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Agronomic Value of Wastewater and Sugar Beet Lime Sludge Compost on Radish Crop

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Abstract : Wastewater treatment stations create large quantities of sludge, whose treatment is poorly underestimated in the draft installation. However, chemical analysis of sludge reveals their important concentration in fertilizer elements including nitrogen and phosphorus. The direct application of sludge can reveal contamination of the food chain because of their chemical and organic micropollutants load. Therefore, there is a need of treatment process before use. The treatment by composting of this sludge mixed with three different proportions of sugar beet lime sludge (0%, 20%,30%) and green waste permits to obtain a stable compost rich in mineral elements, having a pleasant smell and relatively hygienic. In addition, the use of compost in agriculture positively affects the plant-soil system. Thus, this study shows that the supply of compost improves the physical properties of the soil and its agronomic quality, which results in an increase in the biomass of cultivated radish plants and a larger crop.

Keywords : agriculture, composting, soil, sugar beet lime, wastewater
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