CHART II: FOODS RICH IN VITAMINS A, C, and B_2 (Riboflavin)

FOOD–100g servings	MEASURE	CALORIES	PROTEIN	A	C	B_2	B_1	CALCIUM	IRON
FOODS RICH IN VIT. A ONLY									
APRICOTS, raw 100g	2½ apricots	51	1.0	2790	7	.05	.03	16	.5
CARROTS, raw 100g	¾ cup	42	1.2	12000	6	.06	.06	39	.8
SWEET POTATOES 100g	¾ medium	123	1.8	7700	19	.08	.11	30	.7
WINTER SQUASH 100g		38	1.5	3500	5	.08	.05	19	.6
LETTUCE 100g	½ head 4" dia.	15	1.2	3850	11	.15	.07	62	1.1
FOODS RICH IN VIT. C ONLY									
CABBAGE 100g	⅛ cup shredded	24	1.4	80	50	.05	.06	46	.5
CAULIFLOWER "	1 cup sections	25	2.4	90	69	.10	.11	22	1.1
GRAPEFRUIT "	½ cup sections	40	.5	20	40	.06	.08	22	.3
GUAVAS "	1½ guavas	70	1.0	200	300	.04	.06	16	.9
ORANGES "	1 small 3"	45	.9	225	53	.05	.08	33	.4
TANGERINES "	1 medium	44	.8	420	31	.03	.07	33	.5
FOODS WITH VIT. A and C BOTH									
BRUSSELS SPROUTS 100g	7 sprouts	47	4.4	400	94	.16	.08	34	1.3
CANTALOUPES "	¼ melon	20	.6	3420	33	.04	.05	17	.4
SWISS CHARD "		21	1.4	2800	38	.07	.06	105	2.5
MANGOES "	½ medium	66	.7	6350	41	.06	.06	9	.2
PAPAYA "	⅓ cup	39	.6	1750	75	.04	.03	20	.3
GREEN PEPPER "	1 whole large	25	1.2	2800	120	.07	.05	11	.4
TOMATOES "	1 small	20	1.0	1100	23	.04	.06	11	.6
FOODS WITH VIT. A, C, and B_2									
BROCCOLI, raw 100g	1 stalk 5"	29	3.3	6000	118	.21	.10	130	1.3
COLLARDS "		40	3.9	10000	65	.25	.20	249	1.6
ENDIVE "		20	1.6	10000	11	.33	.08	79	1.7
KALE "	2½ cups	40	3.9	10000	118	.33	.16	225	2.5
SPINACH "		20	2.3	10000	38	.26	.11	81	3.0

after "Nutritive Values of Foods in Shares" (Table II) in Taylor, MacLeod, and Rose, Foundations of Nutrition, The MacMillan Co., New York, 1956, pages 529-588.

CHOOSING PROTEIN

As we said earlier, a protein's quality is determined by its amino acid pattern.
Amino acids are the building "blocks" of protein.
A protein is only as good as the value of its scarcest amino acid in relation to the M. D. R. (Minimum Daily Requirement), just as a chain is only as strong as its weakest link.

There are twenty amino acids which, via the genetic code, are transformed into us by the DNA--RNA--Protein Synthesis process.
Nine of these 20 amino acids cannot be synthesized by our bodies from the Nitrogen in our food and therefore have to be provided directly by that food.
Of these nine, four--Lysine(LY), Threonine(Th), Tryptophan(TR), and the Sulfur-Containing(S) (Methionine and Cystine)--are in marked scarcity or excess in plant proteins.

The best figures for the Minimum Daily Requirement for each of these amino acids were obtained by observing at what minimum feeding of representative foods "Nitrogen Equilibrium" (no loss or gain of weight) could still be maintained in an adult human.*
These values are given in Milligrams per Kilogram of body weight. Thus, to get your requirements, you multiply your body weight times the M. D. R.

Then, to determine which amino acid--LY, Th, TR, or S--is "limiting" and which is in abundance you divide the LY, Th, TR, and S values for each protein food by your Minimum Daily Requirement: i.e., $\frac{\text{Food}}{\text{M.D.R.}}$, a ratio which is equal to unity when the requirement is met (see the charts).

However, since the proportions among the amino acids are the same for any body weight, we need only calculate the values (ratios) for a 70 Kilogram "Reference Man." From that chart, then, you can estimate your own needs by seeing how much more or less you weigh than a 70 Kg Man (154 lbs.).

*Altschul, Proteins: Their Chemistry and Politics, Basic Books, New York, 1965. Table 9-2, p. 124