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PERSONIFICATION OF PATHOGEN IN CONVERSATION OF CONSOLIDATED SQUANDERING AND REMUNERATIVE ENLARGEMENT

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ABSTRACT

Consolidated squandering is biologically converted into value added products by physiological action of pathogen. These processes occur under controlled environmental condition. It could be in the form of submerged fermentation or as consolidated-state fermentation technology. Substrates used are mainly agricultural, industrial and domestic squandering. These squandering must possess qualities that will support microbial activities and are usually rich in carbohydrates, proteins, fats and oil. Pathogen used includes bacteria, mould, yeasts and fungi. These organisms are generally considered safe and can't cause harm to the consumers. Products, such as antibiotics, biogas, bifocal, biofertilizers, bioplastic, organic manure, organic acids, flavors, enzymes, etc are derived from squandering conversation. Conversation of consolidated squandering to value-added products has contributed immensely to the remunerative enlargement of the industrialized nations in area of job creation, income generation and in improving the standard of life through agriculture and industrial enlargement. It minimizes squandering generation and reduces the dimensions or land space used as landfill.

KEYWORDS

Conversation, Value-added Products, Pathogen, Organic Squandering, Microbial Metabolites, Consolidated State Fermentation.

INTRODUCTION

Conversation of waste is a biological process by which organic materials in the squandering are microbiologically converted into more simple and beneficial products. The processes might be aerobic, anaerobic or fermentative under controlled conditions. They are currently in use in food, agriculture, beverages, energy and pharmaceutical industries. Conversation of consolidated squandering has facilitated reduced urban waste pollution through biological squandering management practices. The processes involved in consolidated squandering conversion are mainly submerged fermentation and consolidated-state techniques. Using these techniques, products like flavors, organic acids, enzymes, antibiotics, biofuel and biogas have been produced from consolidated waste under controlled operational conditions and right choice pathogen.

Products of Waste Conversation:

1. Biogas: This is mainly in the form of biogas formed through the method of Domination, a process by which organic material in the waste is microbiologically converted under anaerobic conditions to biogas.
2. Bifocals: Bifocals are alternative fuels made from plant and plant-derived resources. Bifocals are used mainly for transportation. There are two types of

bifocals: bioethanol and biodiesel. Bioethanol, the principal fuel used as substitute for petrol for road transport vehicles, is mainly produced by the sugar fermentation process of cellulose (starch), which is mostly derived from Cereals (eg Maize), Cassava, Sugar beet and Sugar cane.

3. Bioplastics: Bioplastic, also known as biogases plastics are plastics made up of agricultural by-products and also from used plastic bottles and other containers using pathogen. Common plastics referred to as fossil-fuel plastics (also called petro based polymers), are derived from petropersonification or natural gas. Petro based plastics require more fossil fuels and generate more greenhouse gases than the production of biogases polymers. Some, but not all, bioplastics are designed to biodegrade.

4. Organic Manure: As countries develop and population increases, people are also demanding more and better food. These pressures are multiplied by shrinking farmland, rising labor costs and shortage of farm workers. Biotechnology offers a further method to improve the sustainability of existing system to produce more and better quality agricultural products. The processing of food and food ingredients using biotechnology provides a wide variety of fermented foods and food ingredients that are extensively used.

5. Antibiotics: Microbes are wont to produce antibiotics. These are low relative molecular mass secondary metabolites that are active against certain bacteria at relatively low concentration. The culture conditions affect the sort of antibiotic produced. Antibiotics such as tetracycline, ox tetracycline, streptomycin, cephalosporin, neomycin and a few other antibacterial compounds are produced through microbial processes. Pathogen like members of the genera Streptomycin, Aeromonium, and Penicillium are used in SSF for the production of the above state antibiotics.

CONCLUSION

Microbes are widely applied in biotechnology as seen above. It utilizes biological sources such as enzymes, plant products and some microbes in the production of bioplastics, organic manures, biofertilizers, biopesticides, bioherbicides, proboscis and bifocals or bioenergetics. Also, organic acids, and enzymes have been produced from squandering by microbial fermentation. These products have been used to improve food quality and are known to be more ecologically friendly than the synthetic counterpart. These products of microbial biotechnology have helped in Agriculture and in various industries; and have contributed immensely to the remunerative growth and improvement of the quality of life in most industrialized and developing nations.

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