

in the use of nutrients is effected. The methods whereby organic nitrogen is prepared for plant food have been revealed, and some of the ways in which atmospheric nitrogen enters into organic combination have been explained. True, a hundred years hence scientists may laugh at some of our present theories, as we do at the ideas advanced by the scientific men in the beginning of last century. For instance, fat was thought to be food for plants but not for animals. Sugar was also looked upon as a manerial substance, while it was not even suspected that potash and phosphoric acid had any fertilizing power whatever, silica being considered of far greater value.

It is not surprising that greater advancement should be made along some lines than others. Naturally the points which offered the least resistance to research work of the chemist would be the first developed. The subject of animal nutrition has received much study, and we have a fairly clear idea of the laws governing the production of fat, flesh and bone; the composition and digestibility of the foods fed, and the amounts and style of ration to feed for whatever purpose we may have in view. Yet it is only in comparatively recent years that the subject of human nutrition has received any attention. Human foods and their adulterations have been receiving considerable attention of late years, but the fact remains that we have much clearer ideas of how a calf should be fed to make a strong, robust, healthy animal, than we have with reference to the child in the home.

Another point on which the advancement of scientific knowledge is slow is in relation to milk. Although milk has been used through all the ages of the past, we have very contradictory accounts of its composition. True, we can tell accurately the amount of fat, sugar, nitrogenous matter and ash contained in it, but we know very little of how these different constituents, especially the nitrogenous matter, are made up. Cheese is still made according to the same general principles that it was hundreds of years ago, yet we have scarcely any exact information regarding the changes in composition that take place in the different constituents during the process of manufacturing and curing. Even the exact composition of casein itself has not been fully proven. Indeed the whole subject of the relation of chemistry to dairying is as yet in its infancy.