

Technology and Equipment Questions for Extrusion

Questions and Answers, Baking & Snack, July 2023

• **What challenges do healthy snacks (high-protein, high-fiber, gluten-free) pose to extruders?**

How can snack manufacturers overcome those challenges?



There are different challenges with the 3 different categories of extruded ingredients. For instance, with abrasive inclusions, hardened cutting blades are needed to improve wearability and maintain clean cuts. Sticky formulations benefit from feed systems like ours at Handtmann® with designs that reduce friction and have short product paths. Material selection for the feed system is also part of the reduced friction design process and specialized coatings can also be used to reduce the coefficient of friction. Water jacketed temperature control has also been very helpful in managing things like the product flow of fudge on extruded baked products with our valve free depositing system, for instance. The ability to extrude clean shapes also supports precision portioning that is most valuable to bakers when they want to reduce the giveaway with their expensive healthy inclusions and ingredients.

Technology and Equipment Questions for Extrusion

Questions and Answers, Baking & Snack, July 2023

- **How is extruder technology impacted snack innovation/new product development?**

Real-time Handtmann 3-D shape design through the control panel opens the door to unique shapes and lets bakers set the shape they



want to test on the control panel and then immediately produce it. Then quickly change the shape and instantaneously produce the next iteration they want to try.

The Handtmann VF can also be set up quickly in different lane and attachment configurations and for a variety of viscosities.

The flexibility and rapid set up of Handtmann coextrusion solutions also offers new product development opportunities that allows simplified R&D and high-volume production with very accurate outer and inner coextruded weights that dramatically reduce giveaway.

- **How is extruder technology driving new product innovation and vice versa?**

Extruded solutions designed to incorporate the capabilities of more sophisticated operating, monitoring and communication software increase the ease, precision, and flexibility needed for rapid innovation. They also support the rapid adjustments needed for the many iterations needed when testing different co-extruded shapes and their ratios of inner and outer product.

Technology and Equipment Questions for Extrusion

Questions and Answers, Baking & Snack, July 2023

- **How has equipment design improved to ensure flexibility, speed up changeovers?**
- **How can snack manufacturers reach high volumes with their extruders and keep them operating optimally, even with healthy snacks?**



Maintenance is the key. Virtual support programs now offer new efficiency. For example, our open platform HVISION® system lets our Handtmann team help almost immediately. They are solving most of the routine issues quickly – providing HVISION program call backs within an hour and successful resolution of most issues within 30 minutes. Simple, thorough sanitation is helped with an excellent sanitation design that supports full washdowns with the elimination of traps and all curved external surfaces for complete drainage. Easy sanitation supports best practices for efficient shift changes and start-ups.

The implementation of a dual offline make-up system helps ensure the entire baking process maintains a smooth flow without extended interruptions between changes overs for different product SKUs.