santiago del Estero.

9 mm case. 2014 - Comunidad Indígena Lote 5 - Provincia de Santiago del Estero.

Slaughtered goat. 2015 - Comunidad Indígena Santa Clara - Provincia de Santiago del Estero

Plastic Canvas. 2014 - Quimili - Provincia de Santiago del Estero.

Burning. 2014 - Comunidad Indígena Las Lomitas - Provincia de Santiago del Estero.



Farmer. 2014 - Pinto - Provincia de Santiago del Estero.

[16] Eviction around the 30's. Archivo General de la Nación.

[17] Memory origins of the small producers central Ashpa Sumaj. Santiago del Estero. MoCaSE VC, 2012.

[18] Tree. 2014 - Indigenous community Las Lomitas - Provincia de Santiago del Estero.

[19] Fourth Declaration of the Lacandona Jungle.1996.

[20] White Quebracho and Turkey. 2014 - Indigenous community Lot 24 - Provincia de Santiago del Estero.

[21] Projection on truck. 2014 - Quimili - Provincia de Santiago del Estero.

[22] End of paved road. 2014 - Quimili - Provincia de Santiago del Estero.

# AGRIBUSINESS

**AGRIBUSINESS**.

Agribusiness is a system of interdependencies between different agents of the food production chain. Under commercial principles a group of companies are coordinated to produce and provide services for the agricultural sector.

Its origins could go back to the start of the *Green Revolution* in the 60's at the United States. This work scheme is based on three fundamental drivers: technological development (of machinery, biogenetics and chemistry); the professionalization of agricultural practices; and a new relationship with rural work. The first of these steps will take place in Argentina around 1975, when a group of producers and scientists tried to implement Direct Sowing. A working method that reduces tillage of the land to zero; avoiding soil erosion; improving the efficiency in the use of water; reducing work times and reducing fuel costs.

Thus, the agribusiness model began to unfold at the end of the 1980s, developed in the 1990s, and consolidated in 2000 with the high international prices of oilseed grains. The increase in profit margins produced by the reduction of time and operating costs would also be enhanced, with greater productivity per hectare thanks to a new weed control system. Goal achieved through the implementation of a technological package of genetically modified crops, resistant to the application of a broad-spectrum herbicide.

In this context of higher productivity and profit margin per hectare, some producers saw their own surfaces full and went looking for fields to lease land. Finding it sometimes less convenient to go with their tools, they moved from direct management to outsourcing. It is then that a figure already present in the agricultural production chain grew in specialization at the pace of new technologies: *The Contractor*. Consequently, this led to the formation of an organizational fabric, where several companies provide services from production to export. In this way, the model of the typical agricultural producer, in charge of carrying out all the tasks, was replaced by a network of companies that provide planting, spraying, harvesting, transport and counseling services. Also growing the industry of agricultural machinery, agrochemicals and others that will make up agro industry and agribusiness in a great sense.

The forces unleashed led to the application of the economic principle of Continuous Growth, and market's logic. A structural change that established patterns of behavior in different parts of the South American territory, through events such as the shifting of the agrarian frontier towards virgin surfaces, and the substitution of livestock - dairy production for the practice of extensive agriculture. In Argentina, the extension of crops to marginal areas caused the annual growth rate to go from 3.5% to 10% after the introduction of genetically modified varieties in 1996.

Fattening systems (Feedlots) where breeding is practiced in much smaller spaces, without the free movement of animals in extensive pastures are exemplary. The introduction of new technologies directed the use of millions of hectares dedicated to fattening livestock towards the cultivation of mainly oilseed grains. Thus, the agro-industrial model has succeeded in perpetuating the transition from an agricultural practice of rotations with livestock grazing to another of continuous extensive agriculture. 40% of the increase in cereal production in Latin America is due to an expansion of the agricultural frontier. This substitution also leads to the displacement of the families in charge of caring for the animals towards the urban cordons of the cities. The countryside has begun to become uninhabited and the model that has been developed is that of rural urban life.

Under these circumstances, agricultural activity transformed, and continues to transform, their historically known way of life. The spillover effect caused by direct sowing and biotechnology facilitated the migration from family farm management to business management of the production system. System that has its maximum expression in the so-called Seeding Pools. Under a land lease system with fixed rent. The landowners found a solution to the social transformations that distanced the heirs from the Family Business. Currently, 60% of the cultivated area in Argentina is not worked by its owners.

In the course of twenty years of the new system of extensive agriculture under annual non-renewable rental contracts, where the owners of the land do not have any type of participation in the results of each harvest; the tenants of the land are sometimes forced to make decisions lacking socio-environmental awareness.

The stress of facing fixed costs in a risky activity can lead to "financially more convenient" options when ensuring the "success" of each campaign. Where the lack of crop rotation alters the pillar of sustainability of new technologies. Given the lack of organic contribution from the fertilizer or stubble, poor soil porosity thanks to deep and extensive roots such as those of corn or sorghum; the soybean over soybean option decreases the amount of nutrients in the soil, generating long-term deterioration. Practiced in this way, industrial agriculture generates a very short horizon of sustainability and a low threshold of commitment, becoming an extractive practice.

As mechanical control of weeds has been abandoned, the direct sowing technique requires a stronger phytosanitary treatment than traditional agriculture. Added to the expansion of the agrarian frontier. The load of applied agrochemicals tripled. And despite the low toxicity of green band phytosanitary products, their cumulative effect or irresponsible use together with insecticides and fungicides, generates diffuse contamination among the still existing rural inhabitants.

Under this paradoxical situation, a great paradigmatic conflict arises: the unlimited growth of business in a limited biosphere. It is from the entry of oilseeds, and the areas necessary for their production within the energy matrix, that has altered its relative value, being an alternative as a substitute for oil. This direct correlation is evidenced by the linking of its international prices to oil fluctuations.

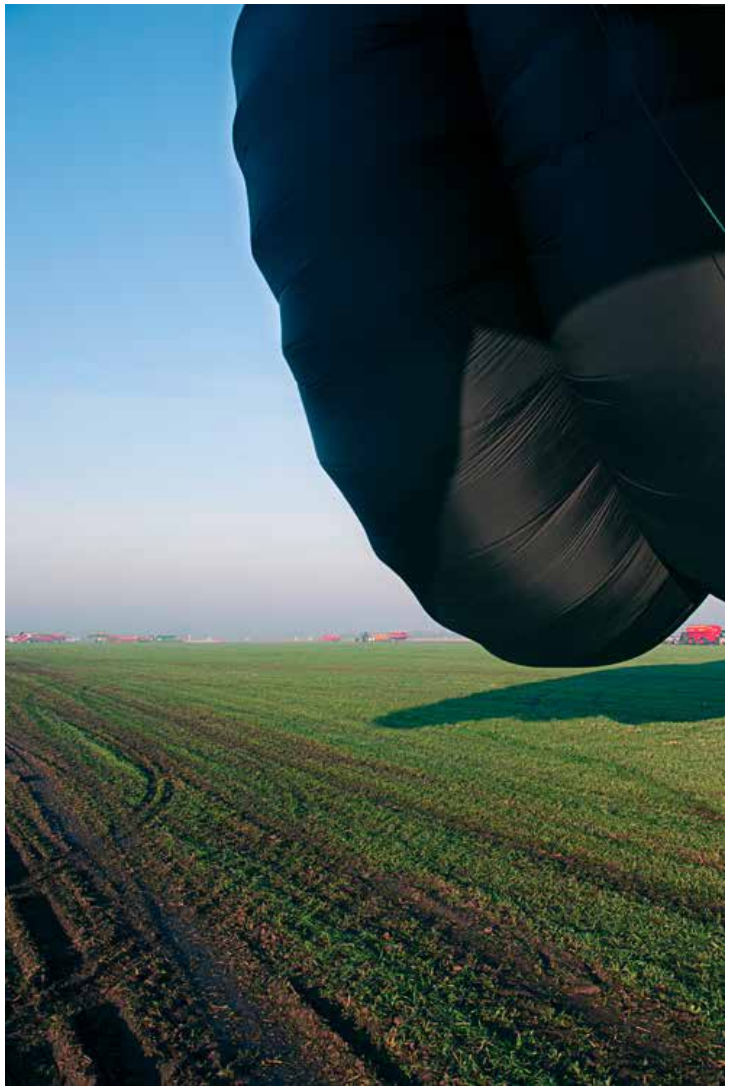
Humanity has grown as a species thanks to the mastery of different energy sources. Like the firewood of the cave and the coal of the Middle Ages; it is fossil fuels that sustain the lifestyle of the industrial age. The paradox of energy cycles is that the technology that triggers the beginning of the cycle will contribute to its closure.

**URÓBOROS**

Stripped land. 2011 - Las Lajitas - Provincia de Salta.

Stripped land. 2013 - La Paz - Provincia de Entre Ríos.

Dust Bowl.(circa 1935)  Centro de Estados Unidos - Fotógrafo desconocido [27]



Tractor hot air balloon wheel 2013 - Armstrong - Provincia de Santa Fe.

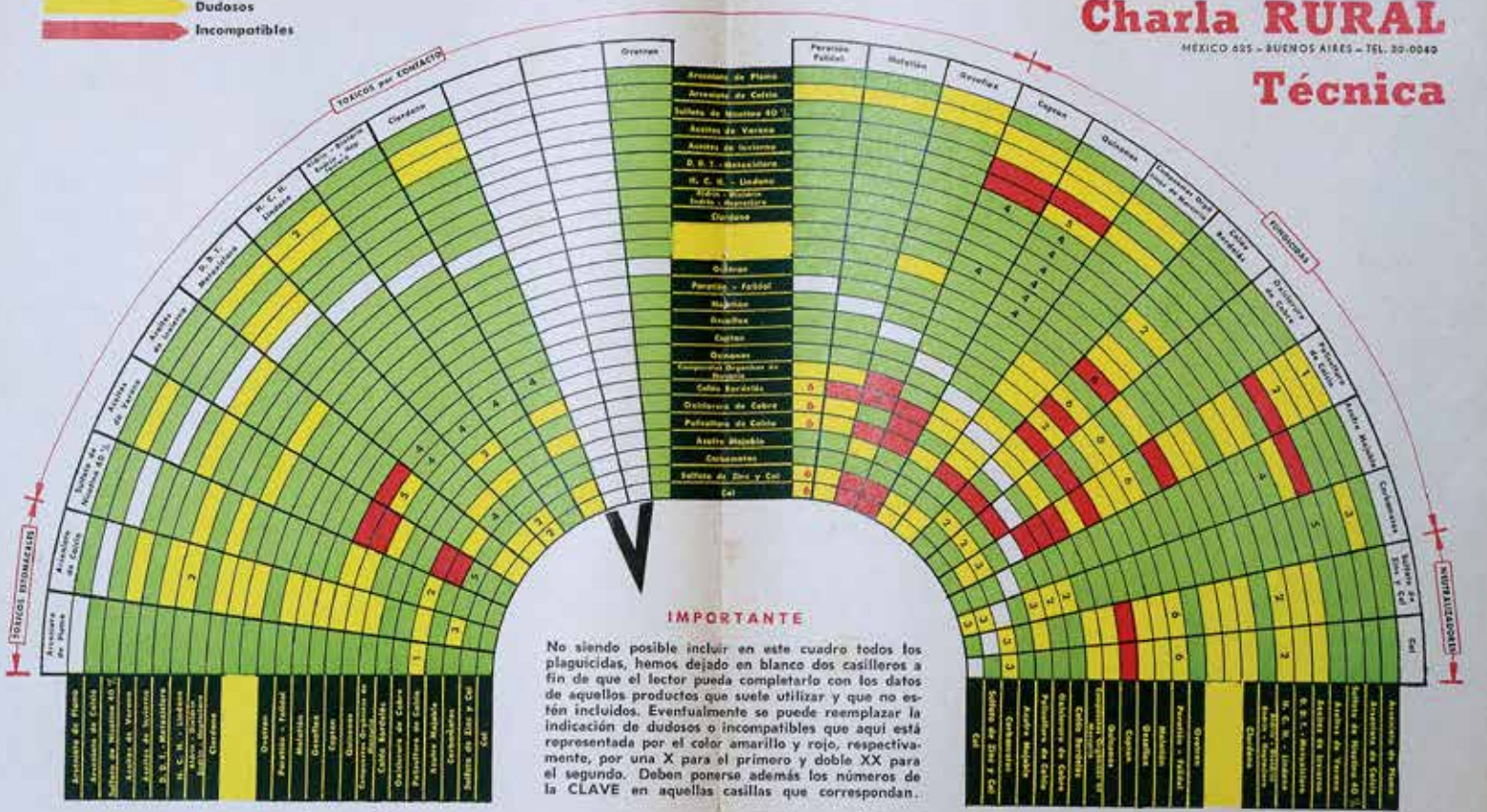
Fumigator airplane. 2011 - Cañada de Gómez - Provincia de Santa Fe.

Swirl. 2011 - Valle de Lerma - Provincia de Salta.

# Cuadro de Compatibilidades de Insecticidas y Fungicidas

Compatibles
Dudosos
Incompatibles






## IMPORTANTE

**No siendo posible incluir en este cuadro todos los plaguicidas, hemos dejado en blanco dos casilleros a fin de que el lector pueda completarlo con los datos de aquellos productos que suele utilizar y que no estén incluidos. Eventualmente se puede reemplazar la indicación de dudosos o incompatibles que aquí está representada por el color amarillo y rojo, respectivamente, por una X para el primero y doble XX para el segundo. Deben ponerse además los números de la CLAVE en aquellas casillas que correspondan.**

## Instrucciones

El propósito del presente cuadro es facilitar la combinación o mezcla de los distintos productos químicos, empleados comúnmente en la lucha contra las plagas agrícolas.

La nueva técnica preconiza el empleo de pulverizaciones combinadas, de dos insecticidas o más, o de insecticidas con funguicidas, a los efectos de combatir simultáneamente dos o más plagas, con una sola pulverización, cuando tienen la misma época crítica para su control. Las pulverizaciones combinadas permiten realizar mejores y más completos tratamientos, más económicamente y ahorrando tiempo.

Para mayor claridad ofrecemos un ejemplo: el productor desea curar contra Sarna y Carpocapsa. Una combinación puede ser D.D.T. con Captan; otra Malatión y Captan; otra D.D.T. y Oxicloruro de Cobre, etc.

Elegidos los productos se procederá a buscar uno de ellos en las columnas de los extremos o del centro. Luego, siguiendo la línea correspondiente, se buscará el cuadrito en el que se enfrenta el otro producto, según la lista que figura en el semicírculo superior. Vemos así que, por ejemplo, el Malatión figura en la casilla 14 (de arriba hacia abajo). Siguiendo esta línea encontramos que el Captan figura en la cuarta columna del Sector Funguicidas. El cuadro donde ambas columnas se encuentran es de color VERDE, lo que quiere decir que la combinación es posible, sin ningún inconveniente.

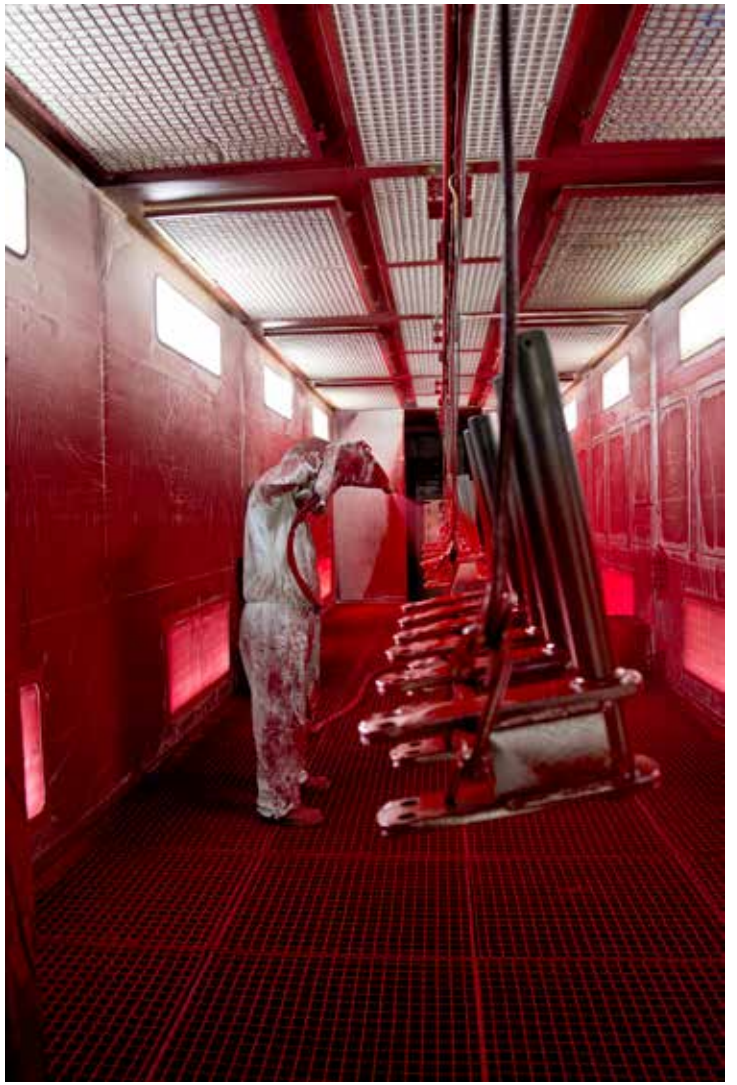
Cuando, en otros casos, el cuadrito donde se unen ambas columnas es AMARILLO, significa que la combinación es dudosa y si es ROJO, que no deben combinarse.

Para mayor precisión figuran en muchos de los cuadritos números del 1 al 6. Estos números resumen las indicaciones que deben contemplarse en esa combinación y se interpretarán de acuerdo con la siguiente:

**CLAVE**

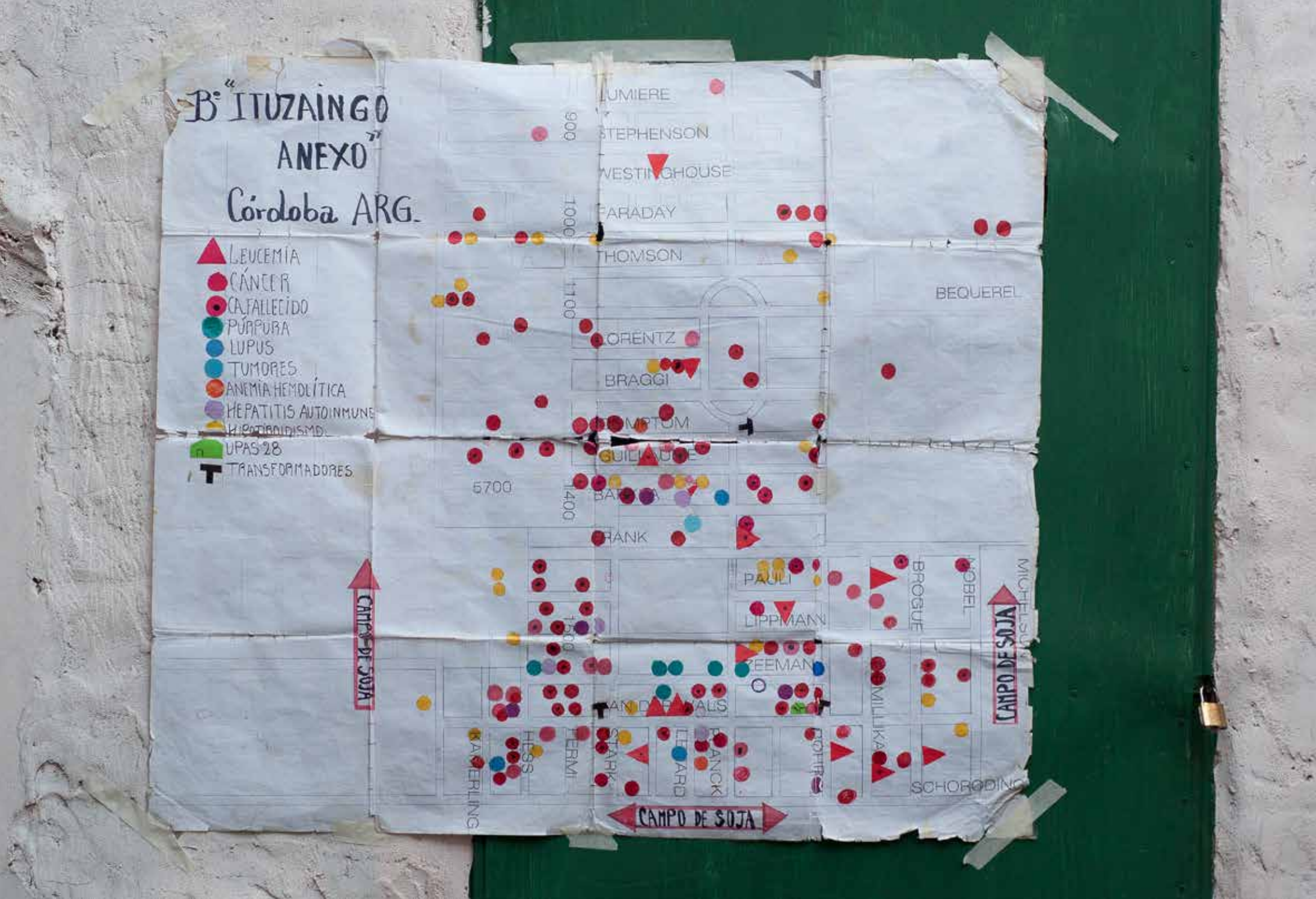
1. **En reposo se descompone.**
2. **Al ser mezclado con agua, se descompone pasadas algunas horas.**
3. **No usar, sino de acuerdo a las instrucciones de los fabricantes. Los compuestos cálcicos pueden modificar la acción fungicida residual de los ditiocarbamatos, convirtiéndolos en compuestos activos sin poder residual.**
4. **Usar en forma de polvos mojables.**
5. **Agregar el producto después de haber emulsionado el aceite en el tanque lleno de agua.**
6. **Acción inicial efectiva, se reduce el poder residual.**

NOTA: La columna correspondiente a CARBAMATOS incluye: Ferban, Maneb, Zineb, Ziram. La columna QUINONAS incluye: Phygon.



Painting line. 2013 - Armstrong - Provincia Córdoba

Painting line. 2013 - Armstrong - Provincia Córdoba


B° "ITUZAINGO ANEXO"
Córdoba ARG.
LEUCEMIA
CÁNCER
CA. FALLECIDO
PÚRPURA
LUPUS
TUMORES
ANEMIA HEMOLÍTICA
HEPATITIS AUTOINMUNE
UPAS 28
TRANSFORMADORES
LUMIERE
STEPHENSON
WESTINGHOUSE
FARADAY
THOMSON
BEQUEREL
LORENTZ
BRAGGI
PLANCK
GUILLAUME
BARDEEN
FRANK
PAULI
LIPPMANN
ZEEMAN
BROGUE
NOBEL
MICHELSON
MILLIKAN
SCHORODINGER
CAMPO DE SOJA
CAMPO DE SOJA
CAMPO DE SOJA
900
1000
1100
1200
1300
1400
5700
BAMERLING
HESS
PERMI
STARK
LENARD
RANCK
COHR

Soy milanesa manufacturing plant. 2012 - Pilar - Provincia de Buenos Aires.

Soy milanesa manufacturing plant. 2012 - Pilar - Provincia de Buenos Aires.

Gas tank. 2012 - Rosario - Provincia de Santa Fe.

Workwear. 2011 - Ciudad Autónoma de Buenos Aires.

Street lighting. 2013 - Balcarce - Provincia de Buenos Aires.

Street lighting. 2013 - Balcarce - Provincia de Buenos Aires.

[23] Agricultural machinery industrial plant. 2012. Provincia de Santa Fe.

[24] Rural Supplement Daily newspaper La Nación - *Saturday December 27, 2003*. 2014 - Newspaper Library National Library.

[25] Vintage gas pump. 2013. Chacabuco. Provincia de Buenos Aires.

[26] Tractor hood. 2013. Armstrong. Provincia de Santa Fe.

[27] Between 1935 and 1938 a series of dust storms hit the central region of the United States as a result of the intensive felling of trees and the lack of coverage for the dry land. The first of them took place on April 14, 1935 in Ocklahoma, then playing Beaver, Boise City and Amarillo. Remembered as *Black Sunday*.

[28] Magazine Charla Agrotécnica. 2012.

[29] Map of diseases in Ituzaingo Anexo - Córdoba. 2012. Ciudad Autónoma de Buenos Aires.

[30] Medium voltage pole in cover cropping. 2013 - Provincia de Buenos Aires.

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The texts of this work have been modified generically from its origins

***Semilla Roja***

*De las sombras de mis abuelos*
vinieron estas ganas de escribir
y de sus ancestros el imaginar.

*Porque hay que ponerse a pensar*
*para encontrarle el nudo a la madeja*

*Que a la ley nadie se haga el sordo*
*cuando todos quieren forrar su saco*
esto a nadie ha de convenir
cuando el camino es de *huella larga*.

Los patrones se vuelven *maulas*
*en eso del negociar*
El egoismo *es un yuyo malo*
*que envenena toda la huerta*
*es preciso estar alerta manejando el azadón*
porque *no falta el varón*
*que lo riega hasta en la puerta*

*si hay leña caida en el monte*
*yo no voy a voltear un árbol*

*malo*
*es que tarde se aprienda*
*hay un asunto en la tierra*
*más importante que dios*
*y es que naides escupa sangre*
*pa que otro viva mejor*

*yo no sé que tienen los yuyitos de* mi tierra
*al tranco los pisotean los zotretas*
*y aún así*
*nacen las hojas por entre las hojas secas*

*que elija una sola estrella*
*quien quiera ser sembrador*
*si ustedes ojos no tuvieran*
*igual podrían ver esto.*