

Stimul: decrease in nitrogen use MIRAGE-e

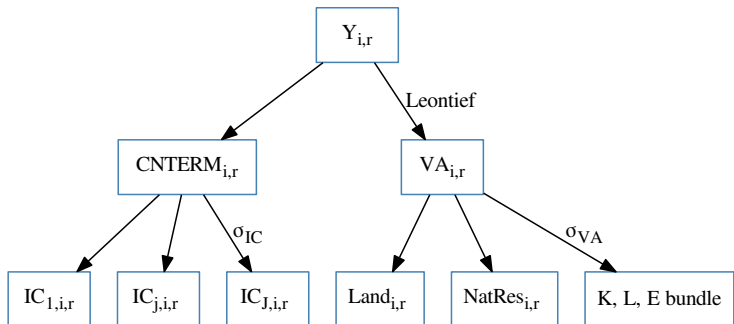
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MIRAGE-e – Land and fertilizers treatment

Production function:



- No direct substitution btw land and fertilizers \Rightarrow a tax on fertilizers translates in *less* land cultivated !!
- Fertilizers: included in the *crp* sector in GTAP (Chemical Rubber Products: basic chemicals, other chemical products, rubber and plastics products)

Scenario – Tax on fertilizers

- Assumption: nitrogen represents 25% of the use of *crp* by crop sectors
- Aim: decrease by around 12% of $IC_{crp,j,EU28}$, with j in {Cereals, Fibercrops, Oilseeds, OthCrops, Sugar, VegFruits, Wheat}
- Implementation: trial and error... \Rightarrow increase by 20 pp of the tax on IC prices produces a decrease by 11% of $IC_{crp,j,EU28}$.
- GTAP 9.2, base year=2011, one shot tax increase in 2019.

Results in a nutshell

Changes wrt the ref. scenario, in % :

	EU		World	
	Prod.	Land	Price	Land
Cereals	-1.7	-1.2	0.4	0.04
Wheat	-3.2	-2.2	0.3	0.23
VegFruits	-0.8	-0.7	0.2	0.03
Oilseeds	-3.7	-2.5	0.2	0.10
SugarCB	-0.9	-0.8	0	0.03
FiberCrops	-1.6	-0.8	0	0.02
OtherCrops	- 3.1	-2.0	0.9	0.24