

## 4021

## Supplementary Values Among Foods. I: Adding Egg to an Adequate Diet Compared with Increasing Vegetables.

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Sherman and Campbell<sup>1</sup> have shown that in a simplified ration composed of whole wheat and whole milk powder marked improvement in growth, reproduction, lactation and general vigor resulted from increasing the milk from 1/6 to 1/3 of the total weight.

We have fed albino rats simplified rations patterned after diets suitable for children, including milk, cereal food (represented by white flour), an assortment of vegetables, a butter substitute (equaling butter in vitamin A content) and meat residue. The composition of these diets is shown in Table I.

TABLE I.  
*Distribution of Calories in Each Diet.*

	H %	M %	L %	E %
White flour .....	50.0	37.5	25.0	37.5
Milk powder .....	25.0	25.0	25.0	25.0
Dextrin .....	5.0	9.5	13.0	9.5
Butter substitute .....	8.0	10.0	12.0	8.5
Meat residue .....	2.0	3.0	5.0	1.5
Vegetables* .....	10.0	15.0	20.0	15.0
Egg .....	—	—	—	3.0
Total .....	100.0	100.0	100.0	100.0

\* The vegetables used were potatoes, carrots, spinach, tomatoes, onions and peas, all fed in dry form.

On each diet a 5th generation has been secured, but the present report covers only 3 generations; on each diet approximately 40 animals have been carried to the age of 1 year, and on each over 1000 young have been born. As many young as survived have been reared to the age of 28 days. The 3 diets with varying proportions of vegetables but no egg, supported excellent growth, fair reproduction, but very poor lactation. Growth and fertility were slightly better in the 2nd and 3rd generation than in the 1st, but the percentage of young reared decreased with each successive generation, owing to poor lactation.

<sup>1</sup> Sherman and Campbell, *J. Biol. Chem.*, 1924, *lx*, 5.

