When we begin to talk about starch in candy, most candy-makers automatically think about starch jelly candies. And it’s true that the big volume usage is thin boiling starch being used in sugared jellies, jujubes and jellybean centers. However, there is a flip side to this, and it’s the potential for using what we in the wet milling industry refer to as specialty modified starches. The typical starch manufacturers’ line may be in the vicinity of a hundred or more different food starch products. These specialty modified starches are manufactured to meet particular functional needs for various food product categories and in some cases even for specific formulations.

The confectionery industry for whatever reasons has not utilized specialty starch technology to the extent that other food manufacturers have. However, as conventional candy makers begin to think about new products that could revitalize certain areas of their business, it is important to be aware of new ingredient technology. Visiting with suppliers is one route to such information. My purpose in this paper is to offer an insight on what is current or maybe coming down the pike, in jelly candy and fruit snack processing, and where new stabilizer ideas might fit in.

Starch, pectin, gelatin and agar are the principle stabilizers most commonly used in today’s jelly candies. These products find lots of use as independent gelling agents to produce the classic marketplace jellies that most all of us are familiar with.

Gellan gum, carageenan and other hydrocolloid products have been proposed for use in confectionery jellies and demonstrate interesting properties, but some of these technologies have been passed over or the technology is still in the research and development stages.

**BLENDS**

In recent years, blending of stabilizers has become a useful area of interest. Some very successful confectionery jellies have made it in to the marketplace based on this technology, and there is currently a lot of R&D activity in that area.

Stabilizer blends can be any number of combinations, for purposes of texture modification, functional improvements, processing advantages and cost reduction. Some of the more useful combinations that I am familiar with, plus some research territories are:

- common thin boiling starch/quick setting starch
- gelatin/thin boiling starch
- thin boiling starch/pectin
- gelatin/pectin
- blends including gellan gum, carageenan, etc.

Starch blends of thin boiling starch and high amylose corn starch have become a standard formulation for the production of quick setting starch jellies. When used alone, thin boiling starch may require a 48 hour cure in moulding starch, particularly for large sized jelly pieces. However when high amylose starch is used at a 30 percent replacement level, the same jellies cure faster and can be demoulded on an overnight basis. In situations where marginal cooking capability limits the high temperature processing of high amylose starch, defatted corn starch or certain thin boiling potato starches can be used in a similar manner.

Instant starch products can also be used effectively in some jelly products and this is relatively new territory which will be discussed later.

Gelatin-starch blends are a hot topic in current research due to increasing uncertainty about gelatin...