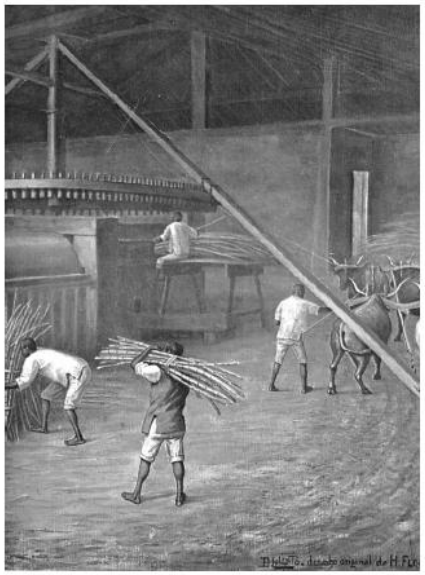
From ancient sugar factories to modern bio-refineries



BIO-ETHANOL

Internal Driving-forces:

Pró-álcool (1975);

•Flex fuel vehicles.

External driving-forces:

•Global warming;

•Ethanol demand in 20 years estimated in 200 bilion liters year.

SUGAR

BIO-ENERGY

BIO-FERTILIZER

BIO-BYPRODUTOS