

TABLE 4
POTASSIUM SERIES NUTRIENT TREATMENT 1933 SAND CULTURE EXPERIMENT

Potassium Concentration in p.p.m.	Source	Milligrams of Source per Liter ³	Milligrams of Source per Pot ³ (4.5 Liters)	Hydrogen Ion ¹ Concentration of Sand Culture Solutions (pH)	Concentration of Nutrient Elements in p.p.m. (Milligrams per Liter) ³						
					K	P	N	Ca	S	Fe	Mg
0	NH ₄ H ₂ PO ₄	940.48	4232.16	5.20	....	253.37	114.50	....	....	....	....
	Ca(NO ₃) ₂ ·4H ₂ O	964.95	4342.27		....	....	114.50	163.78	....	....	....
	NH ₄ NO ₃	202.86	912.87		....	....	71.00	....	....	....	....
	CaCl ₂ ·6H ₂ O	439.71	1978.69		....	....	....	80.44	....	....	....
	MgSO ₄ ·7H ₂ O	1780.00	8010.00		....	....	....	....	231.50	....	175.60
	Ferric Citrate	20.00	90.00		....	....	....	....	....	3.40	....
	Totals ²				X	253.37	300.00	244.22	231.50	3.40	175.60
50	KCl	95.34	429.03	5.20	50.00	....	....	....	....	....	....
	NH ₄ H ₂ PO ₄	940.48	4232.16		....	253.37	114.50	....	....	....	....
	Ca(NO ₃) ₂ ·4H ₂ O	964.95	4342.27		....	....	114.50	163.78	....	....	....
	NH ₄ NO ₃	202.86	912.87		....	....	71.00	....	....	....	....
	CaCl ₂ ·6H ₂ O	439.71	1978.69		....	....	....	80.44	....	....	....
	MgSO ₄ ·7H ₂ O	1780.00	8010.00		....	....	....	....	231.50	....	175.60
	Ferric Citrate	20.00	90.00		....	....	....	....	....	3.40	....
	Totals				50.00	253.37	300.00	244.22	231.50	3.40	175.60
100	KCl	190.69	858.10	5.20	100.00	....	....	....	....	....	....
	NH ₄ H ₂ PO ₄	940.48	4232.16		....	253.37	114.50	....	....	....	....
	Ca(NO ₃) ₂ ·4H ₂ O	964.95	4342.27		....	....	114.50	163.78	....	....	....
	NH ₄ NO ₃	202.86	912.87		....	....	71.00	....	....	....	....
	CaCl ₂ ·6H ₂ O	439.71	1978.69		....	....	....	80.44	....	....	....
	MgSO ₄ ·7H ₂ O	1780.00	8010.00		....	....	....	....	231.50	....	175.60
	Ferric Citrate	20.00	90.00		....	....	....	....	....	3.40	....
	Totals				100.00	253.37	300.00	244.22	231.50	3.40	175.60
200	KCl	381.38	1716.21	5.33	200.00	....	....	....	....	....	....
	NH ₄ H ₂ PO ₄	940.48	4232.16		....	253.37	114.50	....	....	....	....
	Ca(NO ₃) ₂ ·4H ₂ O	964.95	4342.27		....	....	114.50	163.78	....	....	....
	NH ₄ NO ₃	202.86	912.87		....	....	71.00	....	....	....	....
	CaCl ₂ ·6H ₂ O	439.71	1978.69		....	....	....	80.44	....	....	....
	MgSO ₄ ·7H ₂ O	1780.00	8010.00		....	....	....	....	231.50	....	175.60
	Ferric Citrate	20.00	90.00		....	....	....	....	....	3.40	....
	Totals				200.00	253.37	300.00	244.22	231.50	3.40	175.60
319.37	KH ₂ PO ₄	1111.98	5003.91	5.36	319.37	253.37	....	....	....	....	....
	NH ₄ NO ₃	857.16	3857.22		....	....	300.00	....	....	....	....
	CaCl ₂ ·6H ₂ O	1334.98	6007.41		....	....	....	244.22	....	....	....
	MgSO ₄ ·7H ₂ O	1780.00	8010.00		....	....	....	....	231.50	....	175.60
	Ferric Citrate	20.00	90.00		....	....	....	....	....	3.40	....
	Totals				319.37	253.37	300.00	244.22	231.50	3.40	175.60
400	KH ₂ PO ₄	1111.98	5003.91	5.23	319.37	253.37	....	....	....	....	....
	KCl	153.75	691.87		80.63	....	....	....	....	....	....
	NH ₄ NO ₃	857.16	3857.22		....	....	300.00	....	....	....	....
	CaCl ₂ ·6H ₂ O	1334.98	6007.41		....	....	....	244.22	....	....	....
	MgSO ₄ ·7H ₂ O	1780.00	8010.00		....	....	....	....	231.50	....	175.60
	Ferric Citrate	20.00	90.00		....	....	....	....	....	3.40	....
	Totals				400.00	253.37	300.00	244.22	231.50	3.40	175.60
500	KH ₂ PO ₄	1111.98	5003.91	5.38	319.37	253.37	....	....	....	....	....
	KCl	344.44	1549.98		180.63	....	....	....	....	....	....
	NH ₄ NO ₃	857.16	3857.22		....	....	300.00	....	....	....	....
	CaCl ₂ ·6H ₂ O	1334.98	6007.41		....	....	....	244.22	....	....	....
	MgSO ₄ ·7H ₂ O	1780.00	8010.00		....	....	....	....	231.50	....	175.60
	Ferric Citrate	20.00	90.00		....	....	....	....	....	3.40	....
	Totals				500.00	253.37	300.00	244.22	231.50	3.40	175.60
600	KH ₂ PO ₄	1111.98	5003.91	5.03	319.37	253.37	....	....	....	....	....
	KCl	535.13	2408.08		280.63	....	....	....	....	....	....
	NH ₄ NO ₃	857.16	3857.22		....	....	300.00	....	....	....	....
	CaCl ₂ ·6H ₂ O	1334.98	6007.41		....	....	....	244.22	....	....	....
	MgSO ₄ ·7H ₂ O	1780.00	8010.00		....	....	....	....	231.50	....	175.60
	Ferric Citrate	20.00	90.00		....	....	....	....	....	3.40	....
	Totals				600.00	253.37	300.00	244.22	231.50	3.40	175.60
700	KH ₂ PO ₄	1111.98	5003.91	5.47	319.37	253.37	....	....	....	....	....
	KCl	725.82	3266.19		380.63	....	....	....	....	....	....
	NH ₄ NO ₃	857.16	3857.22		....	....	300.00	....	....	....	....
	CaCl ₂ ·6H ₂ O	1334.98	6007.41		....	....	....	244.22	....	....	....
	MgSO ₄ ·7H ₂ O	1780.00	8010.00		....	....	....	....	231.50	....	175.60
	Ferric Citrate	20.00	90.00		....	....	....	....	....	3.40	....
	Totals				700.00	253.37	300.00	244.22	231.50	3.40	175.60
800	KH ₂ PO ₄	1111.98	5003.91	5.38	319.37	253.37	....	....	....	....	....
	KCl	916.51	4124.29		480.63	....	....	....	....	....	....
	NH ₄ NO ₃	857.16	3857.22		....	....	300.00	....	....	....	....
	CaCl ₂ ·6H ₂ O	1334.98	6007.41		....	....	....	244.22	....	....	....
	MgSO ₄ ·7H ₂ O	1780.00	8010.00		....	....	....	....	231.50	....	175.60
	Ferric Citrate	20.00	90.00		....	....	....	....	....	3.40	....
	Totals				800.00	253.37	300.00	244.22	231.50	3.40	175.60
900	KH ₂ PO ₄	1111.98	5003.91	5.47	319.37	253.37	....	....	....	....	....
	KCl	1107.20	4982.40		580.63	....	....	....	....	....	....
	NH ₄ NO ₃	857.16	3857.22		....	....	300.00	....	....	....	....
	CaCl ₂ ·6H ₂ O	1334.98	6007.41		....	....	....	244.22	....	....	....
	MgSO ₄ ·7H ₂ O	1780.00	8010.00		....	....	....	....	231.50	....	175.60
	Ferric Citrate	20.00	90.00		....	....	....	....	....	3.40	....
	Totals				900.00	253.37	300.00	244.22	231.50	3.40	175.60

¹ Average of check solutions.
² The total concentration of each nutrient element except potassium, which is varied, remains constant throughout the series.
³ Figures beyond those significant retained for convenience in machine calculation.