

Country updates:

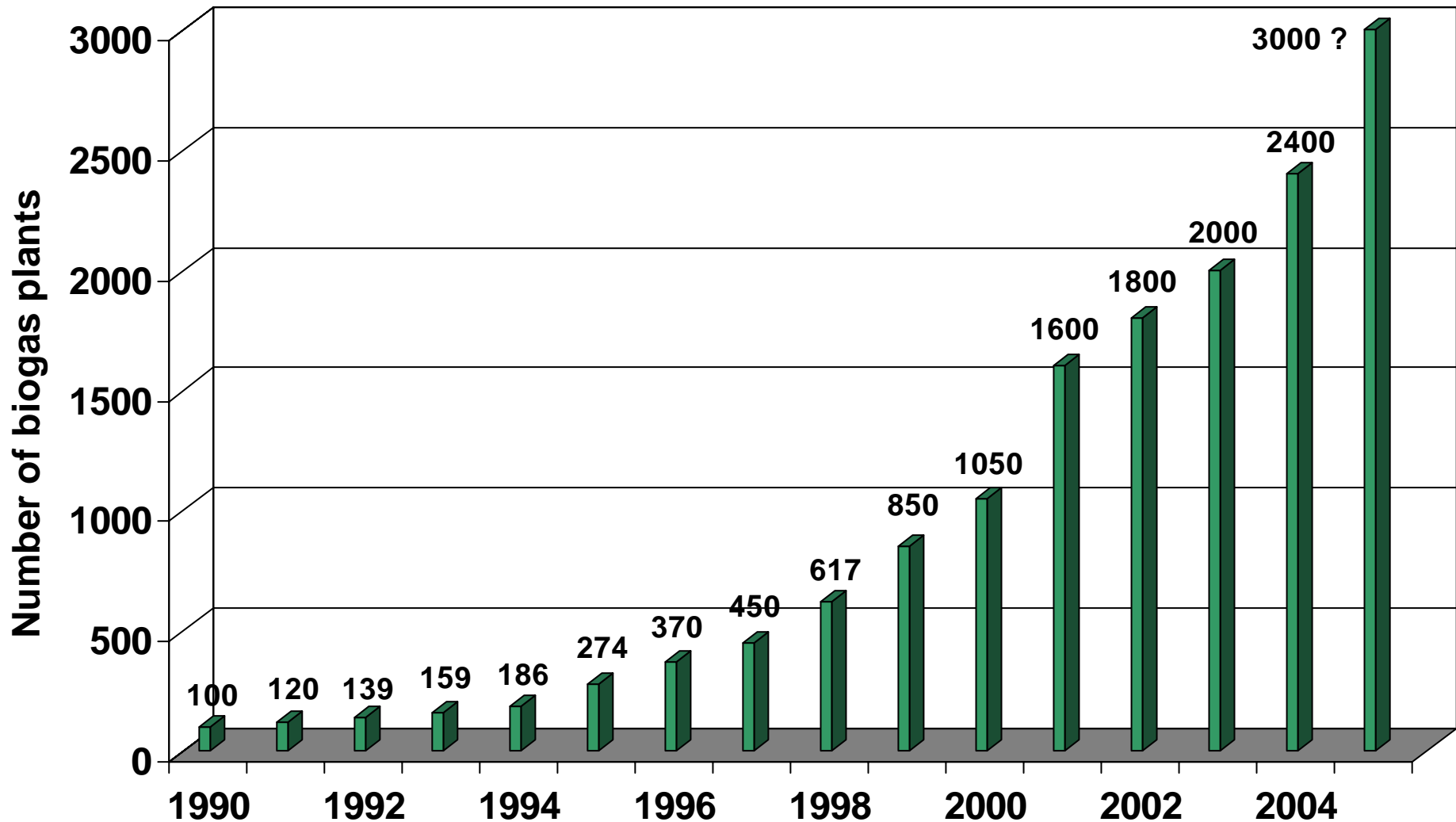
Germany

P. Weiland

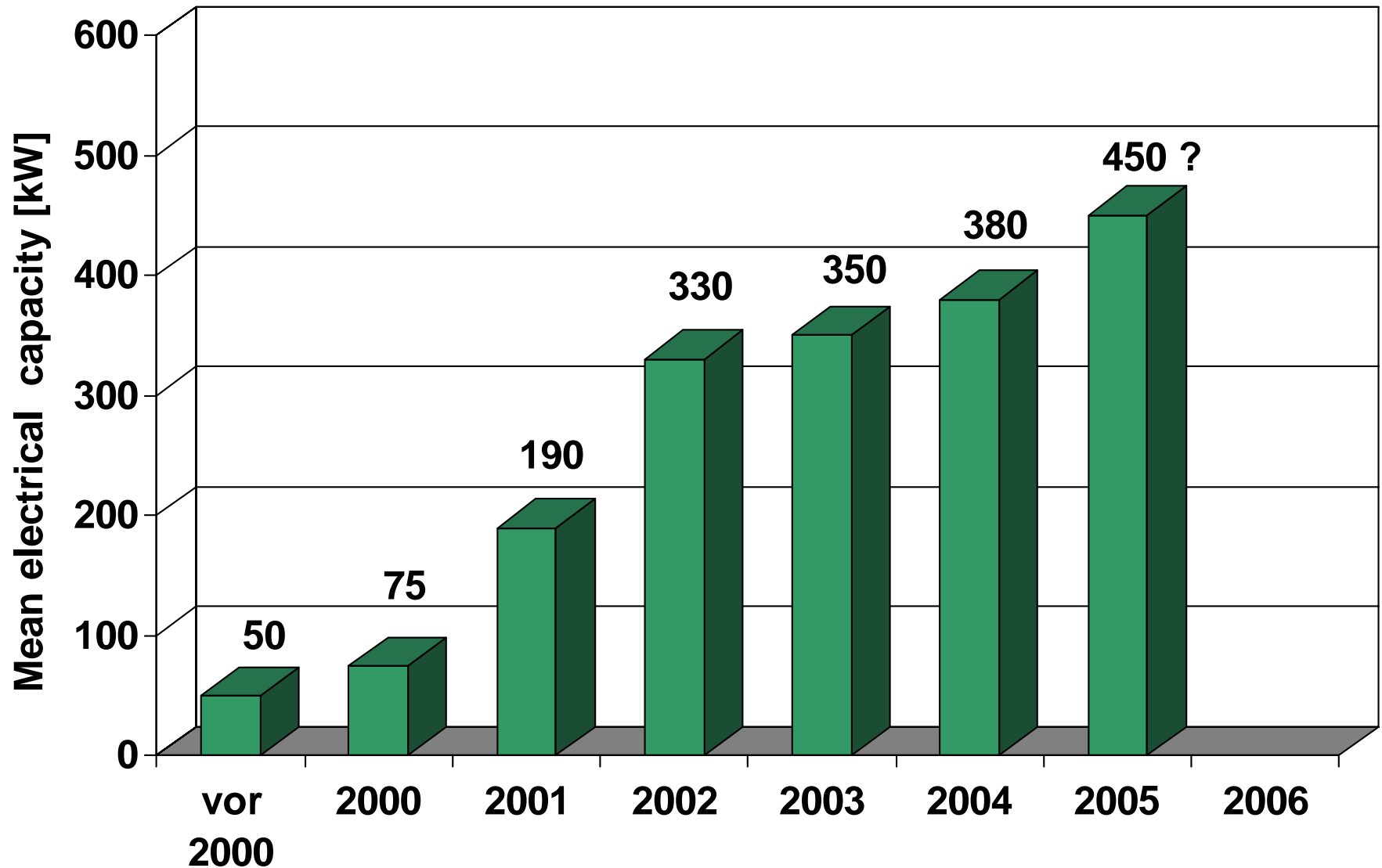
Federal Agricultural Research Centre (FAL)
Institute of Technology and Biosystem Engineering



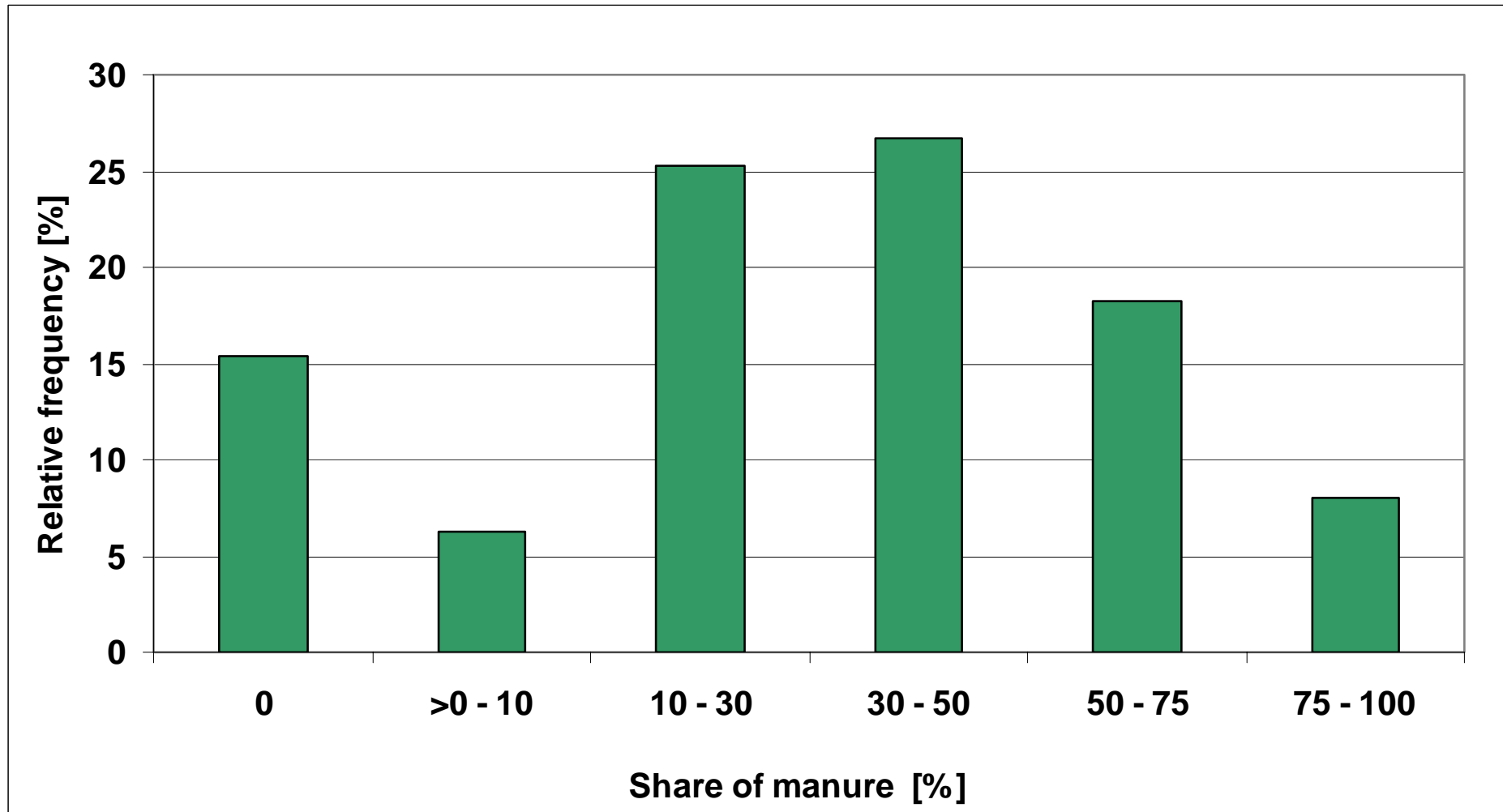
Number of biogas plants in Germany



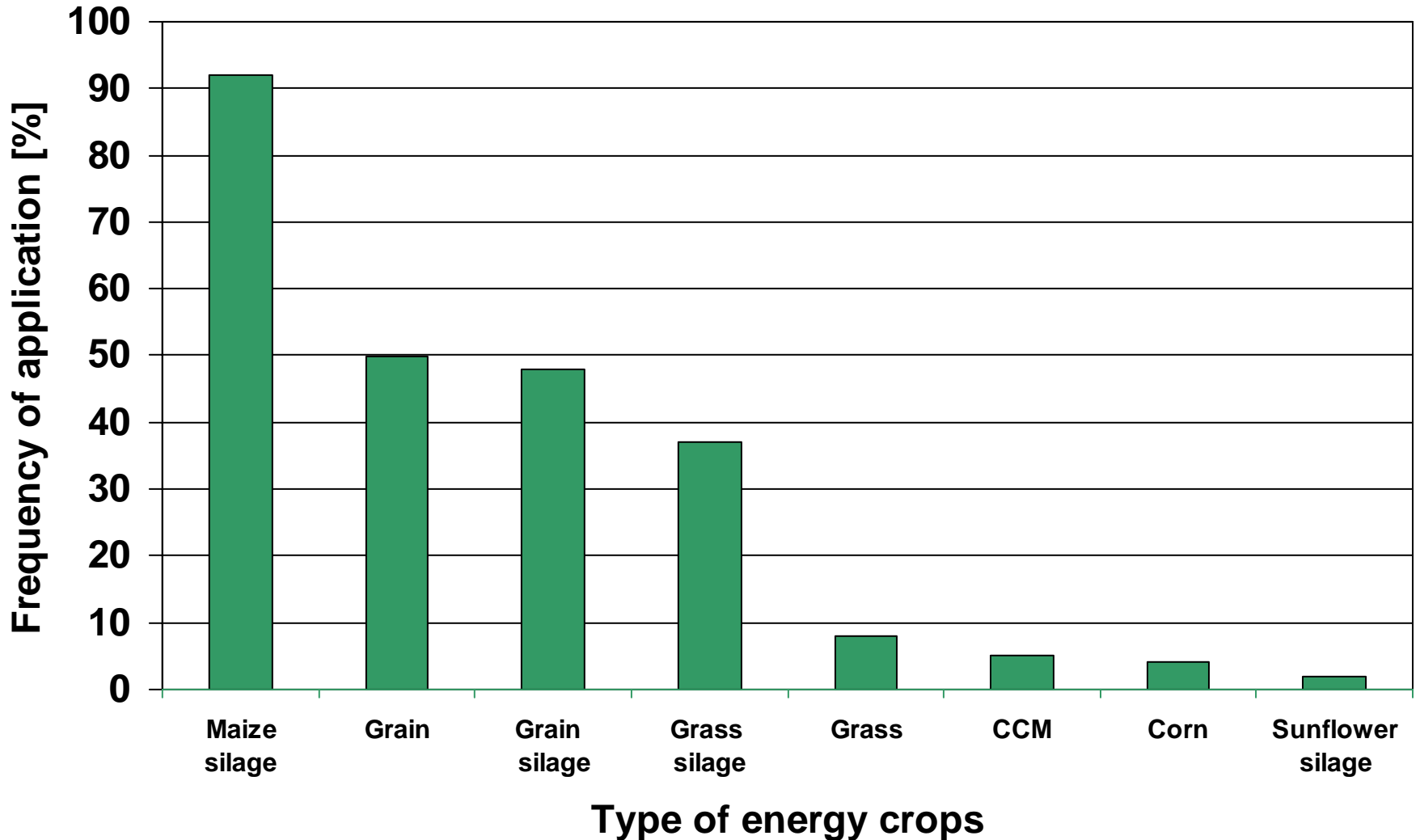
Installed electrical capacity



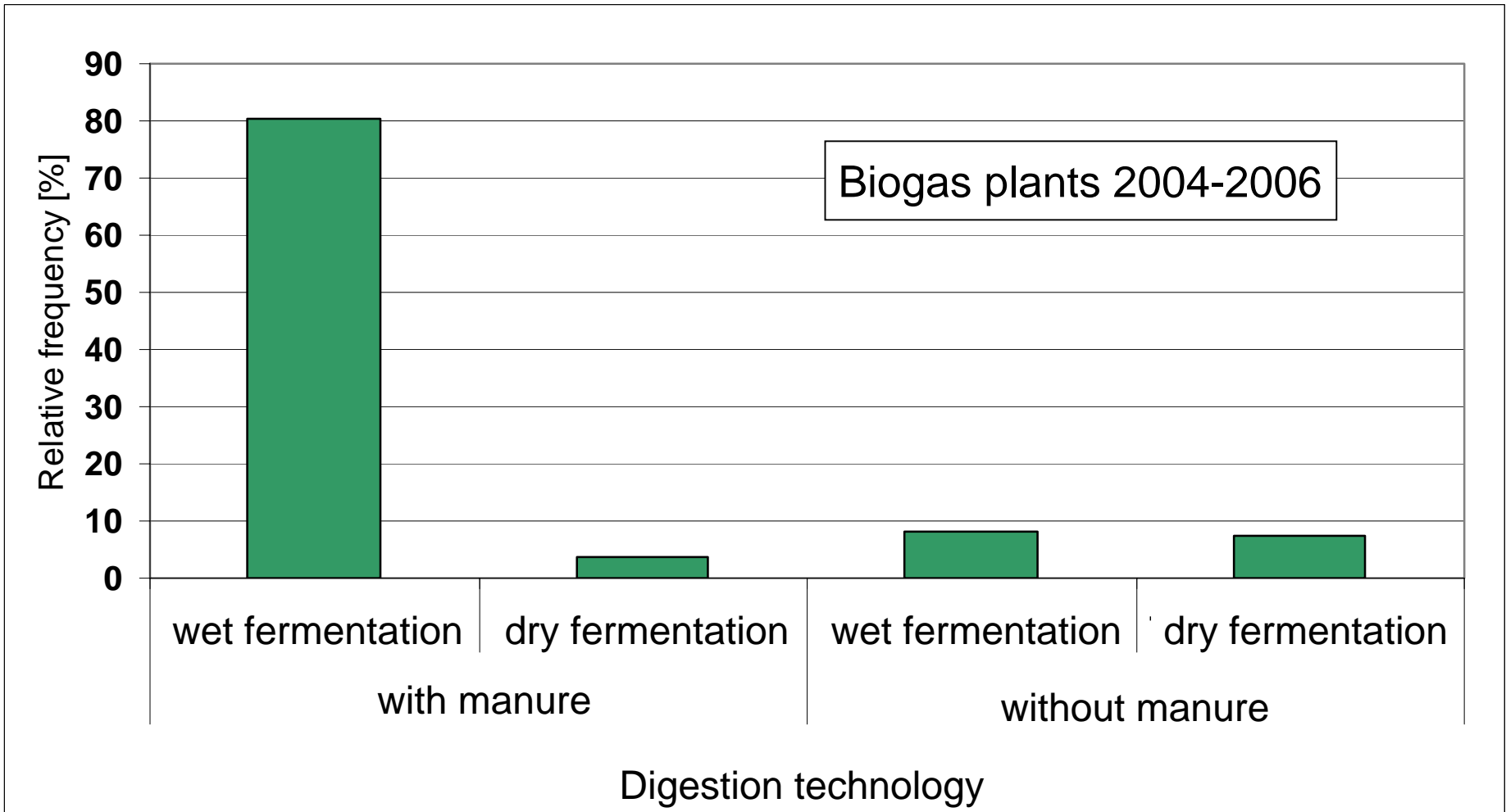
Massenanteil Wirtschaftsdünger am Substratinput (Start up: 2004-2006)



Application of energy crops (Start up: 2004 – 2006)

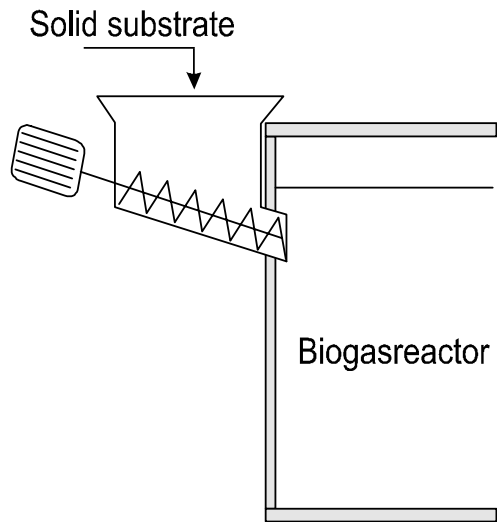


Application of wet- and dry-fermentation

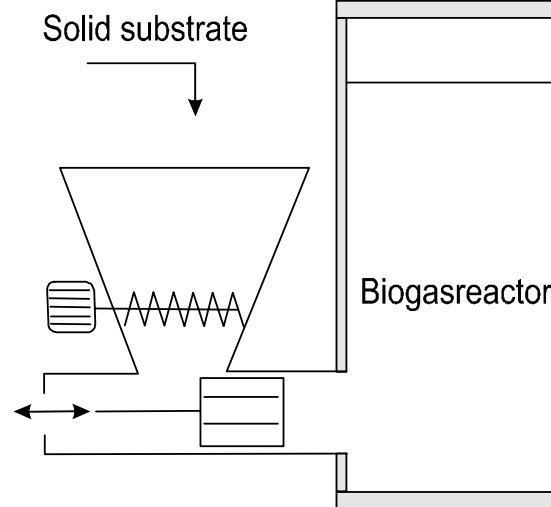


Direct-feeding systems for solids

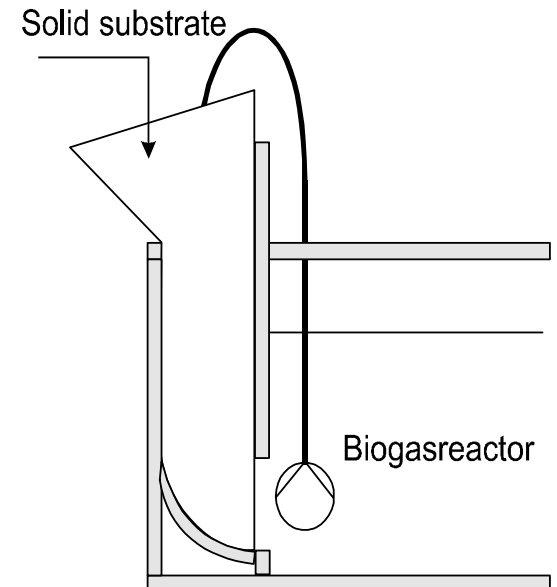
Feed screw



Feed piston



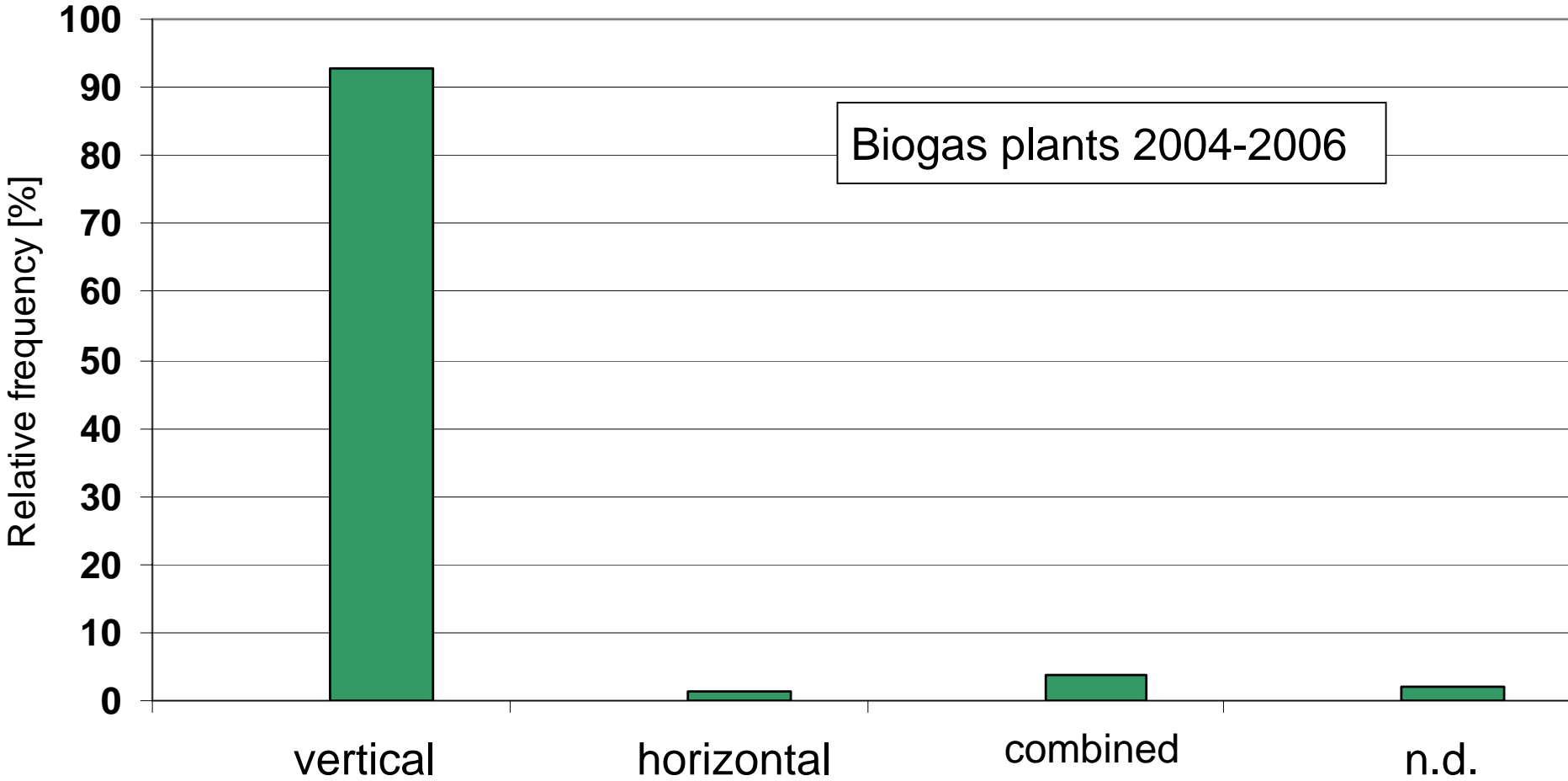
Flushing system



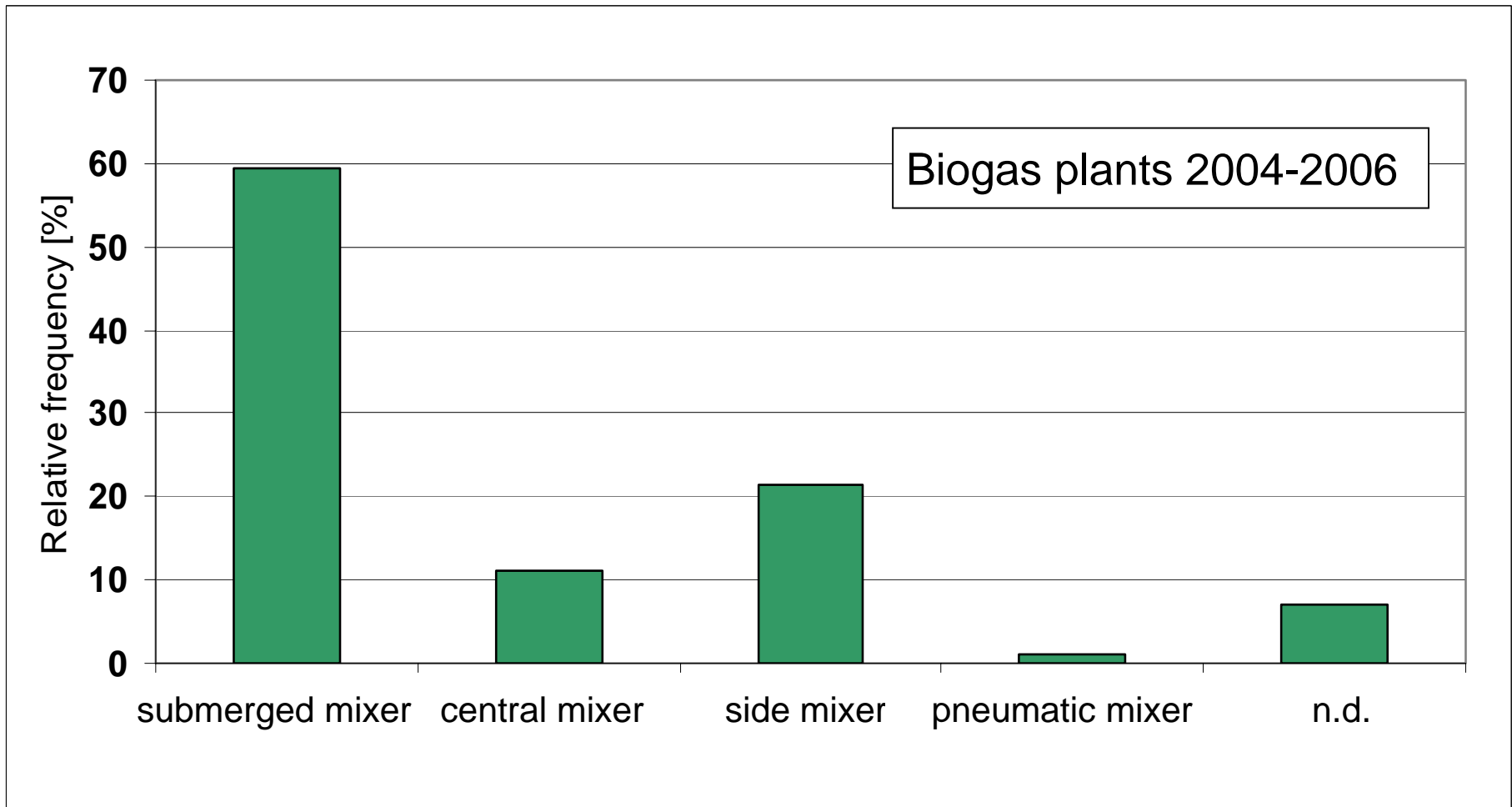
Solid substrate dosing device



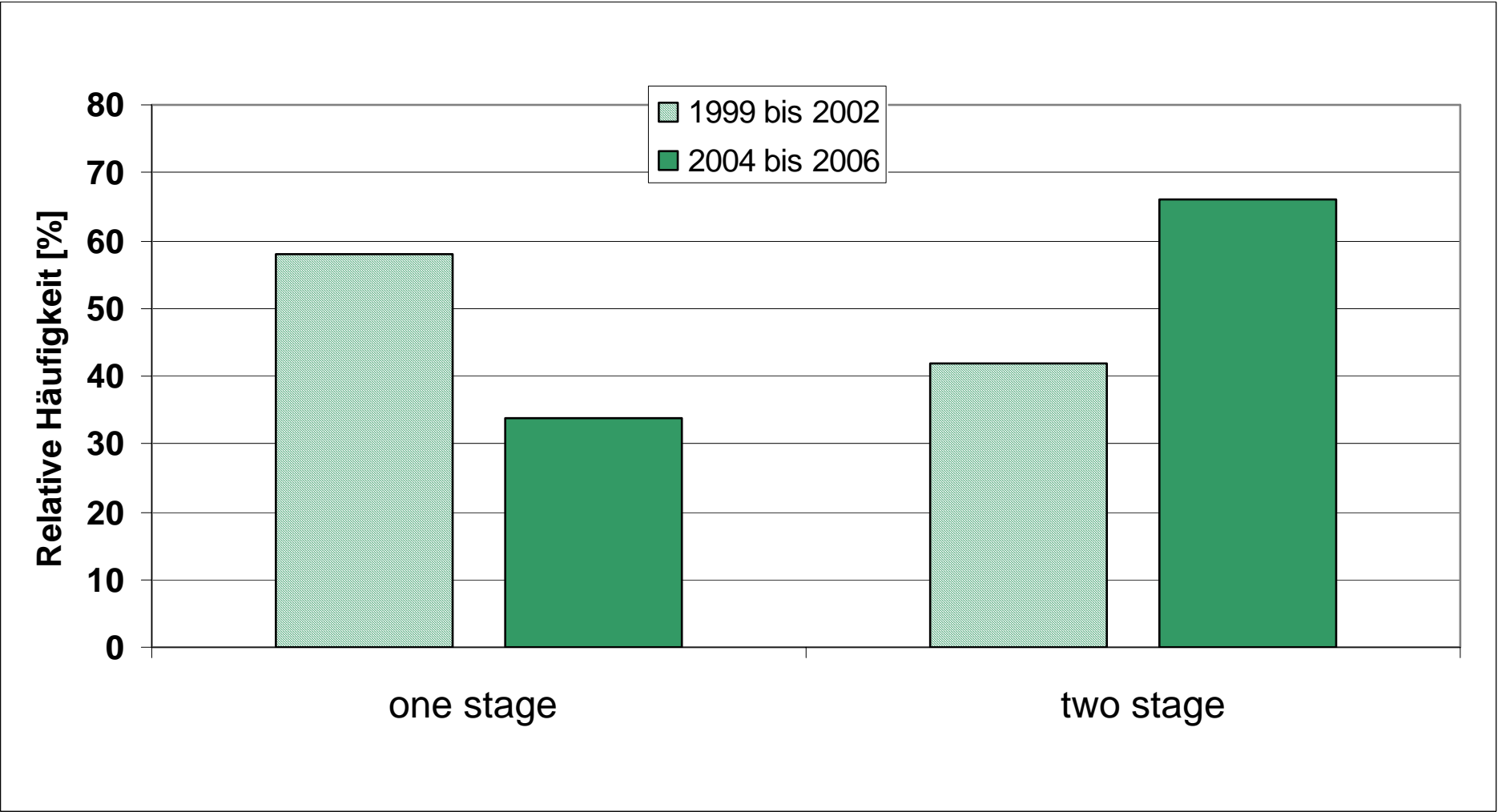
Reaktor systems



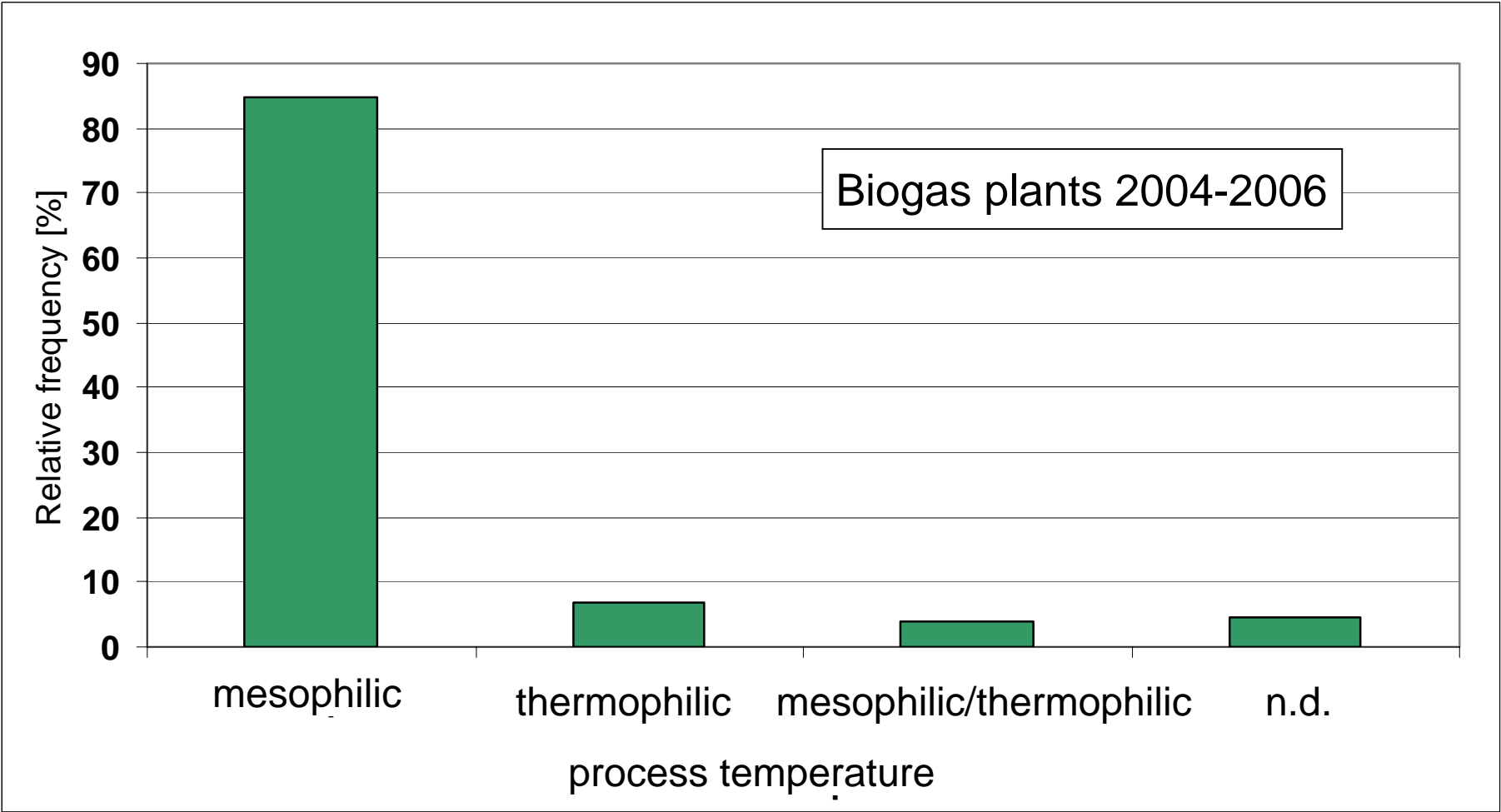
Application of different stirrer types



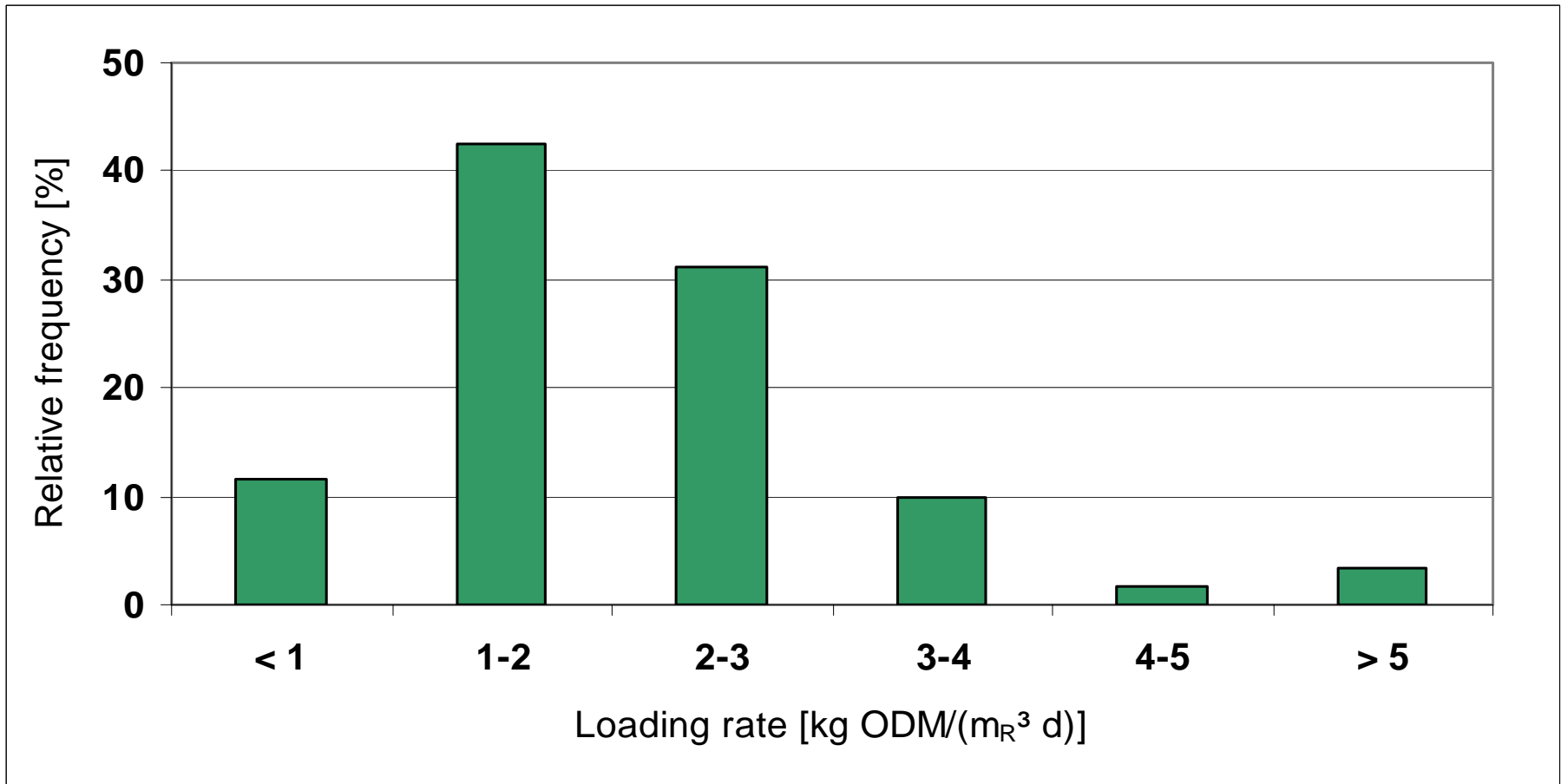
Number of process units



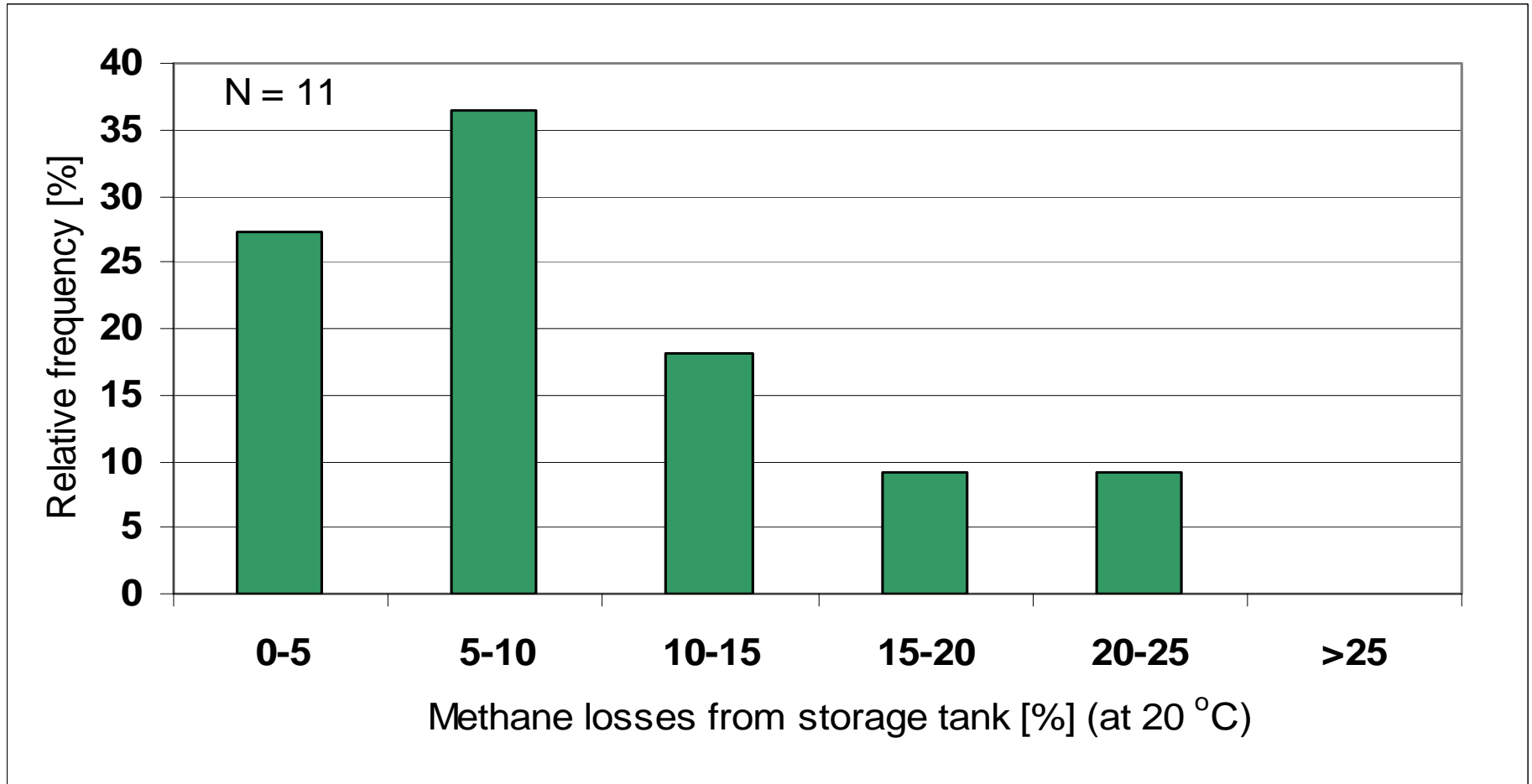
Process temperature



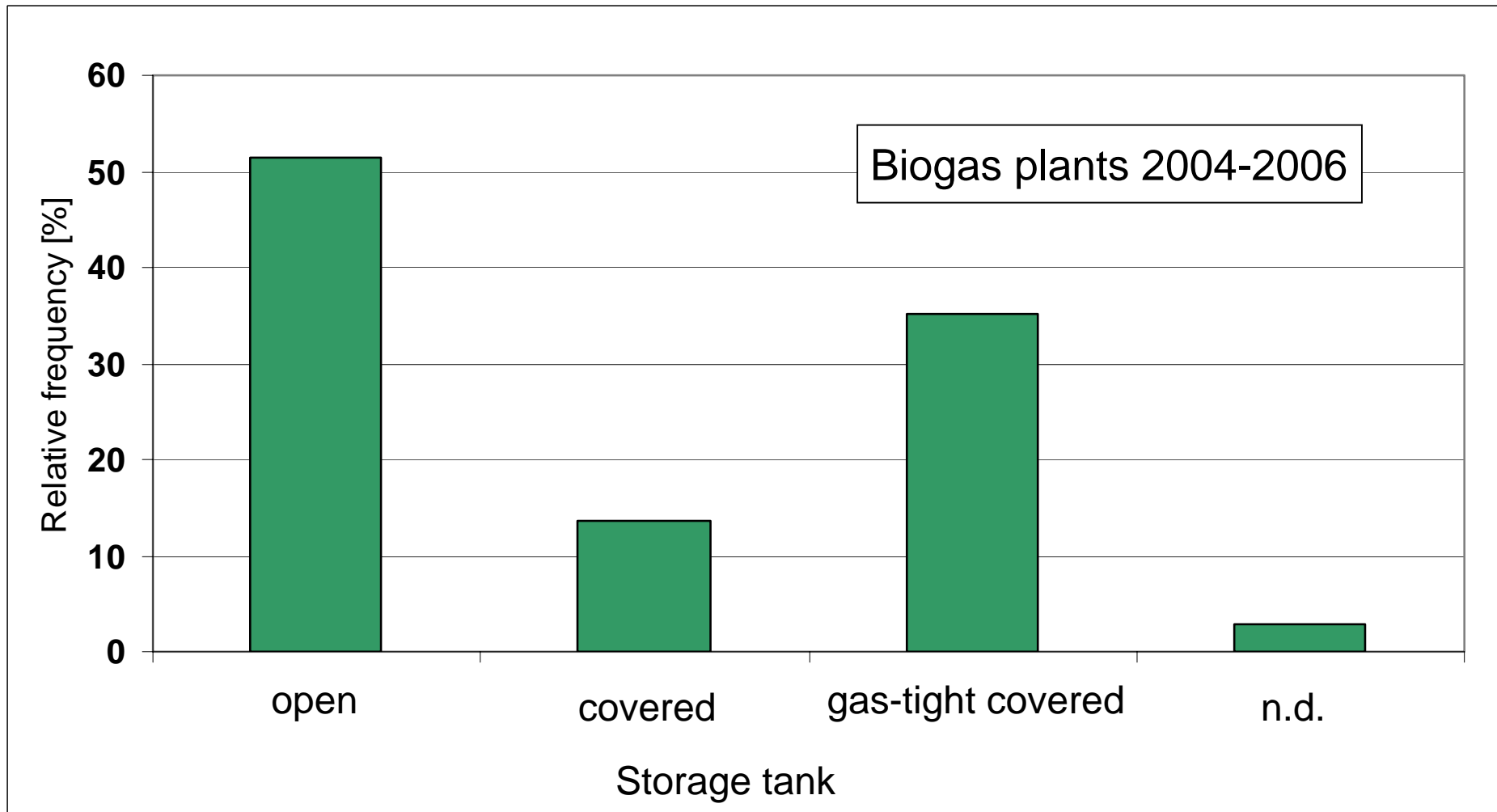
ODM-Loading rate



Residual methane formation from the storage tank



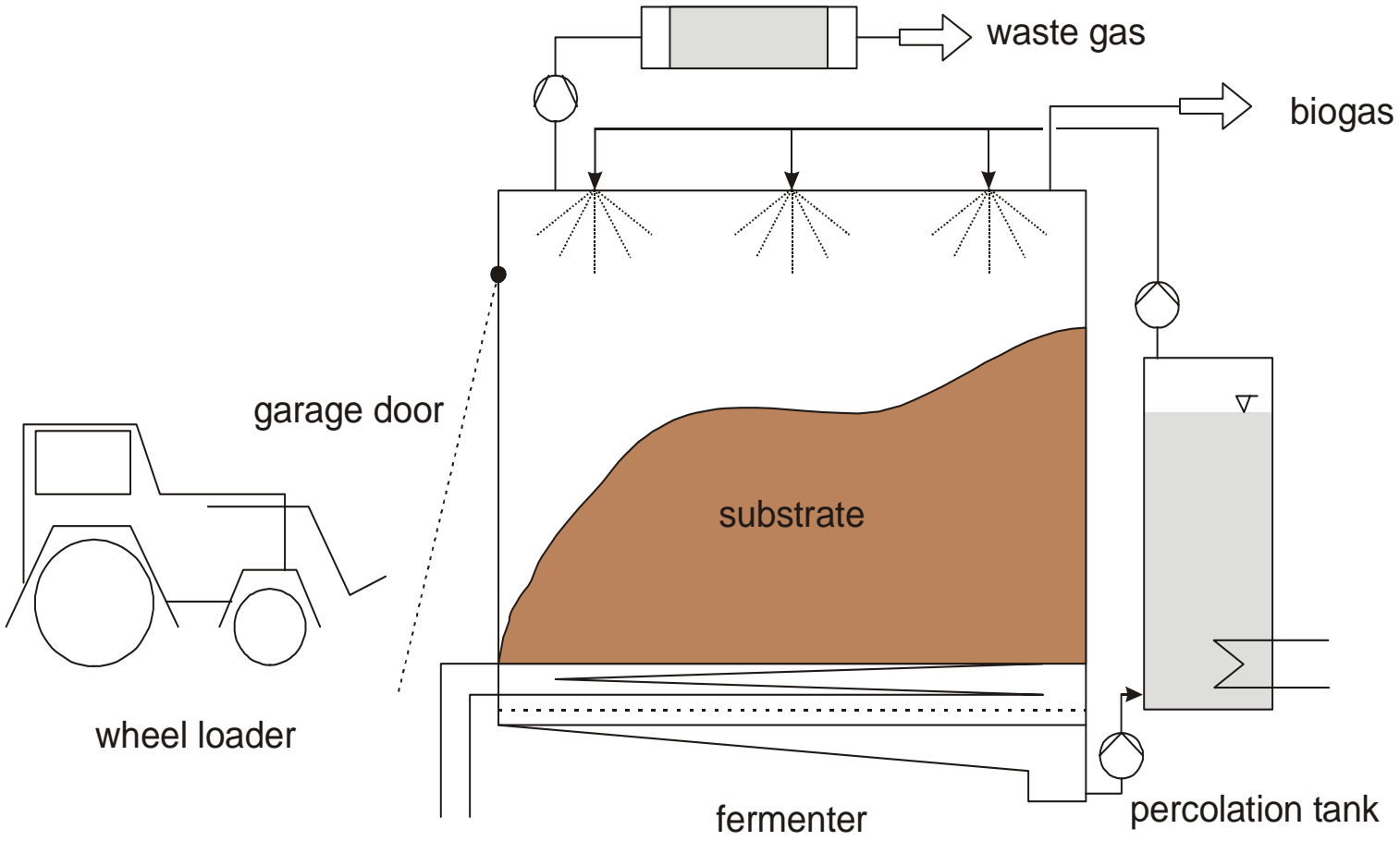
Storage tanks for digester residues



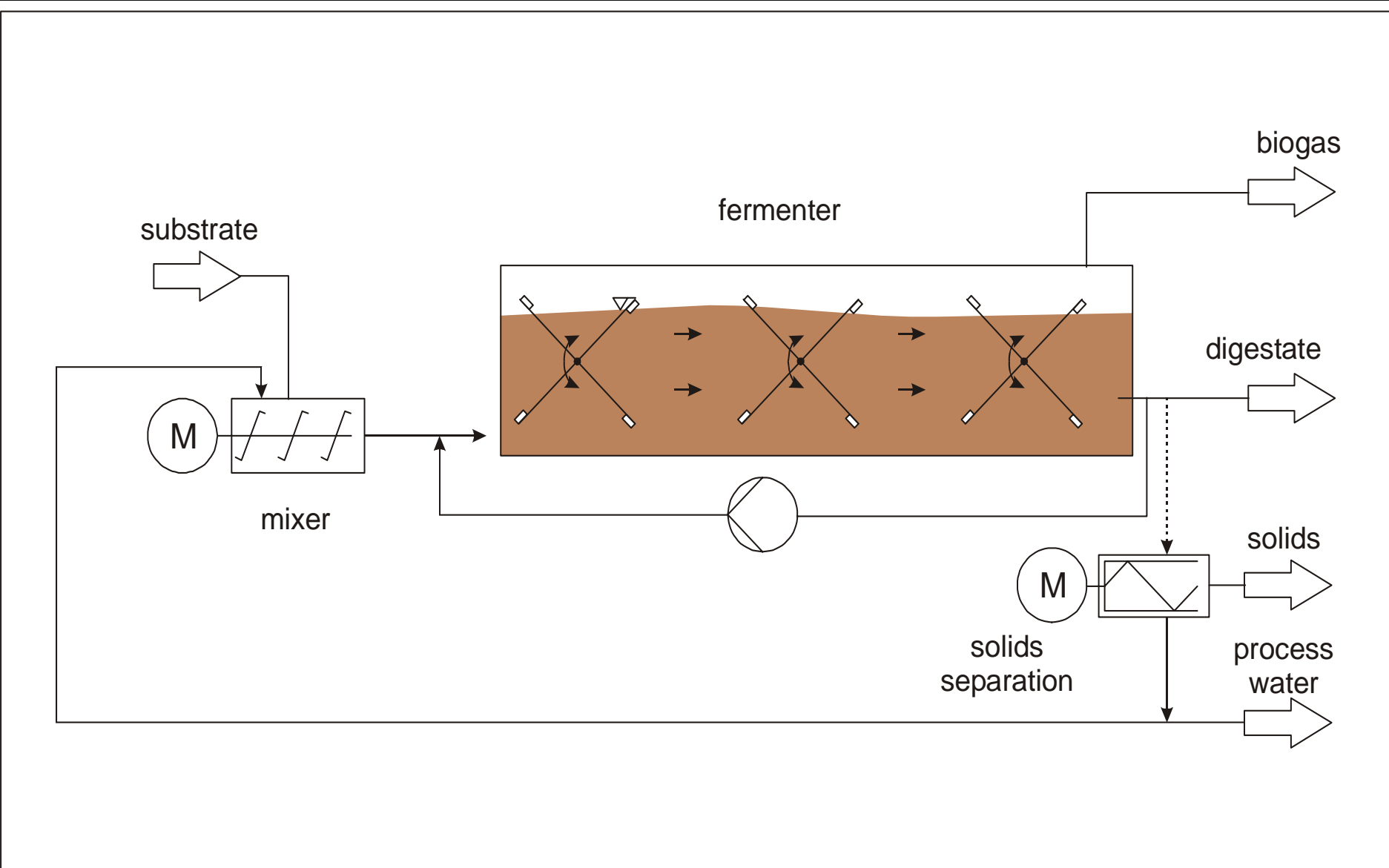
Renewable Energy Sources Act (2005)

Electrical capacity [kW]	Compensation [Cent/kWh _{el}]	Energy crops bonus [Cent/kWh _{el}]
150	11,33	6,0
150 – 500	9,75	6,0
500-5.000	8,77	4,0
KWK-Bonus: 2 Cent/kWh_{el} for external heat utilization		
Technology bonus: 2 Cent/kWh_{el} (e.g. dry fermentation)		

Discontinuously operated dry fermentation with percolation



Continuously operated dry fermentation with plug-flow fermenter



**Many thanks for your
attention!**

