

Protein Productivity	Yield	%	Adjusted	Protein	Fat	Carbs	Fiber	Time	Protein	Fat	Carbs	Calories	Protein	Fat	Carbs	Calories
Crop type	kg/ha-crop		kg/ha-crop	percent	percent	percent	percent	mo/crop	kg/ha-yr	kg/ha-yr	kg/ha-yr	kcal/m ² -yr	kg/ha-crop	kg/ha-crop	kg/ha-crop	kcal/m ² -crop
Duckweed PC high	30000	1.00	30000	35.00%	5.00%	34.00%	10.95%	12	10500	1500	6915	8,066	10500	1500	6915	8066
Mushroom PC	300000	0.90	270000	2.18%	0.34%	3.26%	1.00%	12	5886	918	6102	5,451	5886	918	6102	5451
Broccoli raab PC	35500	0.90	31950	3.17%	0.49%	2.85%	2.70%	2.5	4862	751	230	2,635	1013	157	48	549
Tomato green PC	80279	0.95	76265	1.20%	0.20%	5.10%	1.10%	2.5	4393	732	14643	8,014	915	153	3051	1670
Pumpkin seed+flesh	100000	0.72	72200				0.00%	4	4095	3447	12911	9,628	1365	1149	4304	3210
Swiss chard PC	60000	0.92	55200	1.80%	0.20%	3.74%	1.60%	3	3974	442	4725	3,757	994	110	1181	939
Duckweed PC low	10000	1.00	10000	35.00%	5.00%	34.00%	10.95%	12	3500	500	2305	2,689	3500	500	2305	2689
Daikon PC high	139000	1.00	139000	0.60%	0.10%	4.10%	1.60%	3	3336	556	13900	7,162	834	139	3475	1790
Soybeans	2958	1.00	2958	36.49%	19.94%	30.16%	9.30%	4	3238	1769	1851	3,534	1079	590	617	1178
Peas green	11414	1.00	11414	5.42%	0.40%	14.45%	5.10%	2.5	2969	219	5123	3,325	619	46	1067	693
Spinach PC	18202	0.90	16382	2.86%	0.39%	3.63%	2.20%	2	2811	383	1406	1,971	469	64	234	328
Amaranth leaf PC high	30000	0.94	28200	2.46%	0.33%	4.02%	1.80%	3	2775	372	2504	2,372	694	93	626	593
Tomato PC	80279	0.95	76265	0.88%	0.20%	3.89%	1.20%	3	2685	610	8206	4,754	671	153	2052	1189
Lettuce PC 60 days	36988	0.90	33289	1.33%	0.22%	2.60%	1.30%	2	2656	439	2597	2,421	443	73	433	404
Kale PC high	40000	1.00	40000	3.30%	0.70%	10.01%	2.00%	6	2640	560	6408	3,997	1320	280	3204	1998
Rice (Nerica) high	7941	0.75	5956	10.70%	0.66%	79.95%	1.30%	3	2549	157	18737	8,377	637	39	4684	2094
Broccoflower PC	21353	1.00	21353	2.95%	0.30%	6.09%	3.20%	3	2520	256	2468	2,157	630	64	617	539
Winged bean pods	9160	0.98	8977	6.95%	0.87%	4.31%	2.60%	3	2496	312	614	1,480	624	78	154	370
Camelina high	2240	1.00	2240	27.00%	34.00%	30.00%	9.60%	3	2419	3046	1828	4,337	605	762	457	1084
Broccoli PC	20812	1.00	20812	2.82%	0.37%	6.64%	2.60%	3	2348	308	3363	2,482	587	77	841	621
Peas dry	2292	1.00	2292	24.55%	1.16%	60.37%	25.50%	3	2251	106	3197	2,202	563	27	799	551
Cabbage savoy high	70000	0.80	56000	2.00%	0.10%	6.10%	3.10%	6	2240	112	3360	2,266	1120	56	1680	1133
Pumpkin flesh high	100000	0.70	70000	1.00%	0.10%	6.50%	0.50%	4	2100	210	12600	5,875	700	70	4200	1958
Peanut (groundnut)	3824	0.70	2677	25.80%	49.24%	16.13%	8.50%	4	2072	3954	613	4,534	691	1318	204	1511
Pumpkin seed high	4000	0.55	2200	30.23%	49.05%	10.71%	6.00%	4	1995	3237	311	3,754	665	1079	104	1251
Adzuki	3200	1.00	3200	19.87%	0.53%	62.90%	12.70%	4	1908	51	4819	2,648	636	17	1606	883
Cowpeas (blackeyes)	2000	1.00	2000	23.52%	1.26%	60.03%	10.60%	3	1882	101	3954	2,348	470	25	989	587
Mung bean	2240	1.00	2240	23.86%	1.15%	62.62%	16.30%	3.5	1832	88	3557	2,164	534	26	1038	631
Beans yardlong	16000	0.95	15200	2.80%	0.40%	8.35%	3.23%	3	1702	243	3113	2,079	426	61	778	520
Chufa (tigernut) high	14000	0.80	11200	5.00%	30.00%	47.00%	4.30%	4	1680	10080	14347	15,113	560	3360	4782	5038
Onions	56071	0.90	50464	1.10%	0.10%	9.34%	1.70%	4	1665	151	11566	5,254	555	50	3855	1751

The above Chart lists the top crops for production of protein per hectare per year: **kg/ha-year**.

PC stands for Protein Concentrate.

High, med, low indicate different crop yields.

Pumpkin seed+flesh combines protein in flesh as PC and in hullless seeds.

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For a full explanation of the above Chart, see the article, "Comparison of Potential Staple Crops" at:

<http://www.gardeningplaces.com/articles/>

See also my blog, Hunger Math at:

<http://hungermath.wordpress.com/>

and my book:

Hunger Math: world hunger by the numbers by Ronald L. Conte Jr.