

TABLE XX.

Relative proportions of Phosphorus in aerial and subterranean parts of Fingerhuthia africana, Armoedsvlakte.

Date.	Relative phosphoric oxide content on basis of root = 1.					Relative weights of dry matter of plant parts on basis of root = 1.					Phosphoric oxide in various plant parts on the basis of total in whole plant = 100.					
	Young Leaves.	Full-grown Leaves.	Stalks.	Spikes.	Dry Material.	Young Leaves.	Full-grown Leaves.	Stalks.	Spikes.	Dry Material.	Young Leaves.	Full-grown Leaves.	Stalks.	Spikes.	Dry Material.	Roots.
25. 9.1924	4.8				13.1	1.4				20.5	25.4				69.3	5.3
15.10.1924	12.0				8.5	4.5				12.7	55.0				39.0	6.0
4.11.1924	9.0				7.7	4.3				11.6	50.9				43.5	5.6
19.11.1924	14.2	26.0			12.9	5.0	10.8			23.6	26.2	48.0			23.8	2.0
9.12.1924	1.5	1.2	1.5		5.6	0.6	0.7	0.4		8.1	13.9	11.3	13.9		57.8	9.1
30.12.1924	11.0	17.0	12.7	14.3	10.3	3.6	7.9	7.5	4.2	16.1	16.5	25.6	19.2	21.5	15.5	1.5
19. 1.1925		36.2	2.9	3.9	9.5		19.0	2.3	0.9	13.6		67.7	5.4	7.2	17.8	1.9
4. 2.1925	2.5	3.8	5.0	2.2	7.9	1.0	2.7	7.0	0.7	13.0	11.1	17.3	22.3	9.8	35.2	4.3
18. 2.1925	1.5	1.7	0.7	0.5	5.1	0.4	0.6	0.6	0.1	5.4	14.3	16.2	6.6	4.7	48.6	9.6
11. 3.1925	2.2	2.9	2.8	0.7	5.1	0.4	0.9	0.7	0.2	5.0	14.9	19.6	19.0	6.9	34.6	5.0
31. 3.1925	5.3	12.3	3.8	3.2	5.3	1.2	3.6	1.9	0.7	4.9	17.1	39.8	12.3	10.4	17.1	3.3
21. 4.1925	6.0	6.5	7.6	3.0	3.7	1.7	2.5	3.8	0.8	4.1	21.5	23.4	27.3	10.8	13.3	3.7
19. 5.1925	4.9		1.0	0.9	4.2	2.2		1.3	0.3	6.4	40.9		10.5	7.5	20.6	10.5
18. 6.1925	12.7		0.9	0.4	14.9	4.3		0.9	0.2	10.0	33.3		3.0	1.3	47.6	14.8
15. 7.1925	7.5		3.0		7.7	3.0		4.3		9.7	39.0		15.6		40.1	5.3

TABLE XXI.

Relative proportions of Phosphorus in aerial and subterranean parts of Sporobolus fimbriatus, Armoedsvlakte.

Date.	Relative phosphoric oxide content on basis of root value = 1.					Relative weights of dry matter of plant parts on basis of root = 1.					Phosphoric oxide in various plant parts on the basis of total in whole plant = 100.					
	Young Leaves.	Full- grown Leaves.	Stalks.	Spikes.	Dry Material.	Young Leaves.	Full- grown Leaves.	Stalks.	Spikes.	Dry Material.	Young Leaves.	Full- grown Leaves.	Stalks.	Spikes.	Dry Material.	oots.
25. 9.1924	4.4				0.9	1.3				4.0	69.9				14.2	15.9
20.10.1924	3.0				1.6	2.0				7.4	53.6				28.5	17.9
4.11.1924	7.0				1.9	3.3				5.0	70.7				19.2	10.1
19.11.1924	4.7	8.8			2.7	1.7	3.5			6.5	27.3	57.2			15.7	5.8
9.12.1924	1.8	5.4	13.1	6.3	4.1	0.8	2.6	4.0	2.0	9.5	5.6	17.1	41.3	19.8	13.0	3.2
30.12.1924	9.3	18.4	7.4	5.4	10.3	3.2	6.7	3.7	1.4	22.0	17.9	35.5	13.9	10.2	19.8	3.7
19. 1.1925	22.7		3.0	3.8	21.2	7.7		2.8	0.7	21.0	43.9		5.8	7.3	41.0	3.0
4. 2.1925	3.1	7.4	12.3	1.8	17.1	1.3	3.1	4.4	0.7	31.3	7.2	17.9	28.6	4.1	39.8	2.4
18. 2.1925	0.8	1.4	0.3	0.2	0.9	0.6	1.4	0.4	0.2	2.7	30.4	6.5	4.3	4.3	19.5	21.9
11. 3.1925	4.2	13.3	2.9	3.1	2.2	1.0	3.3	1.6	0.5	3.5	15.7	49.8	10.8	11.6	8.2	3.9
31. 3.1925	2.2	5.9	1.6	1.9	2.0	0.8	2.5	1.3	0.6	5.6	15.0	40.4	10.9	13.0	13.7	7.0
21. 4.1925	5.5	14.2	2.0	1.6	2.2	1.7	5.0	2.0	0.5	3.8	20.7	54.0	7.5	6.0	8.3	3.5
19. 5.1925	5.7		0.6	0.09	3.0	2.2		1.0	0.1	5.7	54.9		5.7	0.9	28.9	9.6
18. 6.1925	1.3		0.2		5.2	0.8		0.8		10.4	16.9		2.5		67.5	13.1
15. 7.1925	4.2		0.7		13.2	2.0		1.6		19.7	22.0		3.6		69.0	4.4

TABLE XXII.

Relative proportion of Phosphorus in aerial and subterranean parts of Aristida congesta, Armoedsvlakte.

Date.	Relative phosphoric oxide content on basis of root value = 1.					Relative weights of dry matter of plant parts on basis of root = 1.					Phosphoric oxide in various plant parts on the basis of total in whole plant = 100.					
	Young Leaves.	Full- grown Leaves.	Stalks.	Spikes.	Dry Material.	Young Leaves.	Full- grown Leaves.	Stalks.	Spikes.	Dry Material.	Young Leaves.	Full- grown Leaves.	Stalks.	Spikes.	Dry Material.	Roots.
25. 9.1924	7·4				3·0	3·4				6·2	64·9				26·3	8·8
15.10.1924	6·3				4·1	3·1				16·3	54·8				35·6	9·6
4.11.1924	21·7				6·4	10·1				23·8	74·6				22·0	3·4
19.11.1924	23·2				2·6	12·8				10·4	87·0				9·7	3·3
9.12.1924	18·9		16·3		3·5	7·9		5·3		10·6	47·5		40·9		8·7	2·9
30.12.1924	13·4		9·7	5·8	0·8	6·5	5·2	2·4	2·8	43·7		31·6	18·9	2·6	4·2	
13. 1.1925	7·7		1·5	0·9	1·7	2·9	0·5	0·2	5·1	60·2		11·7	7·0	13·3	7·8	
4. 2.1925	8·2		1·0	5·6	3·7	2·0	8·6	2·2	10·0	42·0		5·1	28·7	19·1	5·1	
18. 2.1925	8·8		3·6	2·3	3·5	5·6	4·8	1·5	16·1	45·8		18·7	12·0	18·2	5·3	
11. 3.1925	16·0		1·5	2·9	0·8	4·9	0·9	1·1	2·8	72·0		6·7	13·1	3·6	4·6	
31. 3.1925	6·8		8·3	8·8	2·6	3·1	6·7	4·6	8·2	24·7		30·1	32·0	9·4	3·8	
21. 4.1925	6·9		4·4	20·7	2·4	3·3	3·8	5·8	6·9	19·5		12·7	58·5	6·7	2·6	
19. 5.1925	3·1		5·2	5·7	2·9	1·2	7·3	4·3	9·0	17·0		29·0	31·8	16·2	6·0	
18. 6.1925	2·9		2·2	4·7	4·2	1·3	3·4	0·6	6·7	19·3		14·6	31·4	28·0	6·7	
15. 7.1925	10·6		3·2	0·9	8·2	3·3	3·3	1·0	10·0	44·3		13·3	3·7	34·3	4·4	

TABLE XXIII.

Relative proportions of Phosphorus in aerial and subterranean parts of Aristida uniplumis, Armoedsvlakte.

Date,	Relative phosphoric oxide content on basis of root value = 1.				Relative weights of dry matter of plant parts on basis of root = 1.					Phosphoric oxide in various plant parts on the basis of total in whole plant = 100.						
	Young Leaves.	Full- grown Leaves.	Stalks.	Spikes.	Dry Material.	Young Leaves.	Full- grown Leaves.	Stalks.	Spikes.	Dry Material.	Young Leaves.	Full- grown Leaves.	Stalks.	Spikes.	Dry Material.	Roots.
25. 9.1924	4.7				9.5	1.8				16.2	31.8				62.9	5.3
20.10.1924	5.4				2.4	2.7				8.4	61.3				27.3	11.4
4.11.1924	6.4				3.2	3.4				11.6	60.0				30.1	9.9
19.11.1924	4.7			5.4	0.5	2.2		2.9		2.1	40.4		46.5		4.3	8.8
9.12.1924	8.7			22.3	2.3	3.4		6.2		4.8	25.3		65.0		6.7	3.0
30.12.1924	6.0		8.4	2.9	4.6	3.2		5.5	1.3	12.6	26.2		36.7	12.7	20.1	4.3
18. 1.1925	2.6		12.8	2.2	3.8	1.6		8.9	1.4	8.9	11.6		57.1	9.8	16.9	4.6
4. 2.1925	16.1		28.9	2.5	9.5	5.6		9.2	1.2	18.1	27.7		49.8	4.3	16.4	1.8
18. 2.1925	2.4		4.9	1.0	3.0	1.5		4.6	0.7	9.6	19.5		39.9	8.1	24.4	8.1
11. 3.1925	8.3		5.6	1.5	2.2	1.7		2.9	0.6	3.5	44.6		30.1	8.0	11.8	4.5
31. 3.1925	15.2		17.5	9.7	12.9	5.0		8.6	3.8	19.0	27.0		31.1	17.2	22.9	1.8
21. 4.1925	5.5		8.8	3.9	3.0	2.2		5.5	1.7	6.2	24.7		39.6	17.5	13.5	4.7
19. 5.1925	2.7		4.7	1.8	2.8	1.3		4.7	1.1	8.5	20.8		36.1	13.5	21.5	8.1
18. 6.1925	0		11.6	0.5	9.6	0		21.0	0.5	24.5	0		51.1	2.2	42.3	3.4
15. 7.1925	0		17.4	1.0	26.3	0		16.2	1.0	17.0	0		38.1	2.1	57.6	2.1

TABLE XXIV.

Relative proportions of Phosphorus in aerial and subterranean parts of Anthephora pubescens, Armoedsvalakte.

Date.	Relative phosphoric oxide content on basis of root value = 1.					Relative weights of dry matter of plant parts on basis of root = 1.					Phosphoric oxide in various plant parts on the basis of total in whole plant = 100.					
	Young Leaves.	Full- grown Leaves.	Stalks.	Spikes.	Dry Material.	Young Leaves.	Full- grown Leaves.	Stalks.	Spikes.	Dry Material.	Young Leaves.	Full- grown Leaves.	Stalks.	Spikes.	Dry Material.	R roots.
29. 9. 1924	3.0				3.3	1.5				18.4	41.1				45.2	3.7
20. 10. 1924	7.3				5.2	3.5				17.4	54.1				38.5	7.4
4. 11. 1924	3.6				1.4	1.3				3.9	60.0				23.3	16.7
19. 11. 1924	3.9	10.0			4.4	1.0	3.4			11.0	20.2	51.8			22.8	5.2
9. 12. 1924	0.7	1.9	0.7	1.0	3.8	0.2	0.8	0.2	0.3	9.4	7.7	20.6	7.7	11.0	42.0	11.6
30. 12. 1924	3.8	5.0	5.4	6.7	5.6	1.1	2.4	2.3	2.2	16.6	13.8	18.1	19.6	24.3	20.3	4.4
18. 1. 1925	0.5	2.1	2.2	0.4	1.2	0.3	1.7	2.4	0.4	5.0	6.7	28.3	29.7	5.4	16.3	13.6
4. 2. 1925	4.7		1.2	0.9	2.8	2.2	1.2	0.5	9.0	44.3		11.3	8.4	26.4	9.6	
18. 2. 1925	3.5	7.0	0.02	0.4	2.5	1.5	3.3	0.03	0.2	9.4	24.2	48.6	0.14	2.7	17.3	7.1
11. 3. 1925	6.6	10.2	2.4	1.9	5.7	1.8	4.1	1.2	0.7	17.2	23.7	36.3	8.8	6.8	20.5	3.9
31. 3. 1925	10.0	18.2	10.3	5.1	1.9	3.9	8.6	6.0	2.0	6.4	21.5	39.1	22.1	10.9	4.3	2.1
21. 4. 1925	6.2	12.2	2.3	3.4	1.7	2.0	3.8	1.8	1.4	4.2	23.1	45.5	8.5	12.7	7.9	2.3
19. 5. 1925	9.8		0.9	0.6	4.4	3.2	0.9	0.3	12.0	58.0		5.2	3.5	26.3	7.0	
18. 6. 1925	--		0.07		3.6	--	0.2			6.8	--		1.5	77.1	21.4	
15. 7. 1925	--				11.1	--				16.1	--			91.7	8.3	

TABLE XXV.

Relative proportions of Phosphorus in aerial and subterranean parts of Eragrostis lehmanniana, Armoedsvlakte.

Date.	Relative phosphoric oxide content on basis of root value = 1.					Relative weights of dry matter of plant parts on basis of root = 1.					Phosphoric oxide in various plant parts on the basis of total in whole plant = 100.					
	Young Leaves.	Full- grown Leaves.	Stalks.	Spikes.	Dry Material.	Young Leaves.	Full- grown Leaves.	Stalks.	Spikes.	Dry Material.	Young Leaves.	Full- grown Leaves.	Stalks.	Spikes.	Dry Material.	Roots.
26. 9.1924	1.2				2.9	0.8				9.7	20.5				56.8	22.7
15.10.1924	9.4				3.4	3.6				7.8	68.1				24.7	17.2
4.11.1924	16.0				3.9	7.2				3.9	76.6				18.6	4.8
19.11.1924	2.9	4.3		5.8	0.9	1.2	2.1		3.3	2.8	19.4	28.9		39.0	6.0	6.7
9.12.1924	5.4	8.0		9.5	3.7	2.4	5.5		3.0	10.0	19.5	29.0		34.4	13.4	3.7
30.12.1924	13.1		12.6	6.3	8.0	7.6	8.0	1.7	17.4		31.9		30.6	15.3	19.5	2.6
13. 1.1925	5.9		2.9	0.7	3.9	3.5	1.3	0.2	5.8		41.0		18.3	4.8	27.2	8.7
4. 2.1925	2.9		6.8	0.5	7.7	0.8	3.6	0.2	11.2		15.3		35.9	2.6	40.7	5.5
18. 2.1925	8.5		8.3	1.8	4.7	1.9	4.5	0.7	5.5		35.0		34.2	7.4	19.8	3.6
11. 3.1925	11.0		4.8	4.4	1.6	2.5	2.3	0.9	2.3		48.3		21.0	19.3	7.2	4.2
31. 3.1925	17.5		15.7	23.9	0.8	5.8	7.4	6.0	1.2		29.7		26.6	40.5	1.3	1.9
21. 4.1925	5.2		3.1	2.7	0.3	2.0	2.0	1.3	0.9		40.9		24.4	21.2	2.3	1.2
19. 5.1925	3.6			2.1	0.2	3.1		2.2	0.7		52.2		30.4		2.9	14.5
18. 6.1925	1.4			4.8	3.4	0.5		4.1	4.2		13.2		45.2		32.0	9.6
15. 7.1925	1.9		1.4		8.6	1.2	2.8		9.2		15.1		10.8		66.6	7.5

TABLE XXVI.

Relative proportions of Phosphorus in aerial and subterranean parts of Tragus racemosus, Armoedsvlakte.

Date.	Relative phosphoric oxide content on basis of root value = 1.					Relative weights of dry matter of plant parts on basis of root = 1.					Phosphoric oxide in various plant parts on the basis of total in whole plant = 100.					
	Young Leaves.	Full- grown Leaves.	Stalks.	Spikes.	Dry Material.	Young Leaves.	Full- grown Leaves.	Stalks.	Spikes.	Dry Material.	Young Leaves.	Full- grown Leaves.	Stalks.	Spikes.	Dry Material.	Roots.
30.12.1924	29·3		85·3			8·2		31·0			25·3		73·7			1·0
13. 1.1925	11·8		12·5		0·4	6·0		0·6		0·7	42·0		48·6		1·5	7·9
4. 2.1925	29·1		14·9		3·7	24·6		6·4		16·7	59·7		30·6		7·6	2·1
18. 2.1925	22·2		0·9			13·7		0·1			92·1		3·7			4·2
11. 3.1925	43·0		35·9		1·0	13·2		9·3		1·3	53·2		44·4		1·2	1·2
31. 3.1925	9·8		27·8		2·9	5·1		11·8		4·5	23·6		67·0		7·0	2·4

TABLE XXVII.

Themeda triandra: Dry Harts, flood area. Phosphorus content as percentage phosphoric oxide on dry matter.

Date.	Leaves.				Roots.		Stalks and Spikes.		
	Remarks.	Young.		Full-grown.		Remarks.	% P ₂ O ₅ .	Stalks	Spikes
		% Dry Matter.	% P ₂ O ₅ .	% Dry Matter.	% P ₂ O ₅ .			% P ₂ O ₅ .	% P ₂ O ₅ .
11. 9.1924	Very few green leaves, partly folded, broader than in <i>Armoedsvlakte</i> . Grazed down.	33·0	0·306			No removable tissue.....	0·177		
13.12.1924	Open, 11 c.m. long; grazed a little	32·0	0·500	32·0	0·417	Thin absorptive tissue: root hairs and secondary roots	0·156	Flowering spikes.....	0·323 0·417
24. 1.1925	Open, 18 cm. long.....	40·0	0·454	50·0	0·319	Dry, no absorptive tissue or root hairs	0·140	Spikes seeding.....	0·191 0·187
5. 3.1925	Half open and fresh.....	30·0	0·341	48·0	0·349	Thin fresh removable tissue; secondary roots	0·139	Spikes dry, seeds shrivelled	0·196 0·250
30. 4.1925	Open.....	37·0	0·484	42·0	0·405	Secondary roots.....	0·188	Spikes after flowering....	0·111 0·291
12. 6.1925	Green leaves..... Brown leaves.....			58·0	0·357 0·154	No absorptive tissue.....	0·175	Spikes dry.....	0·125 0·093

TABLE XXVIII.

Dry Harts, kopje.

Date.	Leaves.				Roots.		Stalks and Spikes.			
	Remarks.	Young.		Full-grown.		Remarks.	P ₂ O ₅ %.	Remarks.	Stalks.	Spikes.
		% Dry Matter.	% P ₂ O ₅ .	% Dry Matter.	% P ₂ O ₅ .				% P ₂ O ₅ .	% P ₂ O ₅ .
12. 9.1924	Very few green leaves, folded, 7.5 cm. long. Withered at top	40.0	0.171			No removable tissue, dry..	0.230			
13.12.1924	Open, 16 cm. long.....	30.0	0.385	32.0	0.259	Good absorptive tissue on new roots. Root hairs and secondary roots	0.139	Flowering spikes.....	0.341	0.319
24. 1.1925	Folded, but fairly fresh. 30 cm. long	45.0	0.229	50.0	0.187	Dry, absorptive tissue still attached; no root hairs; secondary roots	0.095	Spikes after seeding.....	0.104	0.139
5. 3.1925	Open, fresh.....	35.0	0.162	48.0	0.217	Rather dry, some new roots	0.087	Spikes dry and empty....	0.043	0.076
30. 4.1925	Both old and young leaves open	40.0	0.312	50.0	0.224	Secondary roots; root hairs on absorptive tissue	0.112	Spikes dry.....	0.051	0.203
12. 6.1925	A few green leaves, open.. Brown leaves			45.0	0.150 0.065	Roots dry, with no absorptive tissue	0.114	Spikes and stalks dry.....	0.034	0.054

TABLE XXIX.

Digitaria eriantha: Dry Harts, flood area. Phosphorus content as percentage phosphoric oxide on plant dry matter throughout the year.

Date.	Remarks.	Leaves.				Roots.		Stalks and Spikes.		
		Young.		Full-grown.		Remarks.	% P ₂ O ₅ .	Remarks.	Stalks.	Spikes.
		% Dry Matter.	% P ₂ O ₅ .	% Dry Matter.	% P ₂ O ₅ .				% P ₂ O ₅ .	% P ₂ O ₅ .
13. 9.1924	Open, very fresh under a bush. About 16 cms. long	35.0	0.320			With absorptive tissue...	0.208			
13.12.1924	Open, short.....	27.0	0.429	30.0	0.246	Thin absorptive tissue. Root hairs. Secondary roots	0.115	Flowering spikes.....	0.349	0.326
24. 1.1925	Not quite fresh.....	35.0	0.484	40.0	0.435	Very dry, no absorptive tissue	0.138	Flowering spikes.....	0.300	0.375
5. 3.1925	Open and fresh.....	27.0	0.469	36.0	0.429	Absorptive tissue, secondary roots	0.107	Spikes with unripe seeds..	0.203	0.300
30. 4.1925	Open.....	23.0	0.469	32.0	0.304	Secondary roots.....	0.100	Spikes dry.....	0.078	0.160
16. 6.1925	No green leaves. Only brown leaves				0.156	Dry, no absorptive tissue..	0.178	Spikes dry.....	0.125	0.135

TABLE XXX.

Digitaria eriantha: Dry Harts, kopje.

Date	Leaves.					Roots.		Stalks and Spikes.		
	Remarks.	Young.		Full-grown.		Remarks.	% P ₂ O ₅ .	Remarks.	Stalks.	Spikes.
		% Dry Matter.	% P ₂ O ₅ .	% Dry Matter.	% P ₂ O ₅ .				% P ₂ O ₅ .	% P ₂ O ₅ .
12. 9.1924	Very few green leaves. To 15 cms. long, withered at tip	30.0	0.400			Very dry with absorptive tissue	0.111			
13.12.1924	Open. 13-16 cms. long..	31.0	0.375	32.6	0.300	Dry, some new roots, secondary roots	0.218	Flowering spikes.....	0.300	0.429
24. 1.1925	Open, fresh, very hairy. 25 cms. long	35.0	0.375	35.0	0.333	Dry, no absorptive tissue nor root hairs	0.088	Spikes just after flowering	0.094	0.291
5. 3.1925	Open, fresh, hairy.....	31.0	0.361	40.0	0.333	Dry, some new roots with root hairs	0.093	Shrivelled seeds.....	0.204	0.125
30. 4.1925	Open.....	30.0	0.315	35.0	0.312	Secondary root, no absorptive tissue	0.097	Dry spikes.....	0.089	0.071
12. 6.1925	Few green leaves, rolled.. Brown leaves			45.0	0.237 0.057	Dry, no absorptive tissue.	0.122	No spikes and stalks found		

TABLE XXXI.

Eragrostis superba; Dry Harts, flood area. Phosphorus content as percentage phosphoric oxide on dry matter.

Date.	Leaves.					Roots.		Stalks and Spikes.		
	Remarks.	Young.		Full-grown.		Remarks.	% P ₂ O ₅ .	Remarks.	Stalks.	Spikes.
		% Dry Matter.	% P ₂ O ₅ .	% Dry Matter.	% P ₂ O ₅ .				% P ₂ O ₅ .	% P ₂ O ₅ .
13.12.1924	Open, short.....	30.0	0.411	45.0	0.326	Fairly thick absorptive tissue; root hairs and secondary roots	0.102	Flowering spikes.....	0.263	0.250
24. 1.1925	Fairly fresh.....			40.0	0.429	Roots dry, with absorptive tissue	0.043	Spikes seeding.....	0.268	0.316
5. 3.1925	Open.....			45.0	0.286	Absorptive tissue.....	Lost	Haulms young.....	0.3	23
30. 4.1925	Open.....			37.0	0.469	Absorptive tissue; root hairs and secondary roots	0.112	Spikes flowering.....	0.169	0.400
12. 6.1925	No green leaves found; brown leaves				0.209	Absorptive tissue with root hairs	0.037	Spikes dry.....	0.193	0.207

TABLE XXXII.

Eragrostis superba; *Dry Harts, koppje.*

Date.	Leaves.					Roots.		Stalks and Spikes.		
	Remarks.	Young.		Full-grown.		Remarks.	% P ₂ O ₅ .	Remarks.	Stalks.	Spikes.
		% Dry Matter.	% P ₂ O ₅ .	% Dry Matter.	% P ₂ O ₅ .				% P ₂ O ₅ .	% P ₂ O ₅ .
12. 9.1924	Very few green leaves, open but withered at the tip	45·0	0·228			Roots with absorptive tissue	0·100			
13.12.1924	Open, up to 24 cm. long..	30·0	0·300	35·0	0·196	Thick absorptive tissue; root hairs and secondary roots	0·122	Flowering spikes.....	0·259	0·405
24. 1.1925	Open, 28 cm. long.....			45·0	0·213	Roots dry with woolly absorptive tissue	0·087	Spikes dry, no seeds.....	0·154	0·286
5. 3.1925	Open.....			48·0	0·333	Thin absorptive tissue, some new roots	0·084	Very young spikes.....	0·203	0·385
30. 4.1925	Open.....			43·0	0·250	Absorptive tissue with root hairs	0·088	Spikes before flowering....	0·196	0·357
12. 6.1925	A few green leaves, rolled. Brown leaves.....			48·0	0·385	Absorptive tissue with root hairs	0·080	Spikes.....	0·084	0·200
					0·160					

TABLE XXXIII.

Cymbopogon plurinodis; *Dry Harts, flooded area. Phosphorus content as percentage phosphoric oxide on plant dry matter throughout the year.*

Date.	Leaves.				Roots.		Stalks and Spikes.			
	Remarks.	Young.		Full-grown.		Remarks.	% P ₂ O ₅ .	Remarks.	Stalks.	Spikes.
		% Dry Matter.	% P ₂ O ₅ .	% Dry Matter.	% P ₂ O ₅ .				% P ₂ O ₅ .	% P ₂ O ₅ .
12. 9.1924	Tip withered, 26 cms. long, grazed down	35·0	0·341	35·0	0·341	Thick absorptive tissue without root hairs	0·250	Flowering spikes.....	0·326	0·277
13.12.1924	Open, 40-50 cms. long....					Thin absorptive tissue. Root hairs, secondary roots				
24. 1.1925	Folded.....	35·0	0·300	45·0	0·375	Dry, absorptive tissue peel- ing off	0·150	Spikes seeding.....	0·326	0·306
5. 3.1925	Open.....			48·0	0·277	Absorptive tissue, some new roots	0·046	Seeds have fallen.....	0·058	0·159
30. 4.1925	Open.....			38·0	0·273	Absorptive tissue, second- ary roots	0·132	Spikes have flowered.....	0·118	0·200
12. 6.1925	Green leaves folded..... Brown leaves.....			65·0	0·300 0·139	Dry, no absorptive tissue.	0·230	Spikes dry.....	0·107	0·087

TABLE XXXIV.

Cymbopogon plurinodis; *Dry Harts, kopje.*

Date.	Leaves.				Roots.		Stalks and Spikes.			
	Remarks.	Young.		Full-grown.		Remarks.	P ₂ O ₅ .	Remarks.	Stalks.	Spikes.
		% Dry Matter.	% P ₂ O ₅ .	% Dry Matter.	% P ₂ O ₅ .				% P ₂ O ₅ .	% P ₂ O ₅ .
12. 9.1924	Narrow and folded. 7·5-10·5 cm. long	45·0	0·257			Absorptive tissue.....	0·100			
13.12.1924	Open, 40 cms. long.....	33·0	0·312	53·0	0·275	Good absorptive tissue. Root hairs, secondary roots	0·137	Flowering spikes.....	0·165	0·306
24. 1.1925	Half folded.....	42·0	0·333	50·0	0·280	Dry, absorptive tissue peeling off. No root hairs, secondary roots	0·098	Spikes seeding.....	0·116	0·162
5. 3.1925	Fairly fresh, open.....	42·0	0·492	52·0	0·232	Fresh, absorptive tissue. Secondary roots	0·107	Seeds have fallen	0·062	0·115
30. 4.1925	Open.....	38·0	0·388	40·0	0·283	Absorptive tissue. Secondary roots	0·132	Spikes and stalks dry.....	0·082	0·060
12. 6.1925	Green leaves folded Brown leaves.....			53·0	0·205 0·061	No absorptive tissue.....	0·110	Spikes and stalks dry.....	0·036	0·077

TABLE XXXV.

Pogonarthria falcata; *Dry Harts, kopje*. Phosphorus content as percentage of phosphoric oxide on plant dry matter throughout the year.

Date.	Leaves.				Roots.		Stalks and Spikes.			
	Remarks.	% Dry Matter.	% P ₂ O ₅ .	% Dry Matter.	% P ₂ O ₅ .	Remarks.	% P ₂ O ₅ .	Remarks.	Stalks. % P ₂ O ₅ .	Spikes. % P ₂ O ₅ .
12. 9.1924	Few leaves, rolled, 5 cms. long	39.0	0.236			Root hairs on absorptive tissue	0.106			
13.12.1924	Open, 26 cms. long.....	37.0	0.250			Abundant root hairs Secondary roots	0.115			
24. 1.1925	Open, 22 cms. long	40.0	0.200			Roots very dry. Absorptive tissue peeling off	0.094	Spikes not yet seeded....	0.175	0.210
5. 3.1925	Open, dry at tip.....	55.0	0.273			Absorptive tissue with root hairs	0.069	Very young spikes.....	0.160	0.259
29. 4.1925	Open.....	33.0	0.294			Absorptive tissue with root hairs	0.106	Spikes dry	0.097	0.150
12. 6.1925	Green leaves open. Brown leaves	66.0	0.319	Brown	0.125	Absorptive tissue	0.195	Spikes dry	0.044	0.068

TABLE XXXVI.

Chrysopogon serrulatus; *Dry Harts, kopje*. Phosphorus content as percentage phosphoric oxide on plant dry matter throughout the year.

Date.	Leaves.					Roots.		Stalks and Spikes.		
	Remarks.	Young.		Full-grown.		Remarks.	% P ₂ O ₅ .	Remarks.	Stalks.	Spikes.
		% Dry Matter.	% P ₂ O ₅ .	% Dry Matter.	% P ₂ O ₅ .				% P ₂ O ₅ .	% P ₂ O ₅ .
11. 9.1924	Open, about 5 cms. long..	35.0	0.342			Absorptive tissue without hairs	0.123			
13.12.1924	Open, 10-13 cms. long....	25.0	0.326	30.0	0.375	Thin absorptive tissue, new roots, root hairs, secondary roots	0.115	Flowering spikes.....	0.333	0.306
24. 1.1925	Folded, but erect, 15 cm. long	40.0	0.306	40.0	0.273	Dry, little absorptive tissue peeling off, no root hairs	0.103	Spike seeding, but seeds soft	0.132	0.330
5. 3.1925	Open.....	35.0	0.345	41.0	0.230	Absorptive tissue, secondary roots	0.110	Spikes all gone.....	0.085	
29. 4.1925	Open.....	33.0	0.333	35.0	0.266	No absorptive tissue, no root hairs or secondary roots	0.097	Spikes after flowering....	0.137	0.285
12. 6.1925	Green leaves folded.....			53.0	0.230	Dry, no absorptive tissue	0.106	Stalks only, spikes fallen off	0.052	
	Brown leaves.....				0.125					

TABLE XXXVII.

Panicum coloratum; *Dry Harts, flood area.* Phosphorus content as percentage phosphoric oxide on plant dry matter throughout the year.

Date.	Leaves.					Roots.		Stalks and Spikes.		
	Remarks.	Young.		Full-grown.		Remarks.	% P ₂ O ₅ .	Remarks.	Stalks.	Spikes.
		% Dry Matter.	% P ₂ O ₅ .	% Dry Matter.	% P ₂ O ₅ .				% P ₂ O ₅ .	% P ₂ O ₅ .
11. 9.1924	Dominant grass along the stream of the flooded area Open, 13 cms. long.....	35.0	0.360			Roots with absorptive tissue	0.169			
13.12.1924		31.0	0.487	35.0	0.454	Thin absorptive tissue, no root hairs	0.137	Flowering spikes.....	0.375	0.405
24. 1.1925	Fairly fresh.....			35.0	0.429	Roots dry, no absorptive tissue	0.067	Spikes seeding.....	0.275	0.429
5. 3.1925	Open.....	27.0	0.392	37.0	0.341	New roots, absorptive tissue, secondary roots	0.084	Spikes with unripe seeds..	0.385	0.319
30. 4.1925	Open.....	30.0	0.429	33.0	0.469	Absorptive tissue with root hairs	0.088	Spikes dry with seeds....	0.325	0.469
12. 6.1925	No green leaves, brown leaves				0.132	Absorptive tissue thin....	0.100	No haulms found		

TABLE XXXVIII.

Setaria nigrirostris; *Dry Harts, flood area. Phosphorus content as percentage phosphoric oxide on plant dry matter throughout the year.*

Date.	Leaves.				Roots.		Stalks and Spikes.			
	Remarks.	Young.		Full-grown.		Remarks.	P ₂ O ₅ %	Remarks.	Stalks.	Spikes.
		% Dry Matter.	% P ₂ O ₅ .	% Dry Matter.	% P ₂ O ₅ .				% P ₂ O ₅ .	% P ₂ O ₅ .
11. 9.1924	Open, 5-7.5 cms. long...	35.0	0.410			Loose tissue without hairs	0.250			
13.12.1924	Open, 21-24 cms. long....	25.0	0.368	27.0	0.333	Thin dry absorptive tissue, secondary roots	0.156	Flowering spikes.....	0.429	0.326
24. 1.1925	Dry, 20 cms. long.....			40.0	0.454	Dry, no absorptive tissue, secondary roots	0.139	Spikes seeding.....	0.300	0.333
5. 3.1925	Open and fresh.....	32.0	0.375	45.0	0.417	Many new roots, secondary roots	0.042	Empty spikes and } Young young spikes } with soft seeds } Old	0.316	0.159
30. 4.1925	Open.....			36.0	0.306	Thin absorptive tissue, secondary roots	0.132	Spikes dry.....	0.150	0.233
12. 6.1925	Few green leaves, folded.. Brown.....			38.0	0.389 0.163	Absorptive tissue.....	0.192	Spikes dry.....	0.167	0.120

TABLE XXXIX.

Aristida congesta; *Dry Harts, flood area. Phosphorus content as percentage phosphoric oxide on plant dry matter.*

Date.	Leaves.			Roots.		Stalks and Spikes.		
	Remarks.	% Dry Matter.	% P ₂ O ₅ .	Remarks.	P ₂ O ₅ %	Remarks.	Stalks.	Spikes.
							% P ₂ O ₅ .	% P ₂ O ₅ .
11. 9.1924	Rolled, about 5 cms. long.....	45.0	0.340	Removable sheet.....	0.099			
13.12.1924	Open, long.....	50.0	0.224	Absorptive tissue, root hairs and secondary roots	0.144	Flowering spikes.....	0.385	0.385
24. 1.1925	Extremely dry.....	50.0	0.429	Very dry, no absorptive tissue nor root hairs	0.074	Spikes losing seeds.....		0.300
5. 3.1925	Fresh, open.....	58.0	0.233	Absorptive tissue and secondary roots	0.068	Spikes with unripe seeds.....	0.176	0.326
30. 4.1925	Fresh, open.....	40.0	0.341	Absorptive tissue.....	0.111	Spikes dry with seeds.....	0.205	0.526
12. 6.1925	No green leaves found. Brown leaves		0.117	Absorptive tissue.....	0.092	Spikes and stalks dry.....	0.092	0.163

TABLE XL.
Aristida congesta; Dry Harts, kopje.

Date.	Leaves.			Roots.		Stalks and Spikes.		
	Remarks.	% Dry Matter.	% P ₂ O ₅ .	Remarks.	% P ₂ O ₅ .	Remarks.	Stalks. % P ₂ O ₅ .	Spikes. % P ₂ O ₅ .
12. 9.1924	Rolled, 5-7.8 cms. long.....	44.0	0.344	On a removable sheet root hairs	0.230			
13.12.1924	Open, to 21 cms. long.....	45.0	0.248	Absorptive tissue, root hairs and secondary roots	0.250	Flowering spikes.....	0.250	0.385
24. 1.1925	Rolled and very dry, 18 cms. long	55.0	0.257	Dry, absorptive tissue peeling off, no root hairs		Spikes seeding, but seeds still dough	0.179	0.263
5. 3.1925	Open, tip dry.....	69.0	0.150	Thin absorptive tissue, secondary roots	0.085	Spikes with unripe seeds.....	0.163	0.195
30. 4.1925	Open.....	40.0	0.270	Absorptive tissue.....	0.111	Spikes dry.....	0.141	0.205
12. 6.1925	Few green leaves.....	58.0	0.273	No absorptive tissue.....	0.127	Spikes and stalks dry.....	0.142	0.167
	Brown leaves.....		0.069					

TABLE XLI.
Aristida uniplumis; Dry Harts, kopje. Phosphorus content as percentage phosphoric oxide on plant dry matter throughout the year.

Date.	Leaves.					Roots.		Stalks and Spikes.		
	Remarks.	% Dry Matter.	% P ₂ O ₅ .	% Dry Matter.	% P ₂ O ₅ .	Remarks.	% P ₂ O ₅ .	Remarks.	Stalks. % P ₂ O ₅ .	Spikes. % P ₂ O ₅ .
12. 9.1924	Very few green leaves, up to 3 cms long, rolled	73.5	0.400			Thick absorptive tissue, no root hairs	0.200			
13.12.1924	Open, 13-16 cms. long ...	37.0	0.315			Good absorptive tissue. New roots, root hairs, and secondary roots	0.273	Flowering spikes.....	0.273	0.257
24. 1.1925	Rolled, 14 cms. long	57.0	0.173			Dry, but absorptive tissue intact	0.115	Spikes seeding, styles long and feathery	0.146	0.230
5. 3.1925	Open.....	70.0	0.357			Absorptive tissue, secondary roots	0.083	Seeds shed.....	0.127	0.157
30. 4.1925	Open.....	44.0	0.241			Absorptive tissue with root hairs	0.094	Spikes dry.....	0.131	0.200
12. 6.1925	No green leaves found. Brown leaves		0.072			Absorptive tissue with root hairs	0.130	Spikes empty.....	0.127	0.086

TABLE XLII.

Anthehora pubescens; *Dry Harts, kopje*. Phosphorus content as percentage phosphoric oxide on plant dry matter throughout the year.

Date.	Leaves.				Roots.		Stalks and Spikes.			
	Remarks.	Young.		Full-grown.		Remarks.	% P ₂ O ₅ .	Stalks.	Spikes.	
		% Dry Matter.	% P ₂ O ₅ .	% Dry Matter.	% P ₂ O ₅ .			% P ₂ O ₅ .	% P ₂ O ₅ .	
12. 9.1924	Open, 10-13 cms. long....	37.5	0.209			Loose tissue with fine hairs	0.204			
13.12.1924	Open, edges wrinkled, 13-16 cms. long	22.0	0.399	30.0	0.150	Very thick absorptive tissue, root hairs and secondary roots	0.150	Flowering spikes.....	0.273	0.392
24. 1.1925	Rolled and dry.....			43.0	0.261	Roots dry, with rather woolly absorptive tissue	0.167	Spikes seeding, but seeds shrivelled	0.448	0.385
5. 3.1925	Open, fresh.....	29.0	0.167	32.0	0.326	Absorptive tissue, secondary roots	0.119	Spikes all gone, stalks of old spikes	0.039	—
29. 4.1925	Open.....	26.0	0.294	28.0	0.277	New roots, absorptive tissue. Root hairs	0.092	Spikes after flowering.....	0.265	0.283
12. 6.1925	No green leaves found, only brown leaves				0.078	Absorptive tissue.....	0.131	No spikes. Stalks alone..	0.037	—

TABLE XLIII.

Eragrostis lehmanniana; *Dry Harts, flood area. Phosphorus content as percentage phosphoric oxide on plant dry matter throughout the year.*

Date.	Leaves.				Roots.		Stalks and Spikes.		
	Remarks.	Young.		Full-grown.		Remarks.	% P ₂ O ₅ .	Stalks.	Spikes.
		% Dry Matter.	% P ₂ O ₅ .	% Dry Matter.	% P ₂ O ₅ .			% P ₂ O ₅ .	% P ₂ O ₅ .
11. 9.1924	Rolled, broad, 10 cms. long	35·0	0·223			Absorptive tissue with root hairs	0·155		
13.12.1924	Open. 10-12·5 cms. long	28·0	0·353	40·0	0·250	Thick absorptive tissue. Abundant root hairs, secondary roots	0·167	0·353	
24. 1.1925	Dry, short.....			55·0	0·268	Dry, absorptive tissue still on the root	0·038		0·167
5. 3.1925	Open.....			40·0	0·147	Absorptive tissue, secondary roots	0·096	0·182	0·312
30. 4.1925	Open.....			40·0	0·312	Absorptive tissue.....	0·101	0·115	0·275
12. 6.1925	Green leaves rolled.....			50·0	0·312	Absorptive tissue.....	0·117	0·125	0·102
	Brown leaves.....				0·144				

TABLE XLIV.

Eragrostis lehmanniana; *Dry Harts, kopje.*

Date.	Leaves.				Roots.		Stalks and Spikes.			
	Remarks.	Young.		Full-grown.		Remarks.	$\frac{\%}{P_2O_5}$.	Remarks.	Stalks.	Spikes.
		$\frac{\%}{\text{Dry Matter}}$.	$\frac{\%}{P_2O_5}$.	$\frac{\%}{\text{Dry Matter}}$.	$\frac{\%}{P_2O_5}$.				$\frac{\%}{P_2O_5}$.	$\frac{\%}{P_2O_5}$.
12. 9.1924	Rolled, 5 cms. long.....	35.0	0.223			Absorptive tissue without root hairs	0.133			
13.12.1924	10-13 cms. long, open....	30.0	0.313	38.0	0.222	Thick absorptive tissue. Root hairs, and secondary roots	0.099	Flowering spikes with stalks	0.288	
24. 1.1925	Rolled and dry, 8 cms. long			55.0	0.375	Dry absorptive tissue peeling off. No root hairs	0.125	Spikes losing their seeds..	0.300	0.462
5. 3.1925	Open.....			57.0	0.244	Absorptive tissue, secondary roots	0.096	Unripe seeds.....	0.150	0.203
30. 4.1925	Open.....			40.0	0.217	Absorptive tissue, secondary roots	0.067	Spikes dry with seeds	0.140	0.283
12. 6.1925	No green leaves. Brown leaves				0.100	Absorptive tissue.....	0.064	Spikes and stalks dry....	0.072	0.093

TABLE XLV.

Chloris virgata; *Dry Harts, flood area. Phosphorus content as percentage phosphoric oxide on plant dry matter throughout the year.*

Date.	Leaves.				Roots.		Stalks and Spikes.			
	Remarks.	Young.		Full-grown.		Remarks.	P ₂ O ₅ %	Remarks.	Stalks.	Spikes.
		% Dry Matter.	P ₂ O ₅ %	% Dry Matter.	P ₂ O ₅ %				P ₂ O ₅ %	P ₂ O ₅ %
11. 9.1924	Open. Leaves 5-7.5 cms. long	40.0	0.344			Absorptive tissue, secondary roots	0.230			
13.12.1924	Open, 13-16 cms. long....			30.0	0.283	Thick absorptive tissue. Root hairs and secondary roots	0.099	Flowering haulms.....	0.366	0.254
24. 1.1925	Open, fairly fresh.....			35.0	0.312	Dry, no absorptive tissue nor root hairs	0.125	Flowering haulms.....	0.167	0.345
5. 3.1925	Open.....			40.0	0.259	Absorptive tissue. Some new roots	0.043	Flowering haulms. } Old stalks with- } out spikes. } Old	0.086 0.092	0.230
30. 4.1925	Open.....			32.0	0.366	Absorptive tissue with root hairs	0.118	New young spikes.....	0.224	0.285
12. 6.1925	Green leaves not found, only brown leaves				0.163	No absorptive tissue.....	0.077	Spikes old.....	0.163	0.136

TABLE XLVI.

Sporobolus fimbriatus, Biesjesvlakte. Phosphorus content as percentage phosphoric oxide on plant dry matter throughout the year.

Date.	Leaves.				Roots.		Stalks and Spikes.			
	Remarks.	Young.		Full-grown.		Remarks.	P ₂ O ₅ %.	Remarks.	Stalks.	Spikes.
		% Dry Matter.	P ₂ O ₅ %.	% Dry Matter.	P ₂ O ₅ %.				P ₂ O ₅ %.	P ₂ O ₅ %.
8.10.1924	Open, to 21 cms. long, but most leaves shorter	35.0	0.176			Hairy absorptive tissue. Few secondary roots	0.091			
4.11.1924	Open.....	40.0	0.333			Removable tissue. Root hairs	0.139	Spikes seeding with good seeds	0.217	0.448
14. 1.1925	18 cms. long, open.....	43.0	0.316	38.0	0.230	Dry, little absorptive tissue. No root hairs. Few secondary roots	0.126	Spikes flowering.....	0.147	0.250
26. 2.1925	A little wilted.....			50.0	0.261	Roots with absorptive tissue. Secondary roots	0.079	Spikes with yellow stalks; some seeds	0.113	0.273
29. 4.1925	Fresh.....			35.0	0.277	Roots well developed with absorptive tissue	0.131	Spikes and stalks dry, spikes empty	0.064	0.127
9. 6.1925	Very few green leaves, new			50.0	0.205	Roots without root hairs, but secondary roots abundant	0.112			
	Brown leaves.....				0.075					

TABLE XLVII.

Aristida uniplumis, Biesjesvlakte. Phosphorus content as percentage phosphoric oxide on plant dry matter throughout the year.

Date.	Leaves.					Roots.		Stalks and Spikes.		
	Remarks.	Young.		Full-grown.		Remarks.	% P ₂ O ₅ .	Remarks.	Stalks.	Spikes.
		% Dry Matter.	% P ₂ O ₅ .	% Dry Matter.	% P ₂ O ₅ .				% P ₂ O ₅ .	% P ₂ O ₅ .
8.10.1924	Open, 15-21 cms. long	40.0	0.162			Dry absorptive tissue, no root hairs or secondary roots	0.098			
4.11.1924	Open.....			42.0	0.230	Removable tissue with root hairs	0.087	Young haulms.....	0.250	
14. 1.1925	Rolled, tip dry, 20 cms. long			55.0	0.214	Dry, no root hairs. Few secondary roots	0.131	Spikes seeding, but seeds dough	0.162	0.188
26. 2.1925	Rolled, large portion of tip dry			55.0	0.147	Fairly fresh, part of roots with absorptive tissue	0.094	Most spikes dry and empty	0.059	0.121
29. 4.1925	Open.....			45.0	0.273	Roots well developed with absorptive tissue	0.150	Spikes empty.....	0.153	0.136
9. 6.1925	Few new green leaves, rolled. Brown leaves	50.0	0.127	Brown	0.064	Absorptive tissue smooth	0.098	Stalks only at bottom green	0.115	0.205

TABLE XLVIII.

Anthehora pubescens, *Biesjesvlakte*. Phosphorus content as percentage of phosphoric oxide on plant dry matter throughout the year.

Date.	Leaves.				Roots.		Stalks and Spikes.		
	Remarks.	Young.		Full-grown.		Remarks.	% P ₂ O ₅ .	Stalks.	Spikes.
		% Dry Matter.	% P ₂ O ₅ .	% Dry Matter.	% P ₂ O ₅ .			% P ₂ O ₅ .	% P ₂ O ₅ .
8.10.1924	Open, 7.5 cm. long.....	25.0	0.240			Very thin dry absorptive tissue. Few secondary roots	0.077		
4.11.1924	Open.....	28.0	0.349			Removable tissue and root hairs	0.132	Young haulms.....	0.333
14. 1.1925	Fairly fresh, but mostly folded, 14 cms. long. Young leaves separated.	32.0	0.132		0.219	Dry absorptive tissue. Peeling off in places, no root hairs, few secondary roots	0.097	Spikes seeding, but seeds soft	0.205 0.205
26. 2.1925	Wilted.....			45.0	0.300	Some roots dry, others fairly fresh, absorptive tissue	0.089	Fairly young spikes flowered. Old spikes losing seeds	Young 0.150 0.288 Old 0.066 0.155
29. 4.1925	Open.....			35.0	0.259	Roots well developed. Absorptive tissue	0.126	Spikes without seeds.....	0.150 0.240
15. 6.1925	Brown leaves. No green leaves found				0.093	Roots smooth, secondary roots	0.098	No spikes.....	0.040

TABLE XLIX.

Cymbopogon marginalis, Biesjesvlakte. Phosphorus content as percentage phosphoric oxide on plant dry matter throughout the year.

Date.	Leaves.					Roots.		Stalks and Spikes.		
	Remarks.	Young.		Full-grown.		Remarks.	P ₂ O ₅ .	Remarks.	Stalks.	Spikes.
		% Dry Matter.	% P ₂ O ₅ .	% Dry Matter.	% P ₂ O ₅ .				% P ₂ O ₅ .	% P ₂ O ₅ .
8. 10. 1924	Half folded, 15-21 cms. long	36.0	0.174			With absorptive tissue, but very dry, no root hairs nor secondary roots	0.100			
4. 11. 1924	Leaves open.....			45.0	0.220	Removable tissue.....	0.083			
14. 1. 1925	Open, tips dry, 35 cms. long	43.0	0.205	57.0	0.213	Dry papery absorptive tissue. No root hairs	0.072	Spikes have just finished flowering	0.110	0.260
26. 2. 1925	Folded, but fresh.....	50.0	0.230	53.0	0.214	Dry thin removable tissue. No root hairs	0.067	Spikes seeding, } Young new young } Old haulms	0.063	0.254 0.205
29. 4. 1925	Open.....			35.0	0.261	Roots well developed with absorptive tissue. No root hairs	0.122	Spikes without seeds, yellow old stalks	0.075	0.196
9. 6. 1925	Green leaves, open, few, apparently new Brown leaves.....	32.0	0.219		0.073	Absorptive tissue, no root hairs, no secondary roots	0.123	Stalks brown except bottom part. Spikes dry	0.041	0.113

TABLE LII.

Digitaria eriantha. Absolute amount of phosphorus, in grams phosphoric oxide, in an ideal plant corresponding to 100 grams roots.

Date.	Relation of the different organs. Roots = 1.							Amount of P ₂ O ₅ in the different organs.												Total P ₂ O ₅ .	Average.		
	Green Leaves.	Root Crown.	Dry Leaves.	Green Haulms.	Spikes.	Dry Haulms.	Runners.	Root.	Average.	Green Leaves.	Average.	Root Crown.	Average.	Dry Leaves.	Average.	Green Haulms.	Spikes.	Dry Haulms.	Runners.			Average.	
28. 8. 1925	0.66	5.0	9.8	—	—	11.1	—	0.10	0.17	0.17	0.17	0.55	0.55	0.49	0.49	—	—	1.3	—	—	—	2.6	2.6
29. 9. 1925	1.6	24.3	12.0	—	—	—	—	0.10	0.35	0.35	4.64	4.64	0.53	0.53	—	—	—	—	—	—	5.6	5.6	
30. 9. 1925	2.7	14.3	14.8	—	—	—	—	0.11	0.69	0.69	2.82	2.82	0.15	0.15	—	—	—	—	0.7	—	4.5	5.0	
7. 10. 1925	5.6	37.7	20.0	—	—	—	—	0.11	0.52	0.52	3.7	3.7	0.34	0.34	—	—	—	—	—	—	5.0		5.0
14. 10. 1925	26.0	84.0	3.5	—	—	—	—	0.13	1.07	1.07	4.67	4.67	2.12	2.12	—	—	—	—	—	—	9.2	18.0	
22. 10. 1925	9.3	72.5	62.0	—	—	—	—	0.09	6.96	6.96	13.1	13.1	6.08	6.08	—	—	—	—	1.2	—	28.0		28.0
28. 10. 1925	10.0	75.5	31.2	—	—	—	—	0.10	1.36	1.36	7.9	7.9	2.02	2.02	—	—	—	—	0.6	—	12.4	18.0	
5. 11. 1925	6.2	35.0	33.8	—	—	—	—	0.11	2.10	2.10	17.3	17.3	1.96	1.96	—	—	—	—	0.6	—	22.1		22.1
11. 11. 1925	3.3	21.5	14.7	—	—	—	—	0.12	1.25	1.25	6.97	6.97	1.15	1.15	—	—	—	—	0.3	—	9.8	6.8	
18. 11. 1925	3.3	15.5	18.6	—	—	—	—	0.09	0.76	0.76	4.9	4.9	1.41	1.41	—	—	—	—	—	—	7.2		7.2
25. 11. 1925	3.3	21.3	14.5	—	—	—	—	0.11	0.92	0.92	3.3	3.3	0.93	0.93	—	—	—	—	—	—	4.2	6.8	
9. 12. 1925	5.6	26.0	15.8	—	—	—	0.6	0.11	0.64	0.64	4.8	4.8	1.06	1.06	—	—	—	—	—	—	7.0		7.0
16. 12. 1925	5.6	35.0	16.0	—	—	—	—	0.12	0.94	0.94	4.7	4.7	1.25	1.25	—	—	—	—	0.09	—	6.2	5.4	
29. 12. 1925	5.3	16.5	10.3	—	—	—	—	0.09	0.34	0.34	6.2	6.2	0.93	0.93	—	—	—	—	—	—	7.6		7.6
30. 12. 1925	2.8	5.2	11.6	—	—	—	—	0.10	0.86	0.86	3.2	3.2	0.93	0.93	—	—	—	—	—	—	5.1	5.4	
7. 1. 1926	7.6	25.1	3.1	—	—	—	—	0.10	0.72	0.72	0.9	0.9	0.31	0.31	—	—	—	—	—	—	2.0		2.0
20. 1. 1926	2.7	9.3	8.1	—	—	—	—	0.10	0.41	0.41	4.3	4.3	0.58	0.58	—	—	—	—	—	—	5.4	7.3	
27. 1. 1926	5.2	21.7	11.1	0.8	—	—	—	0.11	1.28	1.28	4.7	4.7	0.81	0.81	—	—	—	—	—	—	7.3		7.3
3. 2. 1926	4.6	11.4	13.1	—	—	—	—	0.09	0.38	0.38	1.8	1.8	1.09	1.09	—	—	0.02	—	0.3	—	3.4	5.9	
10. 2. 1926	6.4	13.6	10.6	—	—	—	—	0.12	0.61	0.61	4.5	4.5	1.62	1.62	—	—	—	—	—	—	7.0		7.0
17. 2. 1926	3.1	12.8	7.3	2.9	0.5	—	—	0.12	0.56	0.56	0.9	0.9	0.71	0.71	—	—	—	—	0.1	—	2.5	3.0	
23. 2. 1926	3.6	9.6	4.5	2.9	0.15	—	—	0.11	0.62	0.62	1.2	1.2	1.08	1.08	—	—	0.02	—	0.05	—	3.4		3.4
3. 3. 1926	4.4	8.9	6.3	—	—	—	—	0.09	0.41	0.41	1.7	1.7	0.65	0.65	—	—	—	—	—	—	2.9	3.1	
10. 3. 1926	2.9	11.1	5.4	—	—	—	—	0.09	0.39	0.39	1.3	1.3	1.18	1.18	—	—	—	—	0.06	—	3.1		3.1
16. 3. 1926	2.3	13.5	9.2	—	—	—	—	0.08	0.64	0.64	0.7	0.7	0.37	0.37	—	—	—	—	—	—	1.9	3.7	
24. 3. 1926	4.0	16.2	17.0	—	—	—	—	0.08	0.44	0.44	1.2	1.2	1.25	1.25	—	—	—	—	0.08	—	3.0		3.0
31. 3. 1926	4.6	11.3	6.4	—	—	—	—	0.09	0.38	0.38	1.7	1.7	1.51	1.51	—	—	—	—	—	—	3.7	4.5	
			21.5	—	—	—	—	0.08	0.62	0.62	2.6	2.6	1.89	1.89	—	—	—	—	0.01	—	5.2		5.2
				—	—	—	—		1.01	1.01	2.1	2.1	1.31	1.31	—	—	—	—	—	—	4.5	4.5	

TABLE LII—(continued).

Date.	Relation of the different organs. Root = 1.							Amount of P ₂ O ₅ in the different organs.													Total P ₂ O ₅ .	Average.	
	Green Leaves.	Root Crown.	Dry. Leaves.	Green Haulms.	Spikes.	Dry Haulms.	Runners.	Root.	Average.	Green Leaves.	Average.	Root Crown.	Average.	Dry Leaves.	Average.	Green Haulms.	Spikes.	Dry Haulms.	Runners.	Average.			
7. 4. 1926	2.7	20.2	16.0	—	—	—	1.0	0.09		0.68		2.8		1.30		—	—	—	—	—	—	5.0	} 5.8
14. 4. 1926	4.4	17.6	19.1	—	—	—	0.85	0.07	} 0.08	0.75		1.58		1.30		—	—	—	—	—	—	3.7	
22. 4. 1926	2.4	12.6	14.6	—	—	—	1.0	0.07			0.62		2.8	} 3.0	1.50	} 1.7	—	—	—	—	—	—	5.5
28. 4. 1926	7.7	27.8	29.3	—	—	—	—	0.10		1.74		4.6			1.50			—	—	—	—	—	—
5. 5. 1926	1.6	12.1	17.6	—	—	—	—	0.10		0.48		—		1.6		—	—	—	—	—	—	5.0	
12. 5. 1926	4.1	24.6	24.8	—	—	—	—	0.11		0.93		3.3	} 3.2	1.80	} 1.5	—	—	—	—	—	—	8.1	
20. 5. 1926	2.8	15.2	15.0	—	—	—	—	0.07	} 0.10	0.82		3.6				1.33		—	—	—	—	—	—
26. 5. 1926	2.2	7.2	19.4	0.5	—	—	—	0.11			0.43		1.0		1.26		0.02	—	—	—	—	—	2.7
2. 6. 1926	2.2	11.6	16.0	2.5	0.7	—	—	0.15		0.40		1.9		1.35		0.23	0.16	—	—	—	—	4.2	
9. 6. 1926	1.2	10.1	19.5	—	—	—	—	0.12	} 0.14	0.31		1.2	} 1.8	1.33	} 1.9	—	—	—	—	—	—	3.5	
23. 6. 1926	2.0	15.5	27.2	—	—	—	—	0.15			0.40			2.3			2.39		—	—	—	—	—
7. 7. 1926	2.0	16.0	19.7	—	—	—	—	0.11	} 0.12	0.74		1.3	} 2.2	2.26	} 1.6	—	—	—	—	0.22	} 0.18	5.1	
21. 7. 1926	2.0	19.3	12.5	—	—	—	—	0.13			0.50			2.6			0.92		—	—		—	—
11. 8. 1926	0.8	14.5	13.4	—	—	—	—	0.10		0.27		3.3		1.55		—	—	—	—	0.07	} 0.10	5.3	
25. 8. 1926	2.5	46.9	31.5	—	—	—	—	0.10		0.91		8.3		2.8		—	—	—	—	0.13			12.2

TABLE LIII.

Chrysopogon serrulatus. Absolute amount of phosphorus, in grams phosphoric oxide, in an ideal plant corresponding to 100 grams roots.

Date.	Relation of the different organs. Roots = 1.								Amount of P ₂ O ₅ in the different organs.											Total P ₂ O ₅ .	Average.	
	Green Leaves	Root (Crown).	Dry Leaves.	Green Haulms.	Spikes.	Dry Haulms.	Root.	Average.	Green Leaves.	Average.	Root Crown.	Average.	Dry Leaves.	Average.	Green Haulms.	Average.	Spikes.	Dry Haulms.	Average.			
28. 8. 1925	1.5	2.4	11.3	—	—	9.7	0.19	0.19	0.24	0.24	0.41	0.41	1.54	1.54	—	—	—	—	1.04	1.04	3.42	3.42
23. 9. 1925	4.0	14.0	3.1	—	—	5.1	0.14	0.15	0.96	0.77	2.77	0.24	0.24	—	—	—	—	0.84	0.84	4.98		
30. 9. 1925	2.4	5.6	1.1	—	—	1.5	0.16	0.15	0.52	0.77	0.75	0.09	0.18	—	—	—	—	0.11	0.11	1.69	3.34	
7. 10. 1925	12.1	24.2	6.3	—	—	12.3	0.14	0.17	3.30	1.99	4.70	1.22	1.06	—	—	—	—	0.60	0.60	10.05		
14. 10. 1925	8.0	17.0	18.5	—	—	8.0	0.21	0.17	2.00	1.99	2.75	1.79	1.06	—	—	—	—	1.24	1.24	7.99	6.63	
22. 10. 1925	3.0	12.0	17.5	—	—	3.0	0.16	0.17	0.70	1.99	1.66	0.52	1.06	—	—	—	—	0.50	0.50	3.54		
28. 10. 1925	2.3	14.6	7.5	—	—	7.5	0.16	0.17	1.96	1.99	1.53	0.70	1.06	—	—	—	—	0.60	0.60	4.95		
5. 11. 1925	4.4	12.0	7.0	—	—	7.0	0.16	0.17	1.09	1.99	1.46	0.84	1.06	—	—	—	—	0.18	0.18	3.72	5.07	
11. 11. 1925	9.7	13.5	16.8	7.4	1.4	16.8	0.21	0.19	2.46	1.25	3.11	1.91	1.02	1.04	0.05	0.39	—	0.60	0.60	9.72		
18. 11. 1925	4.2	7.0	9.0	—	—	9.0	0.18	0.19	1.05	1.25	1.33	0.83	1.02	—	—	—	—	0.34	0.34	3.78	5.07	
25. 11. 1925	1.1	5.8	3.3	—	0.25	3.3	0.20	0.19	0.33	0.81	1.41	3.00	1.26	—	—	—	—	0.65	0.65	3.08		
2. 12. 1925	10.0	10.0	27.8	—	—	27.8	0.21	0.19	1.96	0.81	2.41	3.00	1.26	—	—	—	—	0.74	0.74	8.32	5.55	
9. 12. 1925	2.5	10.5	5.7	—	—	5.7	0.21	0.19	0.42	0.81	1.68	0.52	1.26	—	—	—	—	0.12	0.12	2.90		
16. 12. 1925	4.4	14.1	10.4	—	—	10.4	0.22	0.19	1.11	0.81	2.41	1.30	1.26	—	—	—	—	0.12	0.12	3.81	5.55	
30. 12. 1925	0.75	8.4	2.5	2.8	0.9	2.5	0.13	0.15	0.11	0.81	0.93	0.22	0.87	0.31	0.06	0.02	—	0.15	0.15	2.08		
7. 1. 1926	7.6	59.4	11.6	8.1	0.23	4.3	0.14	0.15	1.24	1.10	6.77	1.15	0.87	—	—	—	—	0.50	0.50	10.78	6.51	
20. 1. 1926	11.2	15.1	14.5	22.4	—	—	0.18	0.15	1.79	1.10	2.04	0.97	0.87	—	—	—	—	—	—	7.18		
27. 1. 1926	1.5	2.4	7.2	0.23	—	6.0	0.13	0.15	0.26	1.10	0.28	0.49	0.87	—	—	—	—	—	—	1.59	6.51	
3. 2. 1926	4.9	3.1	8.2	5.2	0.36	—	0.09	0.15	1.03	1.10	0.29	0.64	0.87	0.50	0.03	0.07	—	—	—	2.62		
10. 2. 1926	5.4	3.7	2.6	0.09	0.08	—	0.07	0.09	0.55	0.58	0.37	0.33	0.79	—	0.02	—	—	—	—	1.84	2.14	
17. 2. 1926	3.3	6.3	15.3	2.0	—	—	0.15	0.09	0.48	0.58	0.63	1.54	0.79	—	0.2	—	—	—	—	3.00		
23. 2. 1926	3.1	3.5	21.4	0.18	—	5.1	0.07	0.09	0.25	0.58	0.33	0.65	0.79	—	—	0.06	0.25	—	—	1.61	3.9	
3. 3. 1926	5.9	6.4	15.7	0.06	—	12.0	0.17	0.09	0.93	0.58	0.81	2.09	0.79	—	—	0.02	0.88	—	—	4.90		
10. 3. 1926	3.3	6.2	16.9	0.16	—	8.9	0.15	0.09	0.55	0.84	0.98	1.12	1.32	—	—	0.03	0.59	—	—	3.42	3.9	
16. 3. 1926	6.8	6.6	18.9	—	—	1.7	0.15	0.09	1.31	0.84	0.92	—	1.32	—	—	—	—	—	—	3.63		
24. 3. 1926	4.3	3.8	12.8	—	0.27	9.6	0.11	0.09	0.88	0.84	0.60	1.19	1.32	—	—	0.04	0.79	—	—	3.61	3.9	
31. 3. 1926	2.7	6.5	15.7	—	0.03	2.3	0.16	0.09	0.54	0.84	1.15	1.02	1.32	—	—	—	0.19	—	—	3.06		

TABLE LIII—(continued).

Date.	Relation of the different organs. Root = 1.								Amount of P ₂ O ₅ in the different organs										Total P ₂ O ₅ .	Aver- age.		
	Green Leaves.	Root Crown.	Dry Leaves.	Green Haulms.	Spikes.	Dry Haulms.	Root.	Average.	Green Leaves.	Average.	Root Crown.	Average.	Dry Leaves.	Average.	Green Haulms.	Average.	Spikes.	Dry Haulms.			Average.	
7. 4.1926	2.3	7.0	14.6	—	0.03	3.4	0.17	} 0.16	0.52	} 0.58	1.25	} 0.95	1.14	} 1.02	—	} —	—	} 0.01	0.22	} 0.19	3.31	} 2.9
14. 4.1926	1.5	4.1	6.7	—	0.02	1.6	0.12		0.27		0.43		0.52		1.18		0.09		1.44			
22. 4.1926	1.7	9.0	16.3	—	—	4.3	0.19		0.50		1.00		1.18		0.29		3.16					
28. 4.1926	3.8	7.0	13.8	—	—	1.6	0.17	1.05	1.12	1.24	0.15	3.70										
5. 5.1926	3.2	2.0	10.9	—	0.12	1.4	0.22	0.96	0.32	1.04	0.14	2.8										
12. 5.1926	6.8	10.1	22.5	—	0.27	4.3	0.25	1.95	1.97	2.22	0.62	7.0										
20. 5.1926	1.1	3.7	14.6	—	—	7.6	0.14	0.33	0.57	1.14	0.50	2.7										
26. 5.1926	1.4	4.6	7.1	—	—	1.1	0.22	0.43	0.69	0.94	0.06	2.4										
2. 6.1926	4.3	6.3	14.2	—	0.06	5.6	0.14	0.24	0.86	2.62	0.57	4.44										
9. 6.1926	1.7	5.1	9.3	—	—	2.2	0.21	0.39	0.96	2.04	0.35	3.95										
23. 6.1926	1.4	3.9	14.3	—	—	4.4	0.23	0.45	0.63	1.49	0.44	3.29										
7. 7.1926	3.3	9.2	20.1	—	—	5.2	0.20	0.95	1.48	1.85	0.36	4.79										
21. 7.1926	2.1	6.3	19.3	—	0.08	7.9	0.18	0.23	1.02	1.37	0.63	3.49										
11. 8.1926	0.8	2.4	9.4	—	—	4.8	0.23	0.20	0.51	0.82	0.44	2.20										
25. 8.1926	0.3	3.5	8.2	—	—	4.0	0.17	0.06	0.13	0.56	0.53	0.55	0.70	—	—	—	0.27	0.36	1.61	1.90		