

IMPROVEMENT OF WASTE SEPARATION AND BIOWASTE COMPOSTING ON THE UDC FERROL CAMPUS

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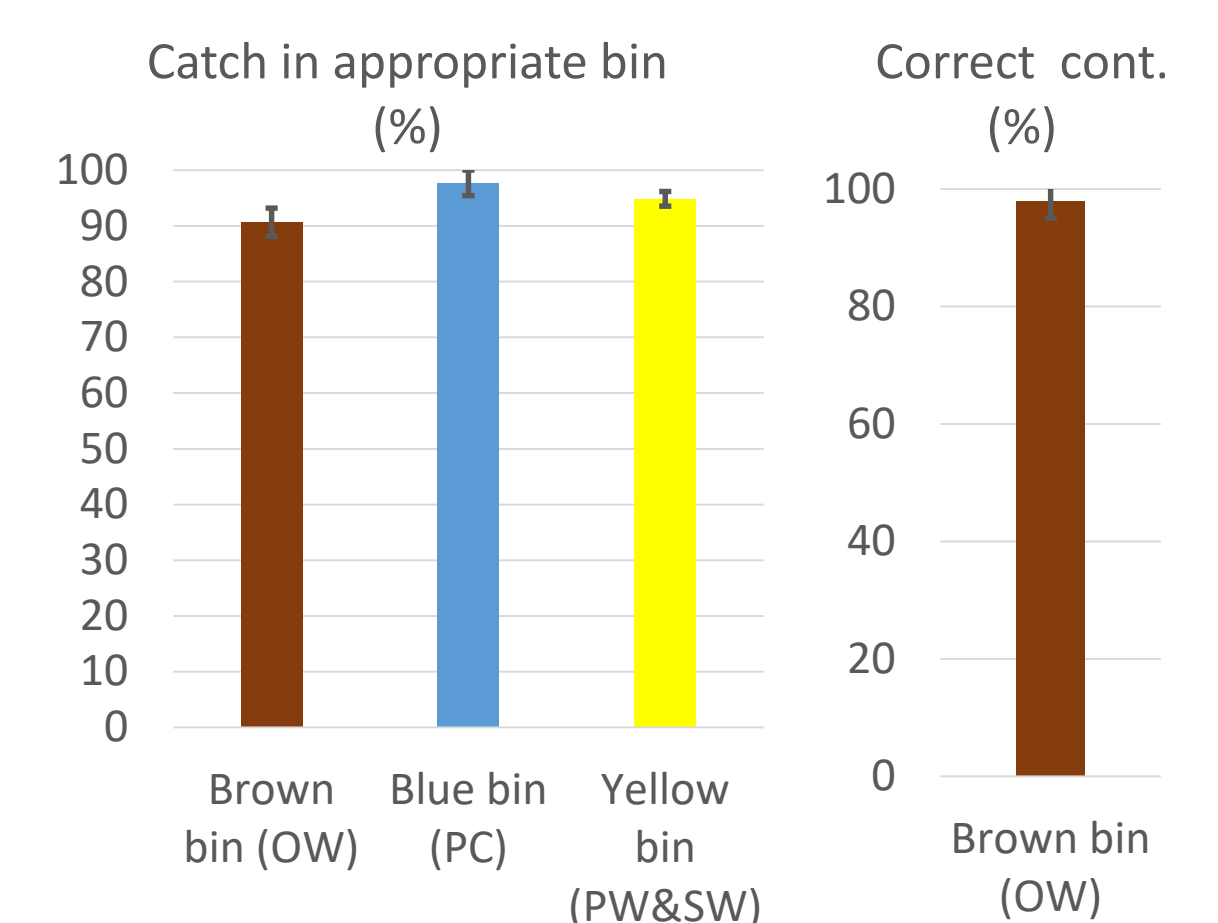
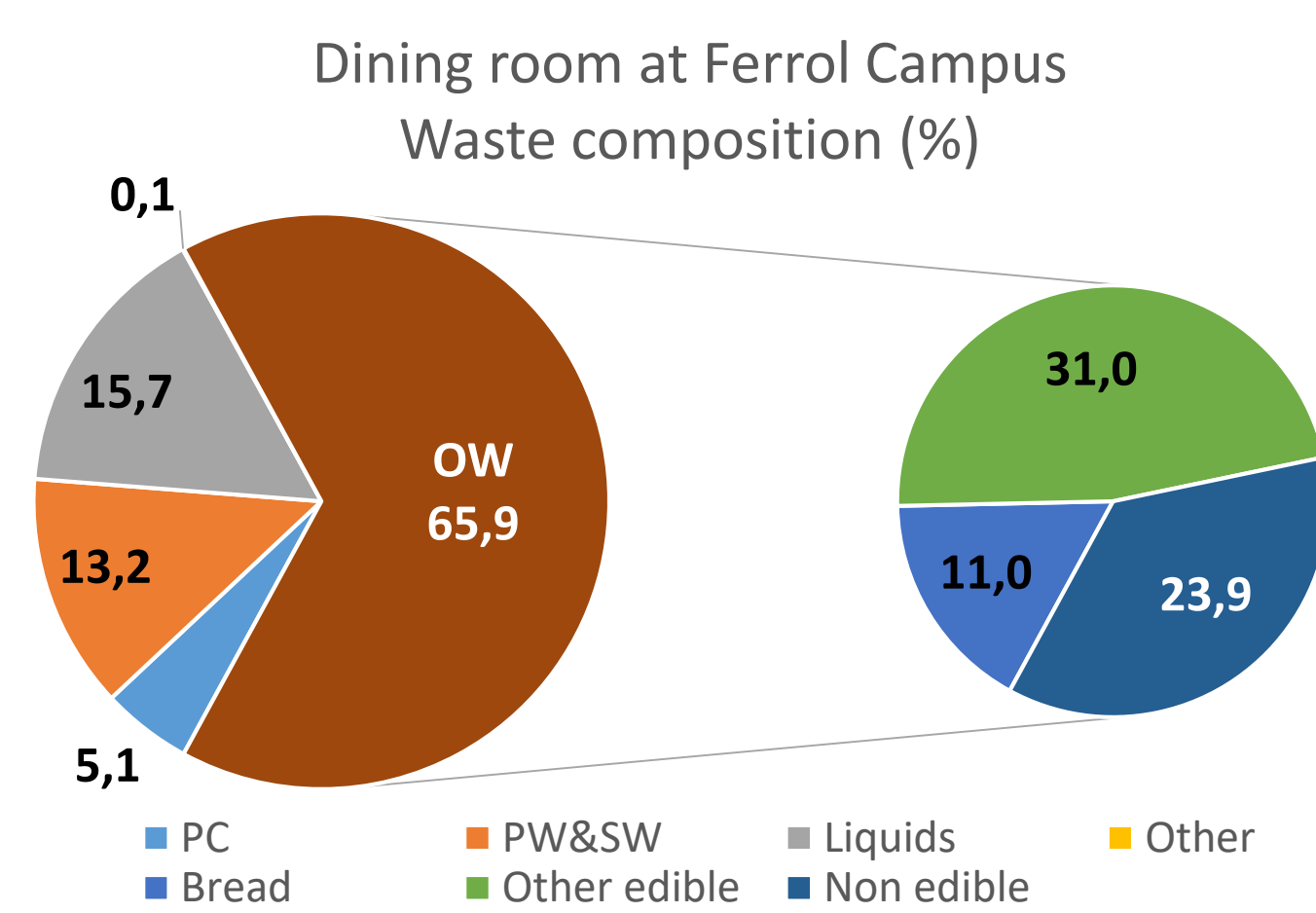
With a population of 3034 people, the Ferrol campus of the University of A Coruña (UDC) comprises five teaching centers and other administrative, research and auxiliary centers, which account for up to 15 buildings in the campus and form a single Eco Campus (EC) program. Improving waste management and prevention in all centers is a main goal of the EC program. The UDC seeks the utilization of organic waste (OW) on site and to increase the recovery for recycling of the remaining fractions: paper and cardboard (PC), waste from light packaging and similar plastic and metal waste (PW&SW) and glass waste. Most of the OW is used on site, in A Coruña campus since 2010 [1] and in Ferrol campus since 2022, where the vegetable garden was created in the spring of 2023. Recyclables were directed to the municipal service.



Map of the UDC Campus in Ferrol:
<https://www.udc.es/gl/sobreUDC/localizacion/ferrol/>

Canteen waste

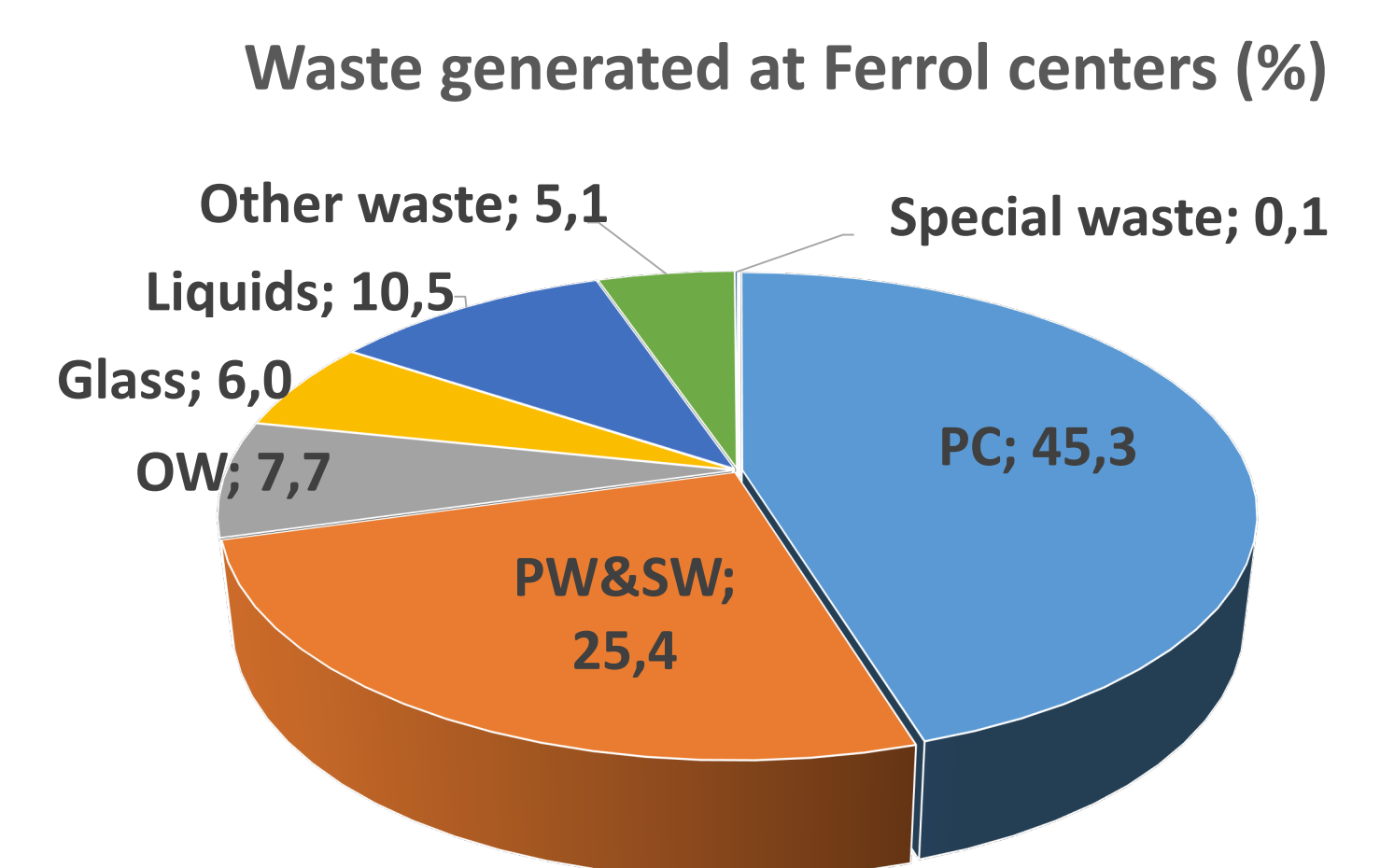
The canteen at the Ferrol campus serves food to about 150 people per day. Total waste generation in the dining room was 14.0 kg/d (2022-2023 school year), including 8.2 kg OW/d. Other 12 kg OW/d were generated in the canteen kitchen, so the composting area received about 20 kg/d of OW. Total OW generated in the canteen service averaged 136 g/d-user, of which the 66% was edible.



Waste in the dining room: Composition (left), recovery rates (center), quality of the organic fraction (right).

Waste collection in the general areas of centers

The waste separation at source began in 2017 with the creation of the EC program at Ferrol Campus. Three waste general fractions were considered: PC, PW&SW and Non recyclable waste (NRW), following the municipal model. After April 2022, the Spanish rules established the requirement for OW separation. OW separation was introduced at Ferrol Campus in early 2024 and directed to on site composting. Per capita waste generation in the five teaching centers was 9.6 ± 2.7 g/d, a lower rate than that reported for the entire UDC [2].



Waste management in the Ferrol Campus of the UDC: A) General collection point in the centers; B) Collection point in the dining room; C) Composting area during the volunteer training activity; D) Volunteer activity in the campus vegetable garden (Credits: A, B: OMA-UDC; C, D. Os Picos do Sol).

Prevention of food waste

Total OW generated in the canteen service averaged 136 g/d-user, of which the 66% was edible. Actions to promote the preparation and supply of both sustainable and healthy food in cafeterias and dining services was the joint work of the Office for the Environment and Healthy UDC, which proposed several measures and monitored their degree of incorporation.

References: [1] Torrijos, V., Calvo Dopico, D., Soto, M., 2021. IntegratiOon of food waste composting and vegetable gardens in a university campus. Journal of Cleaner Production, 128175. <https://doi.org/10.1016/j.jclepro.2021.128175>

[2] Torrijos, V., Soto, M., 2022. Waste Generation and Management at the University of A Coruña. In: Leal Filho, W., Azul, A.M., Doni, F., Salvia, A.L. (eds) Handbook of Sustainability Science in the Future. Springer, Cham. https://doi.org/10.1007/978-3-030-68074-9_119-1

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