

# Energy benchmarking in Covered Cropping



The following tables show the energy use for growing crops in a glasshouse in the Netherlands with some variations in growing techniques.

Cucumber						
Growing techniques		Cucumber, high wire, 2 screens, 42 weeks	Cucumber, 1 screen + plastic film, 50 weeks	Cucumber, 2 screens, 50 weeks	Cucumber, plastic film only, 47 weeks	Cucumber, 2 screens, 47 weeks, lighting - medium
Total energy incl. CO <sub>2</sub>	MJ/m <sup>2</sup>	1090	1460	1420	1230	1800
Total energy incl. CO <sub>2</sub>	MJ/kg	12.78	17.12	16.38	16.56	16.48

Capsicum and Lettuce								
Growing techniques		Capsicum, yellow, 2 screens, 50 weeks	Capsicum, green, 2 screens, 48 weeks	Capsicum, red/orange, 2 screens, 50 weeks	Capsicum, red pointed, 2 screens, 51 weeks	Lettuce, 220 grams, 52 weeks	Lettuce, 400 grams, 52 weeks	Lettuce, on water, 220 grams, lighting - low
Total energy incl. CO <sub>2</sub>	MJ/m <sup>2</sup>	1240	1160	1230	1260	200	200	710
Total energy incl. CO <sub>2</sub>	MJ/kg	38.64	32.48	39.8	60.92	6.2	6	13.4

Tomato											
Growing techniques		Tomato, cherry loose, 1 screen, 50 weeks	Tomato, cocktail truss, 1 screen, 50 weeks, lighting - high	Tomato, round, 1 screen, 50 weeks.	Tomato, truss, fine, 1 screen, 51 weeks	Tomato, truss, heavy, 1 screen, 50 weeks	Tomato, truss, heavy, 1 screen, 50 weeks, lighting - high	Tomato, truss medium, 1 screen, 51 weeks	Tomato, beef, 1 screen, 50 weeks.	Tomato, truss, heavy, 1 screen, 50 weeks, buy CO <sub>2</sub>	Tomato, truss heavy, 1 screen, 50 weeks, fluegas CO <sub>2</sub>
Total energy incl. CO <sub>2</sub>	MJ/m <sup>2</sup>	1480	2130	1480	1540	1480	2730	1540	1480	1460	1480
Total energy incl. CO <sub>2</sub>	MJ/kg	48.25	53.94	22.03	29.23	20.23	29.3	23.87	21.69	19.84	20.19

To view the full report 'Energy benchmarking in Covered Cropping' please visit [eeca.govt.nz](http://eeca.govt.nz)