6 Conclusions

The exploitation of coal in open pit mines in the North of Spain has occupied large areas of land. The restoration of mining operations is an obligatory activity for mining companies according to current legislation. The impacts derived from the mining activity must be corrected in the final phase of restoration, returning the landscape to an aspect similar to the original one, prior to the mining exploitation.

The soils generated in the restoration present extreme conditions (e.g., nutrient poor and polluted soils) for their use for the production of forest biomass, so it is essential to search for new species that adapt to the conditions of the environment.

The restored lands can be used for the production of biofuels through repopulation with fast-growing energy crops and high planting densities. The productions obtained for some poplar clones, such as AF2 (populus x canadensis), exceed in most cases the productions that are being achieved by native species in natural soils in the areas close to the plots that have been studied.

In addition to the production of renewable energy and capture of CO_2 emissions, this activity involves the generation of a new economic activity in abandoned land and the creation of jobs in depressed areas due to the closure of mining operations.

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