

TABLE 3. Maintenance respiration rates obtained with various methods

Species and organ	Conditions	Maintenance respiration rate	Method	Reference
<i>Avena sativa</i> and <i>Hordeum vulgare</i> , seeds	water content 9–11 %	0.0002–0.0010	a	1
<i>Pisum sativum</i> , seeds	air dried	0.0039	a	1
Various conifers, stem wood	core, T = 15	0.02–0.13	a	2
Various conifers, stem wood	bark, T = 15	1.3	a	2
<i>Aspergillus niger</i> , mycelium	T = 30, [O <sub>2</sub> ] = 80 %, non growing	337.0	a	3
<i>Trifolium repens</i> , plants	T = 20, L	15.0	b	4
<i>Gossypium</i> sp., bolls	field conditions	6 ± 10	b	5
<i>Helianthus annuus</i> , plants	P = 24, T = 18, M	28.0	b	6
<i>Helianthus annuus</i> , plants	P = 24, T = 25, M	47.0	b	6
<i>Helianthus annuus</i> , plants	P = 15, T = 25, M	41.0	b	6
<i>Zea mays</i> , plants	P = 23, T = 18, M	7.0	b	6
<i>Zea mays</i> , plants	P = 23, T = 25, M	15.0	b	6
<i>Zea mays</i> , plants	P = 23, T = 33, M	44.0	b	6
<i>Helianthus annuus</i> , leaves	T = 25, H	60.0	c	7
<i>Zea mays</i> , leaves	T = 25, H	40.0–60.0	c	7
<i>Zea mays</i> , leaves	T = 25, H	57.0	c	8
<i>Zea mays</i> , leaves	T = 25, L	39.0	c	8
<i>Zea mays</i> , leaves	T = 25, L	8.0–10.0	c	9
<i>Lolium perenne</i> , leaves	T = 25, H	40.0	c	7
<i>Phaseolus vulgaris</i> , leaves	T = 25, H	80.0	c	7
<i>Phaseolus vulgaris</i> , leaves	T = 25, L	12.0	c	10
<i>Phaseolus multiflorus</i> , leaves, 14 days old	T = 18–25, L	55.0	c	11
<i>Phaseolus multiflorus</i> , leaves, 28 days old	T = 18–25, L	25.0	c	11
<i>Phaseolus multiflorus</i> , leaves, 48 days old	T = 18–25, L	18.0	c	11
<i>Phaseolus multiflorus</i> , leaves, 24 days old	T = 20, L, daylength = 6 h	18.0	c	11
<i>Phaseolus multiflorus</i> , leaves, 24 days old	T = 20, L, daylength = 12 h	18.0	c	11
<i>Phaseolus multiflorus</i> , leaves, 24 days old	T = 20, L, daylength = 18 h	30.0	c	11
<i>Hordeum</i> sp. and <i>Triticum</i> sp., leaves	T = 20	50–150	d	12
<i>Prunus laurocerasus</i>	T = 20	10–20	d	12
<i>Zea mays</i> , leaves	T = 20, M	27 ± 10	d	7
<i>Zea mays</i> , leaves	T = 25, M	26 ± 10	d	7
<i>Zea mays</i> , leaves	T = 30, M	46 ± 10	d	7
<i>Phaseolus vulgaris</i> , leaves	T = 25, M	27 ± 10	d	7

P stands for the tissue protein content (per cent) and T for temperature (°C); the assimilation rate in the days prior to measurement is indicated by H (high, in full sunlight), M (moderate) or L (low, at 100 W m<sup>-2</sup> or less). The respiration rate is expressed in mg glucose per g dry matter per day; values originally expressed in other units were converted, assuming a respiratory quotient of 1.

References: 1 Huber and Ziegler, 1960; 2 derived from Yoda *et al.*, 1965; 3 Tamiya and Yamaguchi, 1933; 4 McCree, 1970; 5 Thornley and Hesketh, 1972; 6 Penning de Vries, 1974; 7 Penning de Vries and Van Laar, unpublished; 8 derived from Heichel, 1970; 9 Alberda, unpublished; 10 Louwerse, unpublished; 11 Prinz zur Lippe, 1956; 12 James, 1953.

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