

Reference Plants (Excerpt)



Scotland, 2005
50.000 t/y
Animal fat,
Used cooking oil



Preparation Plant
COMIGO
Rio Verde/GO
2.500 t/d



Austria, 2006
140.000 t/y
Vegetable oils



Preparation and
extraction plant
IASA – Bolivia
1.500 t/d



Australia, 2007
50.000 t/y
Animal fat,
Used cooking oil



Extraction Plant
Cargill
Barreiras/BA
1.700 t/d



Denmark, 2008
50.000 t/y
Rape seed oil,
Used cooking oil,
Animal fat



Reception Installation
Agreco
Alto Araguaia/MT
300 t/h soybean



Spain, 2008
200.000 t/y
Vegetable oils



Extraction plant
COAMO
Campo Mourão/PR
3.000 t/d

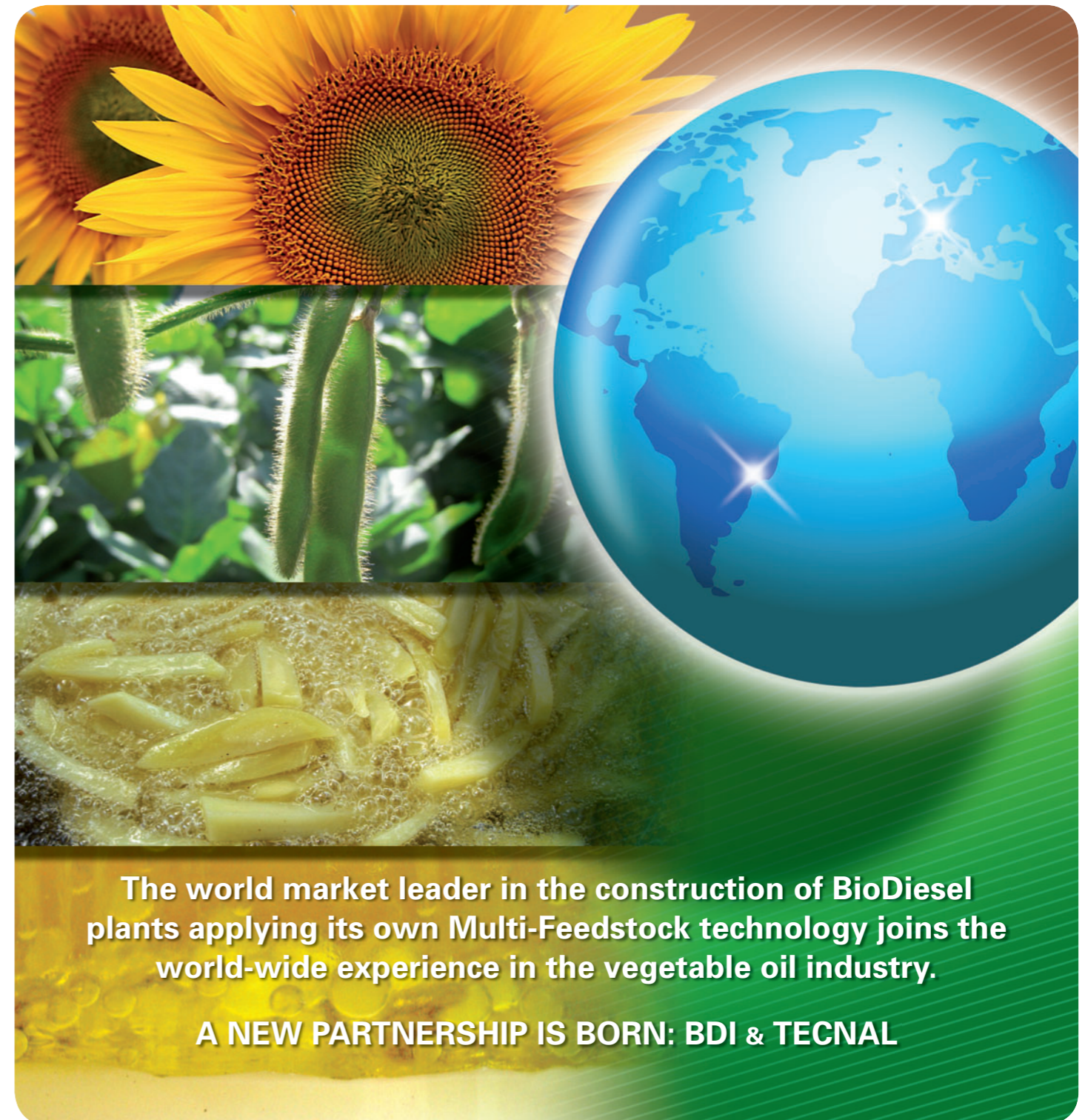
The complete list of reference plants can be found on our websites.



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The world market leader in the construction of BioDiesel plants applying its own Multi-Feedstock technology joins the world-wide experience in the vegetable oil industry.

A NEW PARTNERSHIP IS BORN: BDI & TECNAL

BDI & TECNAL – Tecnologia em BioDiesel Ltda.

Tecnologia em BioDiesel Ltda.

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Competitive Edge of BDI & TECNAL:

- Worldwide approved state of the art BioDiesel technology offered by a Brazilian supplier
- Fair, competitive price
- Covering full value chain to produce high quality BioDiesel
- Offering full service including turnkey solutions, project management, engineering, construction, start up, after sales service and operation support
- Close to the market – fully aware of customer demands
- Proven track record with successful references world-wide
- Strong focus on R&D securing leading edge technology

Customer Focus

- Agro Business
- Renderer / Meat Producers
- Waste Collectors
- International Investors
- Optimising existing BioDiesel plants

BDI – BioDiesel International is market and technology leader in the construction of customised turnkey BioDiesel plants applying BDI's own Multi-Feedstock technology. The range of services provided includes project management, basic and detailed engineering, installation and start-up as well as after-sales support. BDI's plants are designed for the industrial processing of renewable raw materials and represent a benchmark in feedstock flexibility.

BDI owns an extensive patent portfolio resulting from its in-house research and development activities. BDI has been building 30 plants worldwide since 1991: 26 plants with Multi-Feedstock technology.

Technological Leadership

- 1991** First industrial BioDiesel plant for vegetable oil worldwide (Austria)
- 1994** First industrial Multi-Feedstock BioDiesel plant for Used Cooking Oil worldwide (Austria)
- 1998** First industrial Multi-Feedstock BioDiesel plant processing animal fat in the United States
- 2001** First industrial Multi-Feedstock BioDiesel plant processing animal fat in Europe (Germany)
- 2005** First Reference and Demonstration plant of the EU for the production of BioDiesel out of animal fats including high risk material in Europe (Scotland)
- 2008** First industrial Multi-Feedstock BioDiesel plant worldwide processing Trap Grease (Hong Kong, Asia)

Core Skills

BDI's Multi-Feedstock Technology is designed to convert a wide range of raw materials – from crude but also refined vegetable oils to recycled materials or by-products like animal fats, used cooking oil, trap grease and others – into valueable BioDiesel surpassing the most demanding quality standards like ANP 07/08, EN 14124 and ASTM 6751.

BDI's Multi-Feedstock Technology has absolutely no limits in FFA content – all FFAs are transformed into BioDiesel – therefore the achievable yield is at the highest technical level – up to 100%.

The tremendous flexibility in feedstock, the highest possible yield, the quality of the product, low operation and maintenance costs and the reliability of BDI plants guarantee the lowest position on the cost curve and additionally avoid the food vs. fuel discussion.

Research & Development

Research and development activities are of elementary importance to BDI in order to continue to set standards in sustainable energy generation. BDI owns more than 50 patents.

Apart from using its own laboratory facilities, the company takes advantage of longstanding co-operation arrangements with universities and research institutes. BDI is at the cutting edge of international research with its emphasis on **Biomass to Liquid** and **BioDiesel from Algae**.

Since 1976 TECNAL successfully develops, engineers and produces equipments for vegetable oil extraction plants, grain storage and pet food, giving fast answers and "tailor made" solutions for each customer, showing its high quality and updated technology. TECNAL revolutionized the seed and oil business in Brazil with innovative technology that has since been exported to all five continents and today it is proud to be one of the major and most recognized companies in the world concerning seeds and grains processing.

Following the world's tendency of bio-fuels, TECNAL is now also involved in the process and fabrication of equipments and plants for BioDiesel production, introducing new options to customers in Brazil and around the globe.

History

TECNAL offers its products and services since 1976, when it first started developing and producing equipments for vegetable oil extraction plants, grain storage and most recently pet food. All this time has been dedicated to design, development, engineering and manufacture of equipment and installations, constantly researching from fields to specialized laboratories.

TECNAL was the first company in the world to launch, in 1976, the technology for the expansion of soybean, which increased the efficiency and productivity of the oil-producing process by 40 percent. As the equipment evolved, it received attention from overseas and in 1978 the American company Anderson Clayton purchased from TECNAL eight expanders. Soon thereafter such technology spread quickly in the U.S.A. and other countries.

Using its own technology, TECNAL has supplied more than 40 preparation and oil extraction plants in Brazil and other countries. The capacity of such installations varies from 100 mtd to 5000 mtd.

The success of TECNAL's equipments and installations was not only due to the competitive prices of the machinery, but also its innovative design. With the successful operation of TECNAL's machinery for oil production in Brazil, sales to other countries soon followed. However, TECNAL's expansion was not limited to the seed oil industry. The growth of agribusiness in Brazil in the 1980s inspired the production of grain storage units. During the decade, the company manufactured and delivered 194 grain storage installations, which also house cleaning and drying equipment.

In the 1990s, TECNAL launched its line of animal feed equipment for pet food, fish, cattle and horse feed. The machinery that includes extruders, grinders, dryers and coolers, can process from 100 kilograms an hour to 12 tons an hour: 55 such installations are already in operation in Brazil, Argentina, Colombia and Ecuador.

Today TECNAL exports to 36 different countries and offers the most modern and most efficient technology in the sector that is performance tested and guaranteed on site.

Core Skills

Seed and grain storage

TECNAL offers total quality for storage and handling of grains with high technology, providing equipments as vertical driers, pre-cleaners, cleaners, conveyors and others.

Animal feed

Complete animal feed plant production for all kinds of applications.

Oil-extraction

Complete oil extraction plants for all kinds of seeds, without waste of raw material, aiming at the optimization in the process.

