



VEGEPLAST is an independent French company leader in the field of transformation of renewable resources into 100% biodegradable plastic pieces by injection-molding.

With its headquarter and manufacturing plant located near Tarbes (Midi-Pyrénées region), Vegeplast has an immediate access to the extensive cereal production of Southwestern France, and to guaranteed non-GMO material.

VEGEPLAST places itself as a strong supporter of sustainable development, acting as much as a SME can in the three axes :

- *environment*: VEGEMAT plastic material exclusively made from renewable resources; manufacturing of agro-materials with low energy consumption; products that are biodegradable in composting installations or in natural conditions; photovoltaic electricity production in the plant roof... VEGEPLAST is one of the few corporations in the plastics sector which dare to publish their carbon balance. (<http://www.vegeplast.com/fr/news-presse-150.html>)
- *economy* : regional supplies for raw material, training for eco-design of biodegradable plastic pieces...
- *social* : development of local employment through regional sub-contracting as well as local hiring of personnel, collaboration with laboratories, technology centers and corporations in Southwestern France.

## 1 History

- 1.1 *A project hatching in Vivadour* : starting in years 1990s, the cooperative group Vivadour decides to look for diversified opportunities for the maize producers, with high added-value products ; this leads to the creation of the Vivanat subsidiary dedicated to environment services ; Vincent Pluquet is appointed its manager; it is the first composting unit for sludge and green waste created in France by an agro-industrial group ; other diversification initiatives lead to the patenting of the transformation of cereal plants into biodegradable plastic material, deposited in 1998.
- 1.2 *Building the spin-off* : in year 2003 Vincent Pluquet and other associates found the SAS VEGEPLAST in the early-stage business growth center of Martres-Tolosane. Taken out of the Vivadour lab, the base material named VEGEMAT is refined in order to satisfy the needs of larger productions for real clients. The challenge is to manufacture rigid pieces offering « high-speed » fragmentation and biodegradation, such as golf tees, as well as flexible pieces such as parachute ties for the French Defence. During this period, Vegeplast starts building a strong partnership policy with clients who do not know much about biodegradable plastics, in order that the expression of technical requirements frees itself from the old plastic industry habits and take into account the exact advantages and drawbacks of agroplastics. As a consequence, VEGEPLAST becomes a true Research and Development industry serving true clients.
- 1.3 *The take-off* : in November 2008 (see hereunder links to press articles), VEGEPLAST inaugurates its new building at the 2 rue de Troumouse, in Ibos, in the « Parc des Pyrénées » industrial area managed by the Grand Tarbes. With about 2000 sq. m from the beginning, it is a state-of-the-art manufacture, with modern machinery and a wide storage-handling area. In order to ensure its development within the next five years, VEGEPLAST relies on UNIGRAIN, the investment fund of the cereal producers of France dedicated to the support of agro-industrial companies, that entered the capital of VEGEPLAST.

## **2 Patents and brands**

2.1 VEGEPLAST holds several patents

2.1.1 FR 2783740 (Date of publication : 30/03/2000) : Matériau à base de matière végétale issue de plantes céréalières et procédé d'obtention.

2.1.2 US 6,207,196 (Date of publication : 27/03/2001) : Vegetable base material from cereal plants and process for obtaining the same

2.2 Furthermore, other patents have been deposited and are following the instruction process ; the company know-how amply exceeds the first patents object.

2.3 VEGEPLAST deposited the following brand names

2.3.1 VEGEMAT

2.3.2 VEGEPLAST

2.3.3 VEGEFLEX

2.3.4 VEGECLIP

2.3.5 VEGEPACK

2.3.6 VEGEBONE

## **3 VEGEPLAST in the Regional, National and European networks**

3.1 Being at the forefront of innovation in the field of transformation of agromaterials, VEGEPLAST is a leader of the « Pôle de Compétitivité » (innovation cluster) AGRIMIP Innovation. One of the founding member, the company chairman is also a cluster's Trustee.

3.2 In May 2009, the VEGEPACK project, led by VEGEPLAST, was awarded the AGRIMIP Innovation label and funding under a national priority scheme.

3.3 VEGEPLAST innovates and hire personnel in the Midi-Pyrénées Region (see press art.).

3.4 The INNOVACT Agrosources and Innovation prize was attributed to VEGEPLAST in 2006.

3.5 In 2005, VEGEPLAST was awarded the first prize for innovation Bio and Techs, along with a reward from the Midi-Pyrénées Regional Council.

## **4 Products and services**

### ***4.1 Eco-design training***

4.1.1 The training session for eco-design is proposed by VEGEPLAST to personnel wishing to understand, master and implement the principles of eco-design of products; client corporations are usually companies thinking about innovation projects where plastic objects may be used. Based on the industrial experience of VEGEPLAST, the training brings a practical view on projects that integrates biodegradable plastics, their advantages and their drawbacks.

4.1.2 Thanks to the official agreement of VEGEPLAST as a «Training Organism », the training sessions may be financed through the personnel training plan.

### ***4.2 Studies and development***

4.2.1 The characteristics of biodegradable plastics usually require the renewal of the specifications for existing pieces. The VEGEMAT base material is very often re-adapted to fit with technical requirements. Though the machines are the same as in the whole thermoplastic industry, the specificity of agroplastics injection requires the development of particular molds and parameters for each project.

4.2.2 VEGEPLAST is not dedicated to any specific field, and its research activities address the packaging sector as well as sports, agriculture and gardening as well as public works or Defence, etc.

4.2.3 The Studies and Development Service manages projects featuring durations of 6 months to 3 years, and budgets of few thousands to several millions euros.

### ***4.3 Production of biodegradable plastics pieces***

4.3.1 The VEGEPLAST company injects the various grades of VEGEMAT in its own plant.

4.3.2 The VEGEPLAST clients may have their own molds for existing pieces, and some of these may be easily adapted to the requirements of the VEGEMAT injection-molding. VEGEPLAST also orders numerous molds for prototypes and industrial series for its clients.

4.3.3 The VEGEPLAST injection presses enable high-speed production of tens of millions pieces as well as trials for small series.

## 5 Personnel resources

- 5.1 Projects, research and development : 30% of staff
- 5.2 Production : 40% (to increase in 2010)
- 5.3 Commercial and administrative : 30%

## 6 Material resources

- 6.1 Injection-molding presses from 50 to 240 Tons
- 6.2 Extruders
- 6.3 Building of 3200 sq. m.

## 7 Markets and perspectives

- 7.1 The natural markets for VEGEPLAST are all plastic pieces with limited use in time. Among examples usually mentioned are the following sectors :
  - 7.1.1 *Sports and leisure* : golfers and greenkeepers particularly appreciate the quickly biodegradable golf tee ; all articles with short duration of use in open-air activities (fishing, hunting, hiking...).
  - 7.1.2 *Animal food* : a dog treat with a bone shape, featuring various « flavours » and advantages for the dogs health.
  - 7.1.3 *Agriculture, fruit trees, landscaping, gardening* : for example, the famous vine clips VEGECLIP are used in vineyards worldwide, and in the Champagne area in particular ; other example is the VEGEFLEX flexible tie for plant nurseries.
  - 7.1.4 *Various industries* : fireworks bombs, all sectors using boxes, trays, pots...
  - 7.1.5 *Food industries* : disposable cutlery, food trays for dry or fresh products...
  - 7.1.6 *Defence* : parachute ties for the French army, biodegradable training grenades.
- 7.2 VEGEPLAST invested heavy means in research and development in order to impose agroplastics in the food packaging sector, one of the main areas of plastic material consumption.

The strategy chosen by VEGEPLAST in the framework of the AGRIMIP Innovation Cluster is to develop, with its partners, highly technical products based on agromaterials (and not based on the only starch synthetically-derived polymers) to answer the industrial needs of large food corporations and meet the expectations of the « eco-responsible » consumer. VEGEPLAST is financially supported by the French national funding scheme for priority research and innovation projects.

## 8 References and sources

- 8.1 [http://ecoconception.blogspot.com/2009\\_02\\_01\\_archive.html](http://ecoconception.blogspot.com/2009_02_01_archive.html)
- 8.2 <http://agrimipinnovation.com/fr/acteurs.htmlpg=24&motscles=&domaines=&filiere=&metier=>

## 9 External links

- 9.1 Unigrains : <http://www.unigrains.fr/fr/presentation/default.asp>
- 9.2 Serpbio : <http://serpbio.fr/>
- 9.3 Agrimip : <http://agrimipinnovation.com/>
- 9.4 Le Grand Tarbes : <http://www.economie.grandtarbes.fr/agromip.html>

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Incorporated as a French S.A.S « Société Anonyme Simplifiée »  
Motto : the plant-based 100% biodegradable plastic  
Headquarter : Ibos, France  
Direction : Vincent Pluquet, President  
Staff : 12  
Website : [www.vegeplast.com](http://www.vegeplast.com)  
Sales : 1,3 M €