The greying of science

When it comes to scientific disciplines, Food Science sits in the middle between Production Agriculture and Nutrition. Indeed, when Food Science departments were formed in the United States, they tended to be populated by the “food” people from departments such as Dairy Science, Animal Science (also called Animal Husbandry), and Home Economics.

In the 2019 publication from the National Academies titled, “Science Breakthroughs to Advance Food and Agricultural Research by 2030,” major topics covered were Crops, Animal Agriculture, Food Science and Technology, Soils, Water-use Efficiency and Productivity, Data Science, and A Systems Approach (NAS, 2019). They reflect the overall goal of providing an abundant, safe, healthy, and enjoyable food supply by approaches that are, hopefully, environmentally benign. The complexity of the food system is well presented in a quote from the “A Systems Approach” section: “The system is composed of large-scale interconnected systems of systems that include ecosystems (both natural and agricultural), climate, food processing and distribution network data and information systems, and socioeconomic systems.”

That brings me to the focal point of this essay: where are the lines between production agriculture and food science, and food science and nutrition? The Institute of Food Technology (IFT) is the scientific society for food science, and our journals should reflect the discipline – but where does it start and end in the food system? Here is an example to illustrate the dilemma. Plant scientists establish the pathway for lycopene production in tomatoes and develop a series of varieties with increased lycopene. Moreover, they believe the approach will also increase bioavailability and provide more stable color to tomato products (such as paste and sauce). Research proves both to be true. Is this one, two, or three manuscripts? Alternatively, should this be one, two, or three manuscripts? If the food system is “large-scale interconnected systems” (NAS, 2019), is it better to present the data in one article that shows the interconnection? From our perspective, a manuscript on the plant biochemistry producing the increased lycopene content is outside of our Aims and Scope; however, if the plant biochemistry was reported in another manuscript, we would consider a manuscript on the color of tomato products and bioavailability. The common factor for all manuscripts within our Aims and Scope is insight into the food matrix.

Factors regulating production of plant and animal food materials, as well as molecular mechanisms of bioactive compounds, are of critical importance to the food system but beyond the Aims and Scope of our journals. Having staked my claim, there are manuscripts that are the metaphoric equivalent of a “fast ball on the outside of the plate” in baseball. As the umpire behind the plate, I make my best judgement knowing that it may clearly disappoint (outrage) one group of fans. However, grey can delineate to black or white over time. The tent enveloping the science of food is ever-changing and IFT’s Scientific Journals will do our best to cover topics that advance the science.

Sincerely,
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Editor in Chief,
IFT Scientific Journals

REFERENCE