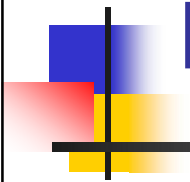


Sugar Production in Ireland Past, Present & Future

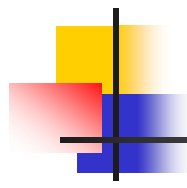


John O'Donovan
EFM Technical Services

Sugar Production in Ireland

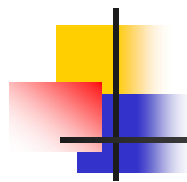


- The History-----
- The Process-----
- The Present-----
- The Future-----



Cane Sugar Refining

- 1660 Cane Sugar refined in Dublin
- Later in Belfast, Cork and Waterford
- 1766 Dublin had 59 refineries alone
- Tariffs, taxes and the 1801 Act of Union
- 1860 only 19 people employed
- 1885 cane sugar refining ceased



Slaves

- Irish as slaves in the cane fields up to 1850
- 40,000 to penal colonies in the 1st 40 yrs of 19th century



Sugar Beet

- 1842 Sugar Beet--- in Co Antrim
- 1845 Sugar Beet Processed --- Achill



First Sugar Factory

- 1851 Royal Irish Beet-Root Sugar Co.
- Mountmellick
- Cost £10,000
- 300T sugar beet/wk
- 22T sugar/wk
- 1862 fails due to tariffs, taxes etc.



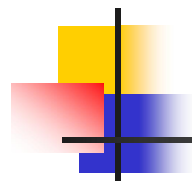
Transition

- Nothing happens over next 40yrs
- 1908 Sinn Fein press for reestablishment of sugar beet industry
- Self sufficiency and replacements of imports
- Experimental crops 1911 to 1914
- Nothing happened – native government



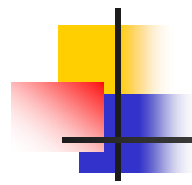
Independence 1922

- Native Government formed
- Huge unemployment
- Industrially very weak
- Commission re Sugar industry
- Engineers check several sites nationwide----



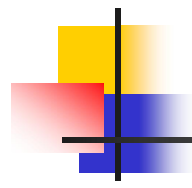
Second Sugar Company

- 1925 Site at Carlow checked
- 1926 Irish Sugar Manufacturing Co.
- 5th Jan the first sod is turned
- Mid Oct processing starts
- Less than 11 mts from turning of the first sod to sugar production.



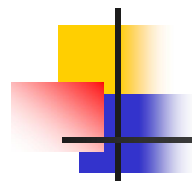
Investors

- Syndicate of Belgians £400,000
- Irish backers invst £3,000
- Government make annual subsidy of £400,000
- Considered a good investment given the unemployment and import substitution



Resources and Skills

- Little or no trained Tradesmen
- Mechanical equipment was scarce
- No National Power Supply
- We had Enthusiasm, Courage and huge numbers of willing workers and growers



Foreign Skills

- Engineers
- Technologists
- Chemists
- Thompsons Engineering
- Settled in Ireland
- Last of them died in the 1990's



Difficult Times

- 1932 Carlow produced 13,400T sugar
- Imports were 85,000T
- Strained relations with growers
- World depression and
- Plummiting sugar prices
- Good quality sugar could be produced economically in Ireland



Third Sugar Company

- Comhlucht Suicre Eireann Teo
(Irish Sugar Ltd)
- State owned and capitalise at £2m
- Shares sold to public – quickly subscribed
- Semi state company until privatised in 1991
- Carlow factory was aquired for £450,000



New Factories

- 1934 Mallow, Thurles and Tuam
- Planning to commissioning < 1yr
- Equipment mostly from Germany
- Payment was in the form of cattle
- 1935 sugar production 69,700T



War Years

- Spares, seed, oils, fertilizers, chemicals-
- Great ingenuity to keep factories running
- 1945 production reached 88,509T
imports were a mere 156T
- The war years propelled the company into self-sufficiency



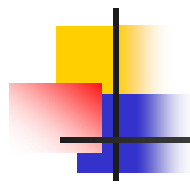
Diversification

- Armer – Agricultural Machinery
- Soil Testing
- Limestone Quarries
- Erin Foods – Heinz- Erin
- Research and Development
- Tuam Engineering
- Molasses Trading
- Animal Feeds – Greenvale Animal Foods
- Gowla – Gowla Grasslands & Bog Development



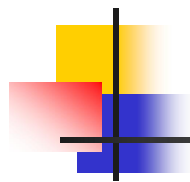
EU / Change

- 1973 Ireland joined the EU
- Quotas and Free Market
- External opposition in local market
- Need to improve all aspects of business
- Huge capital investment programmes
- Tuam closes 1986
- Thurles closes 1989



Privatisation

- 1991 Irish Sugar was privatised
- Name change to Greencore
- Grower uptake of shares poor
- Diversifications and acquisitions dilute Irish Sugar influence within Greencore.



New Millennium

- Rationalisation of quotas
- Carlow closes 11th Mar 2005
- €30m invested in Mallow
- Mallow closes may 2006



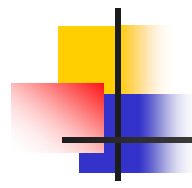
Production 2004

- Acreage -----88,000ac (32,000Ha)
- Beet----- 1,466,000T
- Sugar----- 220,000T
- A Quota ----- 182,000T
- B Quota----- 18,200T



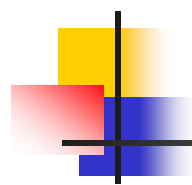
Process Stages

- Reception
- Diffusion
- Purification
- Evaporation
- Crystallisation
- Sugar Handling
- Sugar packaging
- Energy – Power plant
- Animal Feeds
- Environment



Sales x Location 2004

■ Siucra -----	140,000T
■ McKinney-----	40,000T
■ UK-----	20,000T
■ Outside EU-----	20,000T



Sales x Product

■	2004	2014
■ 1Kg-----	35,000T	30,000T
■ Speciality Sugars--	6,000T	5,000T
■ Icing-----	4,000T	3,000T
■ Paper Sacks-----	25,000T	20,000T
■ Bulk-----	110,000T	102,000T



Future

- Irish Sugar Beet Bio-Refinery Group
- Beet Ethanol Energy Teoanta Ireland (BEET Ireland)



Proposals

- | | Irish Sugar Beet | BEET Ireland |
|--------------|------------------|--------------|
| ■ Beet----- | 1,200,000T | 1,800,000T |
| ■ Grain----- | 56,000T | |
| ■ Sugar----- | 154,000T | 250,000T |
| ■ Ethanol-- | 50,000,000lt | 11,000,000lt |