

## REVIEW

# BAT GUANO AS THE COMPONENT OF FERTILIZER OR THE HEALTH HAZARD?

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**Abstract.** Phosphorus is an important element for life since to it is the component of human and animal bodies and it is the composition of plant, the food of human and some animals. Fertilizer is composed of phosphorus, the limited element in the current situation that is also the vital mineral for agricultural sector. Although phosphorus can be extracted from phosphate rock, the quality and quantity may be not enough for using the global scale. The new sources of phosphorus are now from waste and wastewater recovery or guano extraction. Bat guano is rich in phosphate, but it is also the cause of the outbreak of zoonoses through inhalation of fungal spores *Histoplasma capsulatum*, the health hazard that can cause various losses for humans. Policies must be made to solve the health problem from bat guano harvesting to replace the use of phosphate rock with the integrated collaboration of all relevant parties. The objective of this review is to give information nowadays about the realization of phosphorus scarcity, to manifest the advantage of bat guano as phosphorus source and also as histoplasmosis outbreak for making the decision of whether to use bat guano or not in phosphorus inadequacy issue as well as to present the safety and security policies for bat guano collection in case of bat guano will be used as phosphorus source.

**Keywords:** bat guano, zoonotic diseases, histoplasmosis, phosphorus scarcity, fertilizer

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