

Profile inpEV, a reference in reverse logistics, mobilizes the links in the agricultural chain in order to properly dispose of empty crop protection packages

inpEV (National Institute of Empty Packaging Processing) is a private non-profit organization company, formed by 98 member companies. Created in 2001 to represent the agrochemical manufacturing sector and promote the environmentally appropriate disposal of postconsumption crop protection packaging in Brazil, its operations are based on the dynamics of reverse logistics, being responsible for the integration and coordination of all the links of this chain. [GRI G4-3, G4-6, G4-7]

By having as members manufacturers and sellers of products registered by the Ministry of Agriculture, Cattle and Supply (Mapa), inpEV was constituted to comply with Federal Law Nr. 9.974/2000 and Decree 4.074/2002, which instituted the concept of shared accountability regarding the correct disposal of empty crop protection packaging. The legislation defines reverse logistics and assigns to farmers the obligation to return the material to retailers who, in turn, must return it to the manufacturers for final disposal.

inpEV is considered the coordinator and intelligence center of the entire Campo Limpo System (SCL), having 98 crop protection manufacturing companies as members, besides 260 distribution and cooperative members throughout Brazil, 12 recycling partners and three incinerators. It has 63 employees between the São Paulo office, the self-owned management central stations in Taubaté. (SP), Rondonópolis (MT) and Alto Parnaíba (MA), besides ten regional coordinators spread throughout Brazil.

By the end of 2015, SCL had 410 receiving units (113 central stations and 297 outposts) located in 25 states of the country and in the Federal District. In order to facilitate the return by small producers and increase the System's capilarity, Itinerant Receipts (RIs) are carried out, which mainly cover locations where production dynamics do not justify maintaining a fixed infrastructure. [GRI G4-4, G4-8, G4-9]

2015 in numbers



already equipped to receive leftovers and improper products



1,872 schools participating in the Clean Field Environmental Educational Program (PEA) with the involvement of almost 190,000 students

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108

receiving stations directly involved in the Clean Field National Day (DNCL) and over **100,000** mobilized people

R\$ 954,000

in savings generated along the year with a 15% reduction in incineration costs

63 collaborators

nearly

5,400 spontaneous articles published about inpEV and the SCL



Future goals and objectives

• Receipt of leftovers and improper products An additional 45 stations prepared in 2016 and 100% of SCL ready by 2020.

Self-financing

Increase the System's selffinancing from the current 35% to between 40% and 45% until 2019.

Cost reduction

R\$ 420,000 savings in 2016 with the new final disposal of IBCs (Intermediate Bulk Containers), which will reduce incineration costs.

• Process quality

Conduct an internal audit entitled Quality Revision of Administrative Processes (RQPA) at all stations by the end of 2016.

• Technology

Enable access to the Central Stations' Information System (SIC) for tablets and smartphones in 2016.

New projects

• Automate stations having a double press.

• Implement knowledge management.

Commitments for 2016

Cost per kg (total – R\$): 1.83

- Total disposed packages (t):
 46,500
- Total recycled packages (t): 42,000
- Weight shipped per truck (in kg): 13,500
- Media exposure (clippings): 6,000
- Clean Field Environmental Educational Program (PEA): 1,800 schools and 190,000 students
- Clean Field National Day (DNCL): activities at 100 receiving stations

Campo Limpo [Clean Field] System

An ally of the Brazilian agribusiness sustainability and environmental preservation, the Campo Limpo System (SCL) is the program managed by inpEV to carry out the reverse logistics of empty crop protection packages in Brazil.

All crop protection value chain links comprise the SCL, starting with manufacturers, including distributors or resellers up to producers who use such products in the field. Every one of these holds co-responsibilities in the system in order to dispose of the packaging in an environmentally proper fashion after use. inpEV, an institution that represents the manufacturing industry and/or license holders, articulates all these chain links in order to dispose of packagings in an environmentally proper way. The public power is responsible for regulating and supervising the process.

Being a global reference on this matter, the System is responsible for receiving and disposing of 94% of the primary crop protection packaging (that having direct contact with the product) and 80% of the entire commercialized packaging volume (plastic, cardboard and metal). These rates place Brazil as a global leader in this business, followed by Germany, with 76% and Canada, with 73%, according to a sector study by BNDES1.

In order to achieve these results, the engagement and education of all links is fundamental and they are constantly improved by inpEV; as with a gear, the commitment of all directly involved agents of the sector is essential.

1 SILVA, Martim F. de O. e COSTA, Letícia M., A indústria de defensivos agrícolas, "Estudo Setorial de Química". In: *BNDES Setorial Química*, 2012, p. 233-276.



Present in **25** states and the Federal District

113 central stations + 297 outposts = 410 unidades receiving units





Chain integration [GRI G4-DMA]

The Campo Limpo System is based upon four pillars:

- 1 The Law;
- **2** Integration;
- 3 Education and awareness;
- 4 Information management.



Shared responsibility

All chain links are fundamental within the SCL: producers, cooperatives/ distribution channels, manufacturing industry and the public power.

These agents act under a shared responsibility fashion, in accordance with Law nr. 9.974/2000. The legislation requires that each agent acting in agricultural production in Brazil fulfill a specific role in the receipt and final disposal process of empty crop protection packagings, as links in an integrated chain.

INPEV



System Flow Diagram



Product ready for commercialization

Triex Ecoplastic

Triex Ecoplastic is one of the many artifacts manufactured from recycled plastic resin arising from the Campo Limpo System. Produced by the Campo Limpo Plastic Transformation and Recycling, this is the first recycled packaging for crop protection products having UN certification for maritime and ground transportation



Recycling

Twelve partnering recyclers of the System transform the packages (plastic, metallic, cardboard and lids) into 17 different artifacts

Recyclable materials are:

Cardboard packages, lids and rigid packages (plastic or metallic) that, prior to their return are properly washed by farmers, can be recycled, provided they are submitted to a triple or pressurized wash.



Incineration

The non-washable packages (around 5% of the total) and those not correctly washed by farmers are sent to incinerators that partner with the System INPEV



Commercialization

The retailers and cooperatives indicate on their Bills of Sale the location where the empty packages must be returned by farmers



Triple wash

At the time the solution is prepared for application on the crop, the farmer does a triple wash or wash under pressure and temporarily stores the empty package at an adequate location on his property

Return

Farmers return the empty packages to the receiving unit of the System as noted on the Bill of Sale



Environmentally correct disposal

Represented by inpEV, crop protection product manufacturers are responsible for transporting the empty packages from the receiving units to their final destination

Packaging processing

During this phase the empty crop protection packages are prepared by employees of the receiving unit to be sent to their final destination (recycling or incineration). Currently more than 400 units, including offices and stations, are located throughout Brazil

Appropriate disposal

In 2015, 45,500 tons of empty packages were disposed of in an environmentally proper fashion by SCL. This volume represents 94% of primary packages (that have direct contact with products) commercialized during the preceding year and exceeds by 6.8% the total received in 2014. For the following year, our goal is to reach 46,500 tons.

Around 90% of the received packages were sent to recycling and the remainder to incineration where this option is only adopted for flexible materials or packages containing products immiscible in water or also those not properly washed by producers while preparing the product solution applied to the crops. |GRI G4-EN23, G4-EN28|

Most of the material that returns to the System becomes raw material for partnering recycling companies, which produce sewage piping, lubricant packaging, power transmission pole crossheads, conduits and electric trays, among other products.

In 2008, Campo Limpo Reciclagem e Transformação de Plásticos S.A. (Campo Limpo Plastic Transformation and Recycling Inc.), a recycler produing new agrichemical packaging from packages received at the SCL receiving units, was created.

6.8%个

was the total growth of packages received by SCL when compared to 2014



of the entire volume of commercialized primary packages was properly disposed of by the System

DISPOSAL PER STATE (T)			
STATE	2014	2015	VARIATION (%)
Mato Grosso	9,852	10,391	5
Paraná	5,367	6,110	14
Rio Grande do Sul	4,479	4,856	8
Goiás	4,454	4,649	4
Mato Grosso do Sul	2,933	3,498	19
Minas Gerais	3,228	3,454	7
Bahia	3,298	3,413	3
Santa Catarina	824	940	14
Maranhão	848	873	3
Tocantins	400	498	24
Pará	142	170	20
Rio de Janeiro	57	61	8
All other states	6,763	6,624	(2)
Total*	42,645	45,537	7

*variations in the amount disposed of between one year and another in any given state are the result of specific factors, among which: variation in crop protection consumption due to climate changes, shipping availability, optimizations in logistics and expansion in agricultural frontiers.

Disposed of packages (t)

|GRI G4-EN23|



When selling products, cooperatives and distribution channels indicate the packaging return location on the bill of sale Governance favors sharing experiences and generating value through improved organization, which ensures representation of all links of the agricultural chain.

Corporate governance

|GRI G4-34|

Governed by its by-laws that reiterate the need to pay attention to the principles of legality, impersonality, morality and equality, inpEV employs the best market practices to achieve its strategic vision of being a reference in its core business.

Its governance consists of the members General Assembly, Board of Directors, Executive board and Fiscal Council. There are also tax, Logistics, Packaging and Product Approval committees, which provide support to the Executive board, and the National Council of Central Stations, an important communication channel between inpEV and the System's units.

The management model based on strict audit and control rules to manage the Campo Limpo System carries out the operational management, supports and guides the industry, the distribution channels and producers in order to fulfill the responsibilities set forth by legislation, besides promoting environmental education. According to the guidelines of external auditors and with the opinion of its Fiscal Council, the institute discloses the result of its activities and operations on an annual basis in accordance with Brazilian accounting principles as part of its transparency commitment towards associated companies and entities and the other links of the chain.

Organs that establish the governance

General Assembly – The maximum instance of governance, formed by members and summoned twice a year in order to validate mid- and long-term strategic guidelines, besides approving economic and operational statements.

Board of Directors – Defines the guidelines to assure fulfillment of the by-laws, certifies that laws are fulfilled, that assets are protected and that the relationships with links in the chain are closely maintained, among other roles. It is formed by 13 full members - five representatives of the contributing partners (elected during a General Assembly) and eight representatives of the member entities (collaborating members). This format ensures the representation of all links of the agricultural chain such as the agribusiness segments, manufacturers, distributors and cooperatives and rural producers.

The entities that represent these links have the responsibility of disseminating information and deliberations about the Campo Limpo System, as well as adding knowledge and guidelines for the smooth operation of the SCL.

Fiscal Council – It is formed by three members (from among the contributing members) elected during the General Assembly. It offers support to and supervises other governance instances.

Executive Board – Responsible for managing the Institute, it is led by the presiding director, a professional hired by the Board of Directors, and holds no bond to member companies.

Board of Directors

Representatives of contributing members

Basf S.A. Marcelo Maniero Ismael Francisco Verza

Du Pont do Brasil S.A. Marcelo Okamura (vicepresidente) José Donizeti Vilhena

Monsanto do Brasil Ltda. Luciano Fonseca Saul Scatolini Duarte

Nufarm Indústria Química e Farmacêutica S.A. Luis Henrique Sanfelice Rahmeier Gilberto Bento Schiavinato

Syngenta Proteção de Cultivo S.A. Leandro Conti José Roberto Pelaquim

National Council of the Central Stations

A multidisciplinary group formed by ten managers of the central stations, it acts as support to the inpEV administration, meeting formally twice a year in São Paulo. Among its functions are the general requirements of the System and the dissemination of best practices to the regional councils. Its members are elected every two years. Representatives of the associated entities

SEGMENTS OF THE AGRIBUSINESS Associação Brasileira do Agronegócio (Abag) Luiz Antonio Beltrati Conacchioni

Associação Brasileira dos Produtores de Soja (Aprosoja) Glauber Silveira

MANUFACTURERS Associação Brasileira dos Defensivos Genéricos (Aenda) Túlio Teixeira de Oliveira

Associação Nacional de Defesa Vegetal (Andef) Eduardo Daher

Sindicato Nacional da Indústria de Produtos para Defesa Vegetal (Sindiveg) Silvia de Toledo Fagnani

DISTRIBUTORS AND COOPERATIVES Associação Nacional dos Distribuidores de Defensivos Agrícolas e Veterinários (Andav) Henrique Mazotini

Organização das Cooperativas Brasileiras (OCB) Evaristo Câmara Machado Netto

RURAL PRODUCERS **Confederação Nacional da Agricultura e Pecuária do Brasil (CNA)** Daniel Kluppel Carrara

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See the complete list of all companies associated to inpEV on page 48

Support committees

• Taxes – internal organ that facilitates alignment of SCL participants with fiscal, tax and corporate topics. It is formed by professionals of inpEV, of Campo Limpo Reciclagem e transformação de plásticos S.A. and by independent consultants.

• Logistics – discusses measures to improve reverse logistics processes and technologies under the scope of the Campo Limpo System.

• **Packaging** – evaluates new trends, the life cycle of packaging materials and innovations of the sector.

• **Product approval** – evaluates and approves the manufacturing of new products, at recycling partners, produced from packaging received by the Campo Limpo System. inpEV's Code of Conduct addresses topics such as the work environment, conflict of interests, discrimination, relationships with government entities, the responsibility of people managers, and information security.

Code of conduct |GRI G4-56|

inpEV's Code of Conduct seeks to fulfill the principles, values and mission of the institute and guides its social standpoint taking into account its different stakeholders. This document defines the precepts that can sponsor knowledge, skills, experience, and cooperation among all links in the agricultural chain that comprise the System.

Signed by all inpEV employees at the time of admission, the scope and range of this instrument includes guidelines for suppliers, service providers, partners, companies and associated entities. It sets forth that the conduct of the institute depends on each one so that all shall be subject to ethical principles and values that satisfy members and other stakeholders, environmental responsibility, safety, respect for differences, transparency, innovation, team spirit and solutions developed in partnership with clients.

The document addresses topics such as the work environment, conflict of interests, discrimination, relationships with government entities, the responsibility of people managers, and information security.

In 2015, due to the serious allegations of corruption involving the public power and other organizations, the institute initiated a revision process of its code of conduct and trained its employees in order to observe good practices and transparency in institutional relations with public entities.

100%

of inpEV's employees sign the **Code of Conduct** at the time of admission

Human Capital |GRI G4-DMA|

With the goal of achieving greater efficiency in all its processes, people management has focused on the areas of Health and Safety and training in 2015. With regard to benefits, improvements were made to the dental plan of the office professionals, which were also extended to the field staff.

inpEV ended 2015 with 63 professionals, of which 37 are male and 26 female, including four thirdparty workers. In addition to having staff located at the administrative headquarters in São Paulo City, at the regional operational coordination centers and at the central stations located in Rondonópolis (MT) and Taubaté (SP), the Human Resources area expanded its activities to the states of Maranhão, where the Alto Parnaíba central station was inaugurated, the third SCL managed directly by the institute. |GRI G4-9, G4-10, G4-23

Consolidation of the Performance Evaluation and the Results Contract (AdCR) were the highlights for this year. This tool, which is an important indicator in the performance evaluation and composition of variable remuneration of collaborators, started to be applied to operators at the central stations managed by the institute, thus covering 100% of the staff. The AdCR, which was seen as a positive tool by the entire team, also became an instrument to guide training and qualification.

Training

inpEV promoted 2,207 hours of training for its employees in 2015, 151 hours more than the previous year. More than 20 different types of training were offered, which increased the average training hours per professional from 32.6 to 34.5 hours. |GRI G4-LA9|

With regard to management practices, the course Leading Teams and Optimizing Results was given to the young leadership of the organization and the coordinators of inpEV. The Executive development program (pdE) also included employees of the Campo Limpo System.

Organized by the Dom Cabral Foundation, pdE consists of three modules in which the participants – two employees of inpEV and two of SCL – develop a project applied to the business model.

Central station manager formation program

Upon completing two years, the inpEV program to standardize management at the System's central stations focused on practical activities in 2015. The topics were the budget, cash flow and safety.

Trained to prepare budgets and manage the cash flow, the managers of the central stations have developed a standard budget model. The institute believes that the financial results of this initiative will be perceived in 2016, once the program starts focusing on Human Resources training using talent retention and contracting tools.

HR expansion

to the Maranhão region with the inauguration of its selfmanaged central station

Improvement in the dental plan of

office professionals, with the benefit extended to employees in the field

Employee profile

		1				
20	2013 2014		14	2015		
Males	Female	Males	Female	Males	Female	
1	0	1	0	1	0	
3	2	5	2	7	2	
12	6	9	7	9	6	
0	3	0	1	0	2	
4	9	10	12	6	12	
12	0	9	0	12	0	
1	4	1	3	1	3	
2	0	1	1	1	1	
2	0	1	0	0	0	
4	0	2	1	1	1	
33	24	35	25	36	25	
33	24	35	25	36	25	
4	0	2	1	1	1	
6	1	6	3	6	3	
	20 Males 1 3 12 0 4 12 1 2 2 1 2 2 4 33 3 3 4 6	2013 Males Female 1 0 1 0 3 2 12 6 0 3 4 9 12 0 14 9 12 0 14 9 12 0 14 0 2 0 3 24 4 0 33 24 4 0	2013 200 Males Female Males 1 0 1 3 2 5 12 6 9 0 3 0 4 9 10 12 0 9 12 0 1 2 0 1 2 0 1 2 0 1 3 24 35 33 24 35 4 0 2 33 24 35 4 0 2 33 24 35 4 0 2 33 24 35	2013 2014 Males Female Males Female 1 0 1 0 1 0 1 0 3 2 5 2 12 6 9 7 0 3 0 1 4 9 10 12 12 0 9 0 14 9 10 12 12 0 9 0 12 0 1 3 2 0 1 1 2 0 1 1 2 0 1 1 3 24 35 25 3 24 35 25 4 0 2 1 33 24 35 25 4 0 2 1	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	

Safety indicators	Males	Female	Total
Number of injuries (work-related accidents)	2	0	2
Injury rate (frequency) ²	25.79	0	15.29
Number of occupational illnesses	0	0	0
Occupational illness rate ³	0	0	0
Number of days lost	22	6	28
Lost days rate ⁴	286.66	112.71	214.08
Absenteeism number	27	7	34
Absenteeism rate⁵	2,826	1,052	2,104
Number of deaths	0	0	0

 inpEV started to report this indicator in 2015 due to the relevance of the topic.
 ILO recording system: number of injuries

- /MHW (man hours worked including overtime hours) x 1,000,000
- 3 ILO recording system: number of diseases/MHW (man hours worked including overtime hours) x 1,000,000
- 4 ILO recording system: number of days// MHW (man hours worked including overtime hours) x 1,000,000
- 3 ILO recording system: number of lost hours/MHW (man hours worked including overtime hours) x 1,000,000

Employee profile per Region – 2015

|GRI G4-10|



Average training

Average training						
GRI G4-LA9	2014			2015		
	Males	Female	Total	Males	Female	Total
Directors	50	0	50	50	0	50
Managers	30	45	34	26	59	33
Leaders/coordination	25	29	27	25	36	29
Technicians/supervisors	0	25	25	0	18	9
Administrative	22	16	19	34	16	22
Operational	29	0	29	26	0	26
Third Parties	10	20	18	8	23	19
Apprentices	288	288	288	302	302	302
Interns	0	0	0	0	0	0
TOTAL	32,5	32,8	32,6	34,5	34,4	34,5

Work safety

In the area of safety, several management training actions have been developed regarding control tools, thus making this formation constant, since the central stations inform their indicators on a monthly basis. For upcoming years inpEV intends to extend such indicator control to the outposts as well.

The Weekly Safety dialogs (DSS) that take place every Monday at the central stations have been consolidated as well as the Biweekly Safety dialogs at the inpEV headquarters and the adoption of safety practices and PPEs (Personal Protection Equipment) at 100% of the stations. Thus, inpEV believes to be perpetuating its safety culture within the SCL in order to maintain a level of excellence when compared to the International Labor Organization (ILO) standards.

More Health

Once the goal of providing tools that promote the wellbeing and quality of life to the inpEV collaborators was achieved by developing a culture focused on health and prevention throughout the team, the More Health program was converted into a process in 2015, two years after its creation.

Along the year collaborators had the opportunity to consult three times with a nutritionist. Starting in 2016 this appointment will be done annually together with the periodical exams, at which time they will do the nutritional check-up and the routine occupational medicine exams.

The program also includes the distribution of fruit and workplace exercise twice a week at the Sao Paulo office. In addition, the practice of physical activities is encouraged among employees.

Control

Central receiving stations disclose their safety indicators on a monthly basis. In upcoming years, inpEV intends to expand this follow-up to also include the outposts.

More Health (%)

The results of the biochemical exams of the participants proves the health benefits.



Employees of the Rondonópolis (MT) central station, the first to be managed by inpEV

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PROFILE