

Field Crop Nutrient Uptake and removal in typical Manitoba crops (lb/ac)													
Grain	Target Yield	.	N	P2O5	K2O	S							
Cereals			pounds per Acre										
Spring Wheat		uptake	76 – 93	29 – 35	65 – 80	8. – 10							
	40 bu/A (2690 kg/ha)	removal	54 – 66	21 – 26	16 – 19	4. – 5							
Winter Wheat		uptake	61 – 74	27 – 34	64 – 78	9. – 11							
	50 bu/A (3360 kg/ha)	removal	47 – 57	23 – 28	15 – 19	6. – 8							
Barley		uptake	100 – 122	40 – 49	96 – 117	12. – 14					lb/ac	kg/ha	
	80 bu/A (4300 kg/ha)	removal	70 – 85	30 – 37	23 – 28	6. – 8		33			35	39.2	
Oats		uptake	96 – 117	36 – 45	131 – 160	12. – 14							
	100 bu/A (3584 kg/ha)	removal	55 – 68	23 – 28	17 – 20	4. – 5							
Rye		uptake	83 – 101	41 – 51	117 – 144	14 – 17							
	55 bu/A (3450 kg/ha)	removal	53 – 64	22 – 27	18 – 22	4. – 5							
Corn		uptake	138 – 168	57 – 69	116 – 141	13 – 16	153						
	100 bu/A (6272 kg/ha)	removal	87 – 107	39 – 48	25 – 30	6. – 7		44	0.44lb/bu				
Oilseeds		.	N	P2O5	K2O	S							
Canola		uptake	100 – 123	46 – 57	73 – 89	17 – 21							
	35 bu/A (1960 kg/ha)	removal	61 – 74	33 – 40	16 – 20	10. – 12		34					
Flax		uptake	62 – 76	18 – 22	39 – 48	12. – 15							
	24 bu/A (1492 kg/ha)	removal	46 – 56	14 – 17	13 – 16	5. – 6							
Sunflower		uptake	67 – 82	23 – 28	33 – 44	8. – 9							
	50 bu/A (2240 kg/ha)	removal	48 – 59	14 – 18	11. – 13	4. – 5							
Soybeans		uptake	160 - 200	28 - 35	84 - 155	12							

	35bu/ac	removal	130 - 140	28 - 30	48 - 50	4		29			
Oilseeds Pulse Crops*		.	N	P 205	K 20	S					
Peas		uptake	138 – 168	38 – 46	123 – 150	11. – 14					
	50 bu/A (3360 kg/ha)	removal	105 – 129	31 – 38	32 – 39	6. – 7					
Lentils		uptake	82 – 101	22 – 27	69 – 84	8. – 10					
	30 bu/A (2016 kg/ha)	removal	55 – 67	17 – 20	29 – 36	4. – 5					
Fababeans		uptake	257 – 314	89 – 108	229 – 280	12. – 15					
	50 bu/A (3808 kg/ha)	removal	154 – 188	55 – 67	47 – 57	6. – 8					
Forages – Dry Matter		.	N	P205	K20	S					
Alfalfa	5 tons/A 11.2 tonnes/ha)	removal	261 – 319	62 – 76	270 – 330	27 – 33		66			
Clover	4 tons/A (9 tonnes/ha)	removal	194 – 237	50 – 61	181 – 222	10. – 12				67	75
Grass	3 tons/A (6.7 tonnes/ha)	removal	92 – 113	27 – 33	117 – 143	11. – 14					
Barley Silage	4.5 tons/A (10 tonnes/ha)	removal	130 – 180	46 – 60	114 – 132	14 – 21					
Corn Silage	5 tons/A (11.2 tonnes/ha)	removal	140 – 172	57 – 70	181 – 222	12. – 14		68			