

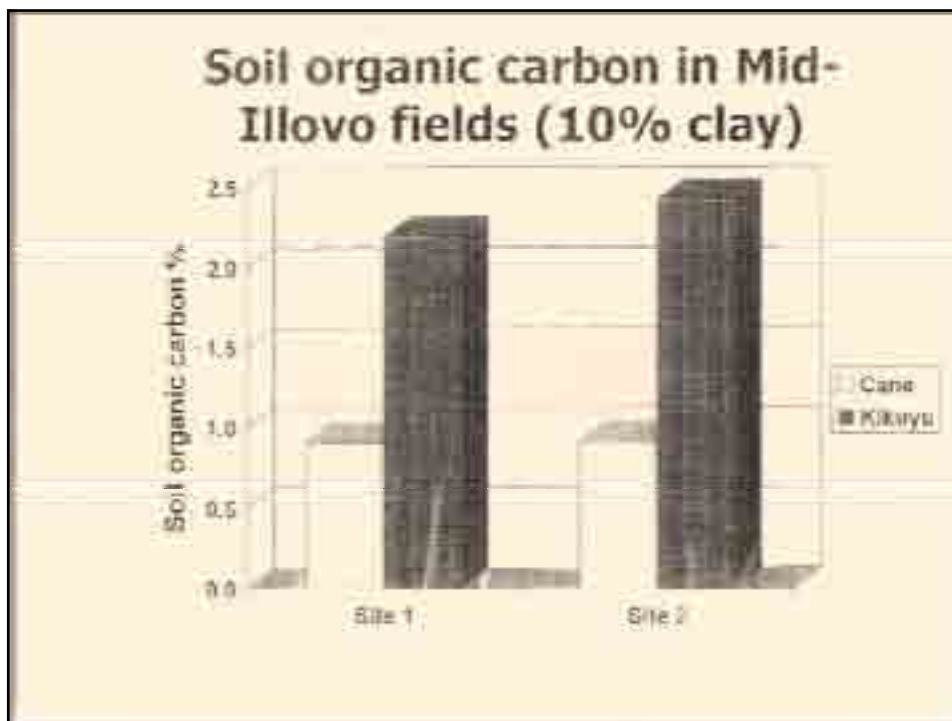
ORGANICS

“SOIL HOMEOPATHY” OR A SERIOUS CONTENDER

- ❑ Up to the 1960's the level of fertilizer applied was relatively low, but with the introduction of new varieties that responded to higher NPK, fertilizer applications were stepped up.
- ❑ Trashing was attempted but has never become general practice, with burning remaining the rule.
- ❑ The result of our cultivation practices has been that soil organic matter (SOM) has dropped steadily and acidity has climbed.

SOIL DEPTH	ACIDITY - PH (ACID SAT)					
	Undisturbed Uncultivated Soil		Cane fertilized according to standard recommendations for \pm 20 years		Cane fertilized for \pm 15 yrs with chicken litter: 12m ³ /ha/crop	
	pH	Acid Sat	pH	Acid Sat	pH	Acid Sat
0-15cm	4,53	(26)	3,80	(71)	4,90	(2)
15-30cm	4,58	(57)	3,94	(75)	5,04	(3)
30-45cm	4,68	(36)	4,00	(78)	5,03	(4)
45-60cm	4,62	(50)	4,03	(68)	5,02	(2)

SOIL DEPTH	DENSITY		
	Undisturbed Uncultivated Soil	Cane fertilized according to standard recommendations for \pm 20 years	Cane fertilized for \pm 15 years with chicken litter: 12m ³ /ha/crop
	g/ℓ	g/ℓ	g/ℓ
0-15cm	0,77	1,12	0,82
15-30cm	0,82	1,11	0,86
30-45cm	0,94	1,10	0,93
45-60cm	1,00	1,14	0,95



- ❑ **Soil acidification (topsoil and subsoil), plus a decline in SOM to under 1,5% has effected yield and with a doubling of fertilizer prices and no commensurate increase in the cane price, the current situation looks bleak.**
- ❑ **SOM must be rebuilt. It's the foundation stone for soil life. When SOM drops under 1,5% you're looking for trouble!**
- ❑ **CEC Sand 3, Clay 30-60, Humus 250, Humic Acid 450 (Compost, Humic and Fulvic Acid are nature's chelating agents).**
- ❑ **Simply adding any OM to the soil cannot replace plant food elements supplied by either organic or inorganic fertilizers.**
- ❑ **The organic component has largely been neglected in the cane industry.**

WHERE TO?

- ❑ When replanting, if there is soil acidity (Acid Sat >10, Ca <400 Mg <100) apply Lime and Gypsum* and plough it in deep.

**I believe that with the decrease in SOM and increase in the use of high grade fertilizers (which contain no sulphur), sulphur deficiencies are more prevalent than we realise.*

- ❑ Fertilise NPK according to soil analysis, incorporating an organic fertilizer but not necessarily replacing chemical NPK.
- ❑ Plant a 'GREENMANURE' crop e.g. Sunhemp
- ❑ Rather apply smaller, regular dressings of NPK fertilizer, than single heavy ones.

ALSO CONSIDER:

- ❑ ECO T.
- ❑ Nutrient deficiencies of elements off the radar screen
 - Silica
 - Sulphur
- ❑ Many forms of nutrients in fertilizers (e.g. Ammonia N), require 'soil life' to make them available to plants. Humic and Fulvic Acid.
- ❑ Twin N, can reputedly fix 60-125kg N of nitrogen/application at a cost of ±R400.