

عنوان مقاله:

Poultry feather waste management and effects on plant growth

محل انتشار:

مجله بین المللی بازیافت مواد آلی در کشاورزی، دوره 7، شماره 3 (سال: 1397)

تعداد صفحات اصل مقاله: 6

نویسندگان:

Khulna University - - -

Khulna University - - -

خلاصه مقاله:

Purpose Poultry industries produce a lot of feathers which are considered as waste and needs to be managed properly. Poultry feathers are rich with keratin protein and therefore they could be a source for good nitrogen fertilizer. Proper treatment of poultry feather waste (PFW) might be an environmental friendly solid waste management tool and a good source of N-rich organic fertilizer. Methods PFW was treated under a mixture of both aerobic and anaerobic processes. Treated poultry feather waste (TPFW) was analyzed for diferent nutrient elements. TPFW was applied to the soil at ۴, ۸, ۱۲ and ۱۶ t/ha along with control. Ipomoea aquatica was grown as the test plant to evaluate the growth performance under diferent rates of TPFW application. Plants were harvested ۷ weeks after seed germination. Results TPFW contained higher amount of organic matter (۳۵.۹%) and total nitrogen (۴%). Other major nutrient elements were found to be satisfactory. Color of the plants were observed greener in TPFW applied plants than control plants and the green color was pronounced with increasing rate of TPFW application. Plant height (cm/plant), leaf number per plant and weight of plants (g/plant) was also increased significantly due to the application of TPFW at ۱۲ t/ha and above. Conclusion Proper treatment of PFW might be an environmental friendly, cost efective and sustainable strategy for .PFW management that will also play a vital role in nutrient (especially nitrogen) recycling to the soil

کلمات کلیدی:

Poultry , Feather , Waste management , Compost , Nutrient recycling

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/1391923>

