

Process Solutions For Adding Gluten-Free to Your Product Mix

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Ingredient changes and process design solutions are much easier to engineer in a new plant than in an existing one. Plants that work with allergen products can design dedicated process lines, separate storage areas and well-planned cleaning processes to avoid any cross-contamination issues. Yet with gluten-free products being relatively new on the scene, retrofitting an existing plant to incorporate this allergen into the current product mix can be challenging.

Here are steps to take within key areas to eliminate the potential for cross-contamination:

Processing

1. **Dedicated process lines** — Process engineers can often evaluate and provide recommendations to reconfigure existing production areas to include a dedicated allergen line. Ideally, each line should also have its own HVAC and/or refrigeration system to effectively control airflow between areas. A full separation of lines will allow other lines to remain in production without any contamination risk. Engineers can also provide recommendations to include dedicated ingredient delivery systems for allergens.
2. **Segregated workstations** — Dry-mixing and dry-blending areas should be housed separately. Airflow should be carefully controlled between the two areas to ensure that particles do not spread. Elevated platforms for equipment that processes allergen products can also be used to reduce the risk of cross-contamination.
3. **Production schedules** — Non-allergenic products should be scheduled first followed by allergen products. A scheduling matrix can help minimize clean-in-place (CIP) and changeover time between batches.

Storage

1. **Segregated storage areas** — Room modifications may be made to create separate storage areas for allergen and non-allergen ingredients. A design engineer can review the facility's layout and determine where walls can be constructed to accomplish this.
2. **Storage control system** — Plants can maximize their space by storing more than one allergen in storage areas. This does require a well-planned, well-documented system with dedicated storage bays and color-coded bins for each allergen product.

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Cleaning

1. **Implement proper cleaning techniques** — Equipment that processes both allergens and non-allergens should include an effective CIP system that will sanitize and flush the lines during changeover.
2. **Detergents with varying pH levels** — Sanitation experts and cleaning product providers can evaluate your plant's needs based on the allergens processed and recommend specific cleaning solutions that will be most effective in removing any residue left on equipment.

Controls

Hazard Analysis and Critical Control Points Plan (HACCP) — Allergen control should be included as part of the plant's HACCP plan. Assess the plant's allergen and develop a detailed plan for addressing those risks. Conduct internal audits on a monthly basis and review the plan to ensure that all practices are addressing allergen controls.

To learn more areas to address when introducing allergens into your plant, email me a kwilson@stellar.net [1].

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