

AGRI-AMELIORATIVE INDICES OF LIQUID WASTES FROM PROCESING GRAPES, PRODUCING THE DIVINE AND ETHYL ALCOHOL

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Abstract

In the process of processing the grapes and the production of strong drinks, annually, at a national level, are formed and accumulated great quantities of liquid wastes (wine yeast, vinasse, cereal melasse and bagasse) which constitutes about 100 – 150 thousand meter³. They are characterized by a reaction of strongly acid environment and a high content of water soluble salts. The pH-value varies from 3,4 to 3,8 units. Mineral residue constitutes: 1,9 g/dm³ in vinasse, 12,0 g/dm³ in wine yeast and 14,9 g/dm³ in cereal bargasse. In the composition of cations predominate monovalent cations of sodium and potassium, that, when reaching into the soil, can form toxic salts. With a high potential of salinity and sodium enrichment is characterized the bargasse. But the greatest danger of contamination of saline and alkaline soils can lead to the incorporation of their abusive and uncontrolled discharge. Along these wastes contain primary nutrients (NPK) that are very necessary for agricultural plant nutrition and soil fertility. Investigations have shown that the waste contains a significant amount of nutrients. NPK content in the waste summary accounts, kg/m³: vinasse - 1.8; cereals bargasse - 5.1, wine yeasts - 10.6. Solid (pressed) wine yeasts contain a higher organic matter and nutrients, in a ton of waste it is also contained summarily 48 kg NPK. Wine yeasts and cereals bargasse have a high content of organic matter, 34 and, respectively 51%. Because of the high content of organic matter and very acidic environment they have a toxic impact on the flora and fauna of surface waters and polluting the paedologic underground waters' action.

Keywords: Total Nitrogen, Bargasse, Wine Yeasts, Total Phosphorus, Vinasse.