HERBITEX: Paper Based on Residual Grass

Montoya, Daniela
Ortega, Laura
Ramirez, Maria

Currently Medellin annually produces between 6000 to 9000 tons of residual organic material (Escalante Hernandez, 2014), which is considered a forest residue since it is the result of pruning and its use is mainly in composting and biomass production. In addition, the accumulation of this waste generates large amounts of methane, a greenhouse gas that affects the ozone layer and contributes to global warming (FAO). Herbitex is born in the search for alternatives in the production of textile fibers; during its development process it was discovered that residual cellulose from organic materials could be used in the manufacture of agglomerates, nonwoven textiles (inner linings), and the reinforcement of composite materials, packaging and paper; the latter product and others closely related to it were made a main focus of research, seeking to solve the problem that its production generates since worldwide 4 billion trees are felled to make paper, as it requires 2 to 3.5 tons of trees to produce the same amount as only one ton of virgin product. (Rosa, 2014). This research, which seeks to develop a cellulosic material manufactured from residual organic materials, came from the search of a better use for this waste in which it is expected to find multiple physicochemical and mechanical properties that will make it a high quality input material. So far it has been determined that the development of such material is possible using organic material as a raw material. It is also known that a basic hydrolysis process is necessary for the production process, and also that the properties that comprise the final material are very similar to those of cardboards currently offered in the market.