



Sugar beet

Beta vulgaris

About me:

I have a deep white taproot full with sugars with a dense rosette of leaves found on the surface. I can tolerate most soil types but prefer moist soils with plenty of nutrients and I do not like high winds as this can damage my leaves. I grow in temperate regions which have warm summer days, cool nights and mild winters.

Where do I come from?

I originated from the wild ancestor sea beet, native to Europe North Africa and South Asia. I was first domesticated in Eastern Mediterranean and the Middle East

How is the bio-fuel produced?

Once ready I am harvested in the autumn. Due to the high sugar content in my roots, the production of bio-ethanol is most suitable. Firstly the plant material (biomass) has a pre-treatment phase which separates the lignin, cellulose and hemicelluloses using enzymes. Once this process has been completed the biomass is then fermented using yeast and distilled to remove any excess water. Lastly it is refined to produce bio-ethanol

How is my energy used?

The ethanol can be converted into combustibile fuel for cars



Image taken by Henk Kusters (2010) Netherlands



Image taken by Cole Gustafson Dept. of Agribusiness and Applied Economics (2010) North Dakota. USA.

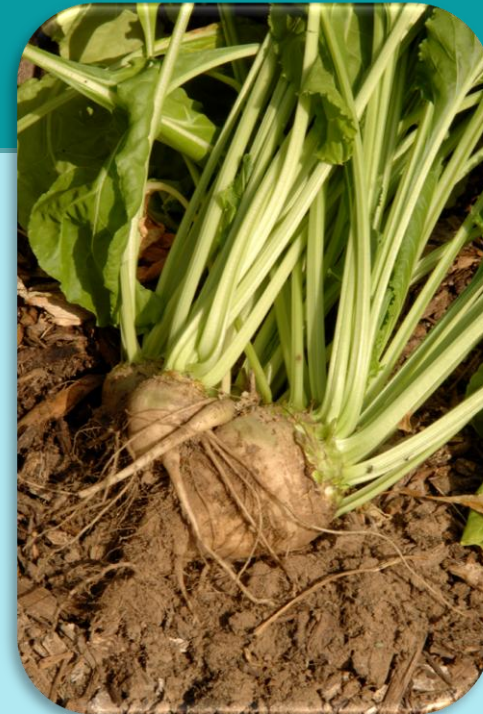
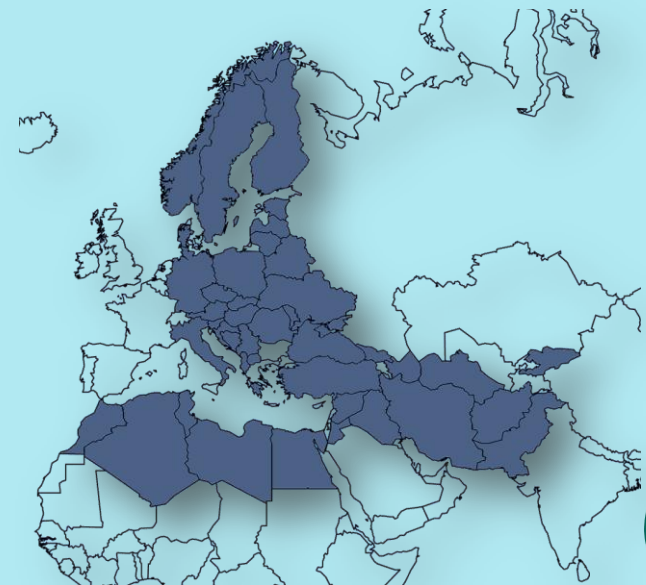


Image taken by US Department of Agriculture (2013).



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