



New Opportunities for Biochar from Biomass Energy

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Abstract:

The US Biochar Initiative promotes the production and use of biochars from urban wood and residues from bioenergy, forestry, and bioenergy industries. Biochar markets continue to grow in North America creating new opportunities to convert wood residues to sustainable carbon while restoring soil health and improving water quality. More than 155 US companies supply an estimated 50,000 tons of biochar per year which is used in agriculture, landscaping, and environmental remediation. Most of the biochar is a co-product of biomass energy made through gasification and combustion. New uses such as wallboard, cement, packaging, and electronics have increased the potential to sequester carbon by converting wood residues to biochar and renewable energy. This presentation will show how bioenergy producers can make biochars at existing facilities to improve soil health; restore degraded urban soils and abandoned mine lands; reduce water pollution from pharmaceuticals and fertilizers; remove nutrients, metals and bacteria from stormwater; and access new carbon markets.

Methods:

This study was a retrospective, descriptive study performed in the national university of pharmacy (Kharkiv, Ukraine) during a 6 year period (from 2013 to 2018). The data on consumption in the community of antibacterials for systemic use (AB) (ATC group J01) in Ukraine (UA) were analyzed according to the ATC/DDD international system for classification and consumption of drugs according to the WHO's measurement methodology. Use of the ATC/DDD-methodology allows standardization of drug groups and represents stable drug utilization metric to enable comparisons of drug use between countries and to examine trends in drug use over time and in different settings [9]. DDD values are actually the assumed average maintenance dose per day for a drug used for its main indication for an average adult. DDDs per 1000 inhabitants per day (DID) were used as a measurement unit for analyzing consumption AB