CONSORZIO INDUSTRIALE PROVINCIALE DI NUORO

Pratosardo (NU) | Italy

COMPOSTING PLANT

ENTSORGA HAS DESIGNED AND BUILT THIS **MODULAR SYSTEM** HELPING THE COMMUNITY TO MANAGE THE PROCESSING OF **RESIDENTIAL AND COMMERCIAL ORGANIC WASTE.**

THE PROCESS ALLOWS **HIGH QUALITY COMPOST,** A SUBSTRATE THAT CAN BE USED IN AGRICULURE TO ENHANCE THE QUALITY OF SOILS IN TERMS OF **NUTRIENTS AND WATER RETENTION CAPABILITIES**

PLANT GENERAL INFO	
Company	CONSORZIO INDUSTRIALE PROVINCIALE DI NUORO
Capacity	10.000 tpa source separated organic waste
Treated waste	Source separated organic waste
Final Output	2.000 tpa High quality compost
Start up	2015
Plant	Aerobic Composting
Population	15,000
Employees	6

ENTSORGA
GREEN TECHNOLOGY REVOLUTION

COMPANY

Consorzio Industriale Provinciale di Nuoro is a public body that manages public infrastructure to support and promote the development in the province of Nuoro (IT).

PROJECT

Consorzio Industriale Provinciale of Nuoro awarded Entsorga with the contract for the **design and construction of the composting plant in Pratosardo (NU)** to process source separated commercial and residential organic waste, and produce high quality compost.

ENTSORGA'S SOLUTION

Entsorga provided the design and construction of a **highly modular and effective composting plant.** The plant allows for flexibility to accommodate seasonal changes in terms of quality and volumes and is a good fit for touristic locations and large resorts.

PROCESS

The process starts from an initial **mechanical shredding** and **screening phase** of the organic material and continues with the biological treatment of aerobic composting, **accelerated by a forced ventilation system** connected to modular bio-containers **Le Coccinelle™ (1).** The biostabilization process is managed by an automatic **control system (2)** which, through a dedicated software, monitors and controls the parameters, regulating the temperature and the correct level of humidity through a special wetting system. Once this first aerobic phase is over, the stabilized mixture is placed in an enclosed shed, equipped with a pit with embedded forced ventilation and maintained in **slight negative pressure**, where the feedstock undergoes curing. Before release into the atmosphere, all the exhausted process air is sent to the **Biofilter (3)** that effectively minimized odors and other emissions. The high compost is then stored in an open pit ready to be marketed.

FINAL PRODUCT

The final result of the process is a **high quality compost**, intended for agricultural use. The use of compost in agriculture is recognized in itself as a practice of high environmental value, it allows **enriching soil with organic matter functioning** as a carbon sink and increasing water retention properties of the soil in dry areas.

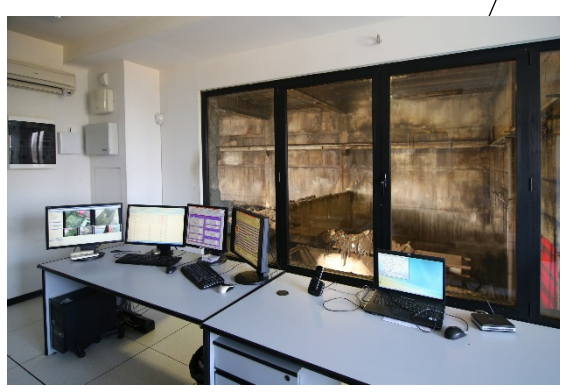
The processing also helps **to progressively reducing landfill volumes,** with additional substantial benefits in terms of GHGG reduction.

STRENGHTS

- **Low environmental impact: no odors, dust, or leachate** are released in the surroundings.
- **Reduced operation and labor costs,** thanks to the **automation**
- **Low energy consumption** thanks to the control system which optimizes air flow rates within the process
- **Modularity:** the plant nameplate capacity can be easily expanded by increasing the number of reactors..

(1) **COCCINELLE™** BIOCONTAINERS FOR AEROBIC COMPOSTING

(2) **24/7 AUTOMATIC CONTROL SYSTEM**



(3) **BIOFILTER** FOR THE PROCESS ODOURS ABATEMENT

(4) **AUTOMATIC BRIDGE CRANE SPIDER™** FOR THE MATERIAL MOVING

Technologies used

The plant uses the Entsorga proprietary technologies **Bee™ and Turtle Q-Ring™.**

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