Biodegradable Film Based on Banana Peel, Cornstarch and Glycerin

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According to ONU environment data, the Caribbean is the second most polluted sea by the use of plastics, as well as the countries: China, the United States and the United Kingdom that present the most serious pollution problems, since it estimates that 145,000 tons are eliminated improperly on a daily basis and only 10% is reused through recycling or other recovery techniques. The biggest difference between the plastic that is currently manufactured and that produced based on starch, is that the second is completely biodegradable and classified as non-toxic material, once degraded it can even be used as a composting material. A biodegradable bag based on banana peel or banana starch is more efficient because it is high in water content, rich in fiber and has nutrients such as potassium, iron, vitamin B, C, K, once discarded and after approximately one year, that they begin their degradation process by fragmenting into smaller and smaller pieces, making it possible for microorganisms such as fungi or bacteria to feed on the material of the bag, making them a contribution to the environment. The biofilm is made from banana starch, cornstarch, vinegar and glycerin, which will help mitigate the negative impacts of the use of plastic bags contributing to the reduction of pollution. Bioplastic has its stake in sustainable development, since the large emissions of carbon dioxide during the production of conventional plastic are reduced with the production of bioplastics between 0.8 and 3.2 tons.

Awards Won: