

Introductory Remarks

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It is an unexpected pleasure to find myself welcoming you on behalf of our department chair, Janet King, and the University of California to the 16th National Nutrient Databank Conference. Dr. King regrets that she is unable to be here and sends her best wishes for a rewarding and pleasurable conference.

Research on the composition and nutrient content of foods has been featured in the land-grant universities from their very beginning. Since passage of the Hatch Act in 1887 much of this research has been in partnership with the United States Department of Agriculture. Our joint sponsorship of this conference is most appropriate.

It might seem that we ought to know all there is to know about the composition of U.S. foods by now. But food supplies and consumption patterns change. Also, it seems the more we know, the more there is to know.

I once thought I must know all there was to know about collard greens. Among the many jobs that paid my way through Ohio State was a laboratory assistanceship in the Experiment Station. Why collard greens was the focus of research escapes me, but it was a large project with many variables: composition of plants harvested at different stages, from opposite ends of rows in plots, stored and prepared in different ways, etc. I learned that all of these variables affected nutrient content--a useful perspective to have acquired early in our profession.

A decade or so later, Brassica vegetables were on my plate again. Our research group at the Quartermaster Food and Container Institute for the Armed Forces followed up early French work showing that guinea pigs fed a diet of oats and bran with cabbage were more resistant to radiation injury than were animals given the same diet with beets. We confirmed the French study and found that broccoli was more effective than cabbage. Unsnarling the known nutrient variables--

vitamins A and C were important, for example--was a major task. Our last attempt to mimic the effect of broccoli with known compounds involved 30+ pure substances; the mix neither looked nor smelled like broccoli and it didn't affect radiation injury either. We now know much more about the properties of this family of plants, including the fact that their consumption is associated with reduced risk of colon cancer. We still don't know exactly why. The point or points of this story are: that foods and nutrients are not the same thing; that foods grouped within a class have some but not all properties in common, or not to the same extent; that discovery of previously unrecognized physiological properties results in a need to know more about old substances--e.g., vitamin C and beta-carotene--and especially, a need to identify and quantify other factors--almost none of which will prove to be nutrients as classically defined but are delivered willy-nilly along with nutrients.

There is nothing I could add to this groups knowledge about the impact of the changing U.S. food supply and intake patterns on data base needs. It used to be an article of faith that food habits are nearly immutable--hard to believe even then, I would have thought, given the example of the worldwide response to Coca Cola. A small canvass of San Francisco restaurants--which I hope you will manage to fit into your busy conference schedule--will illustrate, in case there is any need for it, that the U.S. is a rich, diverse and increasingly globalized village.

This conference is testimony to your commitment to expansion and improvement of the national, and now international, composition information base. We wish you well in this important task.