How much C stock ?

Average EU forest

≈ 62 Mt C/ha
(FAO-FRA 2010)

Perennial woody crops (mature)

63 Mt C/ha
(IPCC GPG 2003 and GL 2006)

TABLE 5.1
DEFAULT COEFFICIENTS FOR ABOVE-GROUND WOODY BIOMASS AND HARVEST CYCLES IN CROPPING SYSTEMS CONTAINING PERENNIAL SPECIES

Climate region	Above-ground biomass carbon stock at harvest (tonnes C ha^{-1})	Harvest /Maturity cycle (yr)	Biomass accumulation rate (G) (tonnes C ha^{-1} yr^{-1})	Biomass carbon loss (L) (tonnes C ha^{-1} yr^{-1})	Error range[1]
Temperate (all moisture regimes)	63	30	2.1	63	± 75%
Tropical, dry	9	5	1.8	9	± 75%
Tropical, moist	21	8	2.6	21	± 75%
Tropical, wet	50	5	10.0	50	± 75%

Country-specific values from EU MS ≈ **5-15 MtC/ha** !

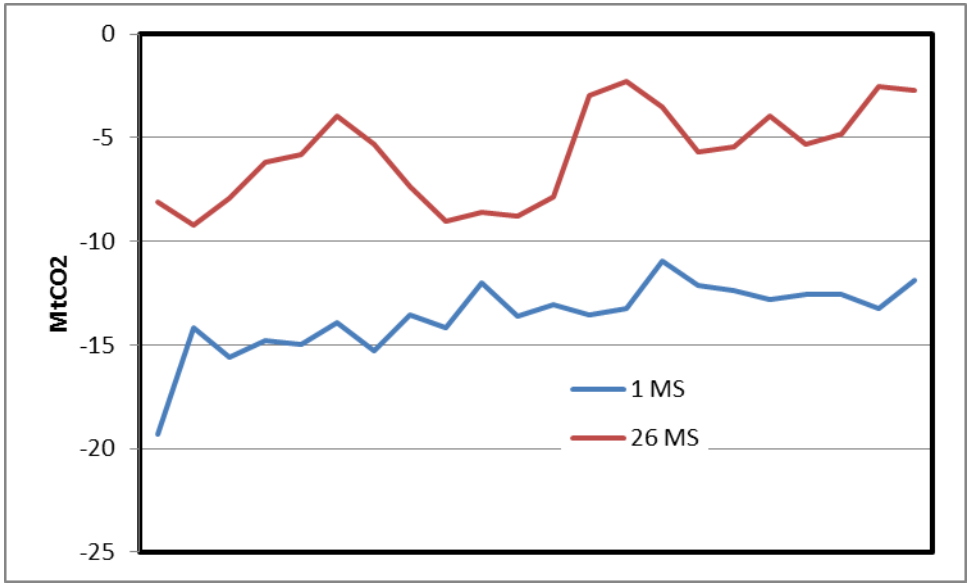
Tier 1

The default method is to multiply the area of perennial woody cropland by a net estimate of biomass accumulation from growth and subtract losses associated with harvest or gathering or disturbance (according to Equation 2.7 in Chapter 2). Losses are estimated by multiplying a carbon stock value by the area of cropland on which perennial woody crops are harvested.

Default Tier 1 assumptions are: all carbon in perennial woody biomass removed (e.g., biomass cleared and replanted with a different crop) is emitted in the year of removal; and perennial woody crops accumulate carbon for an amount of time equal to a nominal harvest/maturity cycle. The latter assumption implies that perennial woody crops accumulate biomass for a finite period until they are removed through harvest or reach a steady state where there is no net accumulation of carbon in biomass because growth rates have slowed and incremental gains from growth are offset by losses from natural mortality, pruning or other losses.

Sink in perennial woody crops in the EU:

A single mistake affects the whole EU LULUCF inventory…
"1 MS": please follow JRC QA/QC advice…



→ Even when using tier-1 factors, make a critical assessment of the appropriateness !

→ The tier-1 factor for perennial woody crops applies only to crops < 30 yrs !!!