

Tools & Charts

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Average nutrients taken up by good crop yields

Crop	Yield per acre	Primary Nutrients			Secondary Nutrients				Micronutrients				
		N	P ₂ O ₅	K ₂ O	Ca	Mg	S	Cl	B	Cu	Fe	Mn	Zn
lbs/acre													
Alfalfa	10 ton	600t	120	600	248	53	51	70	1.60	0.30	1.50	1.20	1.00
Apples	250 cwt	100	46	180	60	24							
Barley	80 bu	100	40	80	18	8	14	7	0.09	0.08	0.31	0.70	0.23
Beans (snap)	4 ton	170t	37	78	28	17							
Beets (sugar)	30 ton	255	40	530	90	80	40						
Beets (table)	500 cwt	360	43	580		101	41		0.14	1.10	0.22		
Bermuda (coastal)	10 ton	500	140	420	66	50	40	0.03	0.03	0.20	0.20	0.10	
Bromegrass	5 ton	220	65	315	42	10	20						
Brussel sprouts	160 cwt	185	44	228									
Cabbage	700 cwt	270	63	249	35	36	64	49	0.15	0.07	0.35	0.18	0.14
Canola	1577 lb/a	126	28	209	8	8	30		0.13				
Cantaloupes	225 cwt	90	28	90	35	12							
Carrots	500 cwt	120	41	270									
Celery	75 ton	280	165	750	150	45	90		0.12	0.12	0.60	0.25	0.12
Clover-grass	6 ton	300t	90	360	170	30	30						
Corn (grain)	200 bu	224	114	266	58	65	33	4	0.23	0.15	1.40		0.34
Corn (silage)	32 ton	266	114	266	65	33							
Corn (sweet)	90 cwt	140	47	136	20	11							
Cotton	3 bale	205	70	186	90	36	39	8	0.05	0.23	0.18	0.39	
Fescue	3.5 ton	135	65	185	21	13	20						
Flax	30 bu	81	33	68	7	5	6						
Grapes	12 ton	102	35	156	36	18	26						
Lettuce	350 cwt	95	27	204	36	9			0.13		1.30	0.34	
Oats	100 bu	115	40	145	13	20	19	2	0.08	0.08	0.95	0.30	0.39
Onions	600 cwt	180	80	150	47	18	37						
Oranges	540 cwt	265	55	330	76	38	28						
Orchardgrass	6 ton	300	100	375	32	25	35						
Peanuts	4000 lb/a	240t	40	145	125	20	19	3	0.08	0.08	0.67	0.53	
Peas	70 cwt	135t	44	105	175	18	10	8	0.04	0.06	0.60	0.40	0.02
Peppers (bell)	180 cwt	137	52	217	43								
Potatoes (Irish)	600 cwt	139	60	290	20	50	22		0.09	0.36	0.13	0.27	
Potatoes (sweet)	300 cwt	115	37	168	7	18	12						
Rice	8742 lb/a	194	62	276	25	20	12	85	0.28	0.23	3.30	3.30	0.36
Ryegrass	5 ton	215	85	240	58	40	58				0.04		
Sorghum (forage)	8 ton	198	67	286	48	35	18						
Sorghum (grain)	4 ton	250	90	200	28	28	38						
Sorghum (Sudan)	8 ton	319	122	467	64	47	32						
Soybeans	60 bu	324t	69	176	85	35	25	21	0.09	0.06	1.50	0.58	0.35
Spinach	200 cwt	160	46	300	24	10							
Sugarcane	100 ton	360	156	610	120	100	86						
Tobacco (burley)	4000 lb/a	290	37	321	33	24							
Tobacco (flue-cured)	3000 lb/a	126	26	257	105	24	19						
Tomatoes	30 ton	250	78	400	20	28	41						
Wheat	100 bu	150	75	156	26	30	20	44	0.14	0.11	4.00	0.60	0.49

(t) Legumes normally obtain most of their nitrogen from symbiotic N-fixing bacteria (Rhizobia). Data have been updated. Compilation of data from Plant food uptake. PPI, Atlanta, GA; Chapman, H.D. 1966. Op cit.; Bear, F.E. 1964. Trace elements. Agric. and Food Chem. 2:244-251; Terra Intl. Secondary Nutrient and Micronutrient Handbook; Fluid Fertilizer Manual, 1994 Edition, Vol 1