



GENERAL SUMMARY

PRESENTATION

The workshop was inaugurated by the **Councilor for Environment of the City of Toledo, D. Gabriel GONZÁLEZ MEJÍAS** who welcomed all the attendees to the city of Toledo and encouraged participants to continue working on the environment and the importance of recycling and its connection with agriculture. The workshop began with a brief presentation of **Inmaculada GONZÁLEZ GRANADOS**, which introduced the Workshop Program and Open Day Afternoon, describing the main works performed by BIOMASA DEL GUADALQUIVIR in REFERTIL. <http://www.refertil.info>.

Section 1a. COMPOSTING-COMPOST and PYROLYSIS-BIOCHAR REFERTIL SURVEY in the EU

- **Rafael GARCÍA** (BIOMASA del GUADALQUIVIR). He presented the result of compost and biochar production survey in the EU talking about the composting and pyrolysis technologies. He explained the conclusions obtained in a comparative matrix database constructed for composting technologies evaluation. Also, he talked about new End of Waste criteria and the future EU regulation on fertilizers, explaining that only a few samples of the analysed compost didn't meet these criteria. The origin of pollutants was always identified in the input materials.

On the other hand he talked about the Biochar requirements and the differences between PBC-Plant based biochar and ABC-Animal bone biochar and their effect and characteristics as fertilizers.

Section 1b. REFERTIL: TRIALS OF COMPOSTING BAT in the "ALGODOR Recycling Center"

- **Isabel SEGURA** (BIOMASA del GUADALQUIVIR). She presented the results of the analytical campaign JRC, FATE COMES Program conducted on bio-waste and compost, indicating the samples and types of non-conforming wastes. Subsequently she introduced composting trials conducted in REFERTIL BATs in Spain and Hungary, by the companies BIOMASA del GUADALQUIVIR and PROFIKOMP:

She also explained that monitoring is carried out to control batteries: continuous temperature, oxygen, humidity, ventilation control. And some results of these tests, as analytical compost and raw materials from first trial composting trial REFERTIL in Algodor (Toledo).

Section 2. TECHNOLOGICAL APPLICATIONS IN COMPOSTING, A. DIGESTION and PYROLYSIS

- **Xiomar GÓMEZ** (IRENA UNILEÓN). She introduced FLEXINER project. She said the recovery of waste allowed to monetize and increase the sustainability of production processes. The project proposes FLEXINER optimization of food waste management by obtaining biogas and biofertilizer quality. The paper on the results of the tasks performed in this project were presented to date.

- **Daniel BLANCO** (BYDT). He presented BYDT developments on monitoring and control processes of Anaerobic Digestion and Composting by BYDT, which is a technology based company that provides services for R&D in the field of chemical and environmental engineering and renewable energy. It also develops biological treatment systems for bio-waste. The main line is the small agro-industrial systems of biogas, which is built into the FLEXINER and PLAMGAS projects in collaboration with the BIOMASA Group and the University of LEON. Currently a pilot dry digestion and composting in the composting plant Vegas del Genil (Granada) is in operation, with another pilot designed and built in the Algodor Recycling Center (Toledo), being operated for evaluation.

Josep Miquel UBALDE (BODEGAS TORRES). He presented the PIROLEV project, indicating that it is a project undertaken by Bodegas MIGUEL TORRES, University of LEON and MECANOTAF, SA and is producing biochar from biomass of the vineyards and their application as a soil amendment. This experience has shown that the use of biochar, along with compost, not only reduces the overall carbon footprint of the winery, but also improves the nutritional status of the vineyard nitrogen, without compromising the quality of the grapes.

Section 3. REFERTIL & FERTIPLUS: FIELD EVALUATION of HIGH QUALITY COMPOST BIOCHAR

- **Massimo PUGLIESE** (AGROINNOVA-Uitorino). REFERTIL Project. He presented the work package 8 OF REFERTIL Project: Activities and results of tests with compost and biochar IN laboratory. Then, in relation to the revision of Regulation 2003/2003 Fertilizer, he commented in which group could be included compost and biochar: organic fertilizer, soil improver, growing media. He also explained the trials with 11 types of compost and 3 types of biochar: Physico-chemical characterization, germination and phytotoxicity test and trials potted (Promotion of growth and root biostimulation and suppression of diseases)





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- **Miguel Ángel SÁNCHEZ-MONEDERO** (CEBAS-CSIC) FERTIPLUS Project. After an introduction of the project by **Laura de la CRUZ**, the rapporteur presented a summary of the activities conducted for agronomic and environmental assessment of compost, biochar and the combination of compost and biochar within the project FERTIPLUS

A major finding was the synergistic effect found between biochar and compost in field experiences, especially parameters related to soil microbiology. <http://www.fertiplus.eu/Fertiplus/index.xhtml>

Section 4 and ROUNDTABLE

STANDARDIZATION of biowaste, COMPOST AND BIOFERTILIZERS

- **Inés Belén ESTRADA** (BIOMASA PENINSULAR). She summarized the Framework Directive and the Spanish Law on Waste with regard to biowaste and compost and the current situation in which the bio-stabilized waste and compost contaminated or out of frame for agricultural use. Also indicating the parallels between the Directive and the Law with the document "EOW" or "End of Waste" and the conditions to comply with Compost End of Waste.

- **Bibiana RODRÍGUEZ** (MAGRAMA). She described the work of DG Enterprise in Industry on the new Regulation on Fertilizers, to harmonize the register and use of fertilizers for all EU MS, expecting to publish a first draft by the end of this year 2014.

- **Carlos G^a IZQUIERDO**. (CEBAS-CSIC). He introduced the importance of knowledge and research to develop a model of sustainable agriculture and the role of universities and public research centers in agronomy and soils. He stressed the importance of organic matter in the conservation and soil fertility, as well as the need for top quality products respectful of the soil, avoiding the use of soils as landfills. He concluded stating the importance of the participation of Spanish companies and research organizations in European research and innovation projects (LIFE, FP7, H2020, EEA, etc.)

- **Teresa GUERRERO** (AGENCIA DE RESIDUOS DE CATALUÑA). She presented the current status of separated organic fraction collection in Catalonia, where it is applied in 740 municipalities from a total of 948 (separate collection of food, with an average of 14.19% unfit materials), and average amounts that can reach 290 gr/inhab/day, values varying depending on the model used and by type of municipality. She also highlighted the operational 21 public facilities with biological treatment system of the ARC, which treat 373,828 t/year (2013), so that almost all compost produced meeting the End of Waste criteria. Teresa highlight the differences between compost and bio-stabilized residue (not coming from separate collection)

- **Antonio CALVO**. (COMUNIDAD DE MADRID). He expressed the great pressure on agriculture and the environment posed by the current sludge production in CAM, both from urban and paper plants origin, pressure which is growing by the recent shutdown of the thermal drying facilities. It also expressed the need to update and clarify certain aspects of the legislation on sludge, as the type of sludge included and excluded from the scope thereof, the definition of treated sludge, etc.

- **Ramón PLANA** (COMPOSTING EXPERT). He introduced briefly the SCOW Project (Selective Organic Waste Collection in Tourist Areas), devoted to the promotion of small composting plants in the Mediterranean area and offered the view that small plants handling quality raw materials should have a simplified authorization scheme and administrative and environmental performance. <http://www.biowaste-scow.eu>

- **José M^a GÓMEZ** (BIOMASA PENINSULAR). He requested the inclusion of Compost in the new European regulation of fertilizers as a category inside of organics products, in between the amendments and organic fertilizers (eg 2.5% <NPK <6%) to the way it was done by Spanish law. He stressed the importance of "Communication on Circular Economy: towards zero waste to Europe" in July 2014, according to which the End-of-Waste criteria for biowaste concept will be adopted; this communication intends to establish as binding for 2025, the separate collection of the organic fraction of municipal waste, requiring planning and immediate action by the government and the recycling sector in general.





REFERTIL Project. Second Regional Workshop

17th October, 2014. Toledo (Spain)

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PHOTO DOCUMENTATION

Register



Section 1



Section 2



Pause





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Section 3



Section 4



Lunch



Open day

