



# HEALTH, SAFETY & ENVIRONMENT REPORT 2007

## Agripec, Fortaleza

Agripec, located in Fortaleza, Brazil, formulates herbicides, insecticides, fungicides, acaricides and veterinary products to service the Brazilian agrochemical and veterinary markets.

**The plant** is located in the 1° District of Maracanaú – Ceará, about 30 km from the city of Fortaleza. Agripec, formed 44 years ago, is an operation in Ceará which has become the largest formulator of agricultural protection products in Brazil. It has equipment and the motivated people integrated to work together in the search for intelligent solutions that make Brazilian agriculture an example of sustainable development involving the entire productive chain. Today, Agripec occupies an industrial park of 161,000 m<sup>2</sup>, with buildings of 41,000 m<sup>2</sup> area in total. In addition, there is an office dealing with accounts and a business oriented strategy group in São Paulo, and four distribution centres located in the principal market areas for our products, located in the following States: Paraná, Mato Grosso, Rio Grande Do Sul and São Paulo.

### Health and Safety Performance

The performance of Agripec in the HSE area is very good, reaching similar levels to that of Nufarm world-wide. In Brazil the Safety performance of Agripec is comparable with that of the large companies. Agripec has a commitment to manage HSE in a professional manner in all of its activities.

The main preventative programs in the HSE area we have implemented are, in summary: Five minute safety meetings, Comments of Safety, Photo Tour, Pit Stop of manual handling, TPM (Total Productivity Maintenance), Safety Tours, Check List of Safety, Meetings of Shift Change, weekly HS&E Training, Reviews of HS&E of new Projects (Hazop), Operational Training and implementation of operational safety management, etc.

The Photo Tour is cost effective, it involves the teams of each area searching for improvements, using a camera to register them. The hazards as well as potential problems are photographed and registered, so we can act to correct any problems.



*Aerial view of Agripec*

### Expenditure (continued)

Major expenditure during the year included:

- Site new gate construction
- Facilities lay-out redesign
- Installation of automatic stretch wrapping of pallets
- Replacement of manual pallet lifters by forklifts
- Paving of roads to reduce risks to forklift drivers
- Relocation and refurbishment of powder facility
- Vacuum hoist to reduce manual handling
- Completion of scrubbing system for insecticides
- On site water pre-treatment
- Design of fire protection system

	LTIFR	MTIFR	Severity
Agripec	4.11	4.11	0.037
Nufarm global	3.36	5.67	0.034

*LTIFR = number of lost time injuries per million hours worked*

*MTIFR = number of lost time and medical treatment injuries per million hours worked*

*Severity = number of days lost per thousand hours worked*

### Expenditure

During 2006, Agripec made significant expenditures to improve safe working on site, much of which was to install mechanical aids for handling of packages and pallets, and to improve internal roads to avoid injury to people driving forklifts.

Air scrubbing facilities to minimise emission of odours from the site were installed. Some details are provided below.



*Vacuum lifting aid for handling drums onto pallets*

	R\$	\$A
Capital for safety	1,567,000	941,480
Safety Training Costs	10,000	6,008
People or safety equipment	85,000	51,069
Salaries for people on safety	200,000	120,163
Cost of workplace monitoring	6,000	3,605
Workers compensation	3,027,448	1,818,943
<b>Total expenditure, safety</b>	<b>4,895,448</b>	<b>2,941,269</b>
Capital for environment	545,000	327,445
Environmental monitoring, internal	82,000	49,445
Environmental monitoring, external	13,000	7,811
Environmental training	4,000	2,403
Environmental licence	7,300	4,386
<b>Total expenditure, environment</b>	<b>651,300</b>	<b>391,312</b>



*The main entrance to the site has been improved to give better control and security for people and transports*

## Formulations

Our formulation facilities have been constructed with safety and environmental issues in mind. They are spacious, to give people plenty of room in which to work, designed to be easy to clean and with the necessary mechanical handling aids to protect our workers from lifting injuries. When product changes occur, washings are captured wherever possible and returned to production at a later stage when the same product is made again.



*Part of the herbicides formulation plant*

## Energy Use

Situated in a hot climate, our energy demands are relatively minor. We use oil for raising steam, and diesel to feed our electricity generator in case of emergency. Our energy use during 2006 is shown in the table. We obtain our electricity supply from hydroelectric sources, which means that there is no CO<sub>2</sub> released from its generation.

Oil	50 MT
Diesel	29 MT
Electricity	1570 MWhr

## Wastes

Our operation is predominantly formulation of agrochemicals, so we generate little waste, mainly packaging waste such as drums. The wastes are separated into liquids, solids and gases and all are treated following international and national norms. The wastes we produced in 2006 are detailed in the table.

Waste	Tonne	Destination
Solid residues	28.7	Incineration
Soluble materials, incl BOD	0.78	Sewer
Metals	0.0048	Sewer
Plastics	144	Reprocessing
Steel drums	511	Steel recovery

## Complaints

There have been nine complaints from the public during the year. Three of these arose from transport accidents. The others were from odours from our site. Principally, one product is responsible, methamidophos. Although our production units have systems to capture and treat gases by oxidation, fugitive releases cause the disagreeable odours characteristic of the product to reach the community, resulting in complaints. Agripec met with the community, where an action plan was presented to them with the objective of reducing odour emissions. Already, 67% of the actions proposed have been done and work is progressing with the rest, positive results have already been achieved. Amongst the actions was an increase in the scrubbing capacity and new technologies have been developed and implemented for the benefit of the internal and external community.

## Monitoring

We regularly monitor a variety of important parameters to ensure that we are complying with our responsibilities, such as the quality of the water we send to sewer. All of the 585 measurements made during the year were within the limits set.

## Transport accidents

There have been three transport accidents during the year, with the cost of remediation of the spillages being R\$86,777. Agripec works with the best transport companies, all of which strictly follow the Brazilian legislation. There are annual training programs such as: defensive driving, Brazilian transport legislation, what to do in case of accidents or leaks, national code of transport. Beyond this concern with the safety of transport, Agripec formed a group that can take action in case of internal and external emergencies called GAE (Emergency Response Group). This group comprises technicians and specialists in the diverse areas of the company, and in case of an accident, the group is sent to the scene to take responsibility and action to manage the situation. Agripec also relies on a company specialising in accident response and remediation of the location.

## Open House

Agripec is initiating an 'Open House' program with the objective of integrating the company and families of its employees as well as the local community and Government institutions. We want to share our responsible performance in the areas of environment, safety and industrial hygiene, as well as the technological improvements within the industrial complex. Our community out-reach will be based on this 'Open House' program, our employees will be responsible for the presentation of the programs that have been adopted by the company as well as showing people our production facilities.

## Beto Studart Foundation

Fundação Beto Studart de Incentivo ao Talento - Beto Studart Foundation for Incentives for Talent was created in May 2004 with the purpose of identifying and stimulating talent development, recognising that talent has no age, creed or social class; it blossoms at any moment and any time, it needs only to be fostered. Although the main focus of the foundation being the incentive for talent, other social activities have also been developed during the year 2005, which are:

- scholarships
- assessment of other Associations
- stimulating volunteer attitudes
- technical and financial support for other non-profit associations for diverse projects.

It is important to stress that Fundação Beto Studart is the only foundation in Ceará State that funds projects from other associations, which leads it to be a 'Grantmaking Foundation', ie, it transfers its own resources to socially oriented organisations, enabling the development of projects consistent with the foundation's mission. The option to become a 'Grantmaking Foundation' is based on the rationale of strengthening the social organisations that have social credibility. This way, the Fundação Beto Studart and other organisations may create synergy, building networks and mobilising the potential for future socially strategic projects.

To enable the proper management of resources for these projects, the Fundação developed a monitoring and assessment system through reports and visits, keeping a close relationship with these organisations. Looking towards strengthening the private foundations in the State of Ceará, the Beto Studart foundation and other foundations created AFECE - Associação das Fundações do Estado do Ceará which is managed by us. This is an important step taken by this group in which Fundação Beto Studart proudly participates.

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