PROJECTFACTSHEET

CompoBall

Novel on-line composting monitoring system

COMPOBALL

www.compoball.eu

01/02/2010 – 30/01/2013

PROJECT COORDINATOR:

Dr. **Mirta**RodriguezPinilla
IRIS SL
Innovació i Recerca Industrial i Sostenible
Spain
rpinilla@iris.cat

PROJECT OFFICER:

Ms.**Michaela** Bitsakis
REA
Research Executive Agency
Brussels
Michaela.BITSAKIS@ec.europa.eu

RTD PARTNERS:

Innovació i Recerca Industrial i Sostenible, Spain
Universitat Politècnica de Catalunya, Spain
Instituto Superior Técnico, Portugal

INDUSTRY PARTNERS:

European Compost Network ECN
Kompostgüteverband Österreich, Austria
Czech Biomass Association, Czech Republic
Associació de Plantes de Compostatge de Catalunya, Spain
Hungarian Quality Compost Association, Hungary
Branche Vereniging Organische Reststoffen, Netherlands
Cré – Composting & Anaerobic Digestion Association of Ireland, Ireland

SME PARTNERS:

Solum A/S, Denmark
KomTek Miljø A/S, Denmark
Agència de Residus de Catalunya, Spain
Profikomp Ltd., Hungary
Müller Abfallprojekte GmbH, Austria
Gökser Machine Ltd., Turkey

ABSTRACT:

Composting represents a sustainable solution for the treatment of organic waste, whatever its origin, however the economic returns of composting could be increased by improving the quality of the final product. The starting waste material from farms is more homogeneous and has a higher percentage of organic waste than household recycled waste. To this end, the final quality of the compost could be sufficiently high for use as a fertilizer not only on the farm where it has been produced, but also for its commercialisation. To achieve this, the production process needs to be well controlled. While the main biological and chemical parameters affecting the composting process are well known, the technological solutions available for monitoring and controlling the process are very limited. The present **COMPO-BALL** project will develop an on-line wireless system for the measurement of temperature and humidity at various points in the composting material. The proposed solution consists of a set of independent sensor nodes, i.e. the nodes will not require any external connections to feed or read the sensors, and which will be encapsulated in an inert material. **COMPO-BALL** could also be used in other types of composting processes whereby the starting material is quite homogeneous, as is the case with sewage for example, as well as for any other biological process where monitoring is essential, i.e. grain fermentation. Furthermore, we envisage this novel system as a starting point to extend this organic composting monitoring technology to monitoring the composting of household recycled waste. This would allow for a higher economic return, and smaller composting plants could be considered. Smaller composting plants could be located closer to the urban nucleus, which would reduce transport costs.

KEYWORDS: Composting process, wireless sensor network, lower temperatures, shorter treatment times.

Powered by IRIS