

Supplimentary fiels

Germination and survival

The seedling emergence rate for organic substrate treatments ranged from 9% to more than 45% on the 7th day after sowing. The seedling emergence rate for mineral substrate treatments ranged from 6% to more than 20% on the 7th day after sowing (Table S1). After 21 days, the seedling emergence rate became unchanged for all treatments, showing a range around 70% for organic substrate MKS 1, higher than MKS 3, this ranged from 50% to almost 59%. The seedling emergence rate for mineral substrate treatments ranged from 51% to more than 70% on the 21st day after sowing.

Table S1. The seedling emergence rate (%) for seed source of provenance and substrate treatments.

Day after sowing	Treatment	Organic substrate			Mineral substrate					
		B1	B2	B3	B4	B5	B6	B7	B8	
7 th	Provenance	A1	37.2	9.5	11.1	18.1	8.2	19.8	9.5	11.7
14 th			48.6	45.7	45.7	43.2	46.3	50.2	44.4	47.9
21 st			70.2	50.8	60.1	53.3	60.1	59.3	54.9	57.6
7 th		A2	47.1	24.7	11.9	10.1	7.2	20.6	6.8	7.4
14 th			63.6	52.7	52.5	54.1	57.2	66.5	52.9	61.5
21 st			73.7	56.4	63.0	54.3	66.0	70.8	67.1	62.8
7 th		A3	25.7	31.1	14.0	6.0	11.1	20.6	6.8	8.0
14 th			43.4	56.0	47.9	39.7	50.2	54.5	38.1	42.8
21 st			69.1	58.8	60.9	51.4	60.5	64.8	59.9	56.0

*Organic substrates: B1 – Peat MKS 1; B2 – Peat MKS 3; Mineral substrates: B3 – Rendzina; B4 – Rendzina + sand; B5 – Dystric cambisol; B6 – Dystric cambisol+sand; B7 – Eutric cambisol; B8 – Eutric cambisol+sand.