Sweet bakery products should be a major focus of sugar-reduction efforts, according to the most-recently issued U.S. Dietary Guidelines.

Sugar plays many roles in texture. It can be important for aeration during mixing (cakes); for tenderization; and for controlling the rate of gluten formation. Other steps one can do to offset the textural impact of sugar reduction are to use flour with less protein; increase fat content (to prevent full gluten development); use emulsifiers (lecithin, egg yolk); reduce mixing; and manage moisture with soluble fiber, glycerol and other small molecular-weight ingredients.

As a fifth recommendation—regarding cereal and protein bars in particular, Goulson professed great satisfaction with using dietary fiber syrups, such as inulin, tapioca and corn syrups. She recommended paying close attention to the molecular chain lengths of the syrups and to be aware of potential digestive tolerance issues.

Can such products ever hope to meet consumer expectations? “It’s a steep challenge to replace 100% of the sugar in baked goods and bars and fully duplicate a full-sugar version,” Goulson replied. “But by using ingredient systems to replace all of the taste and functionality of sugar, you can make very good products.”

“Five Tips for Reducing Sugars in Bars and Baked Goods,” Melanie Goulson, MSc, General Manager, Merlin Development and Adjunct Professor, St. Catherine University

“Sugars are the most important control variables to determine proper freezing properties of mixes during processing,” explained Hopkinson. “Freezing-point functionality must somehow be compensated for when sugars are taken out of the formula.” Shelflife is affected by sugar’s effect on product melting point,