

## Overcoming Jelly Belly Aches

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Requests from overseas customers started almost immediately after it became known in 1980 that President-elect Ronald Reagan adored the jelly beans made by the Herman Goelitz Candy Company. Jelly Belly® jelly beans were different from the standard penny store jellies, instead manufactured through a meticulous process, with intense and unusual flavors in the candy shell as well as inside of the bean, using natural ingredients for flavoring.

Today's Jelly Belly Candy Company, which produces 34 million pounds of jelly beans per year, in addition to assorted gummy, licorice, candy corn and chocolate candies, has its headquarters and largest production facility in Fairfield, CA. There is an additional U.S. plant in located in North Chicago, IL as well as a distribution center and warehouse in Pleasant Prairie, WI.

In 2006, Jelly Belly, a company producing candy that had become inexplicably linked to American patriotism, made an important decision. The company, which was struggling to produce enough jelly beans to satisfy U.S. demands as well as international ones, was ready to build internationally.

### Making Jelly Belly Beans

On average, it takes 7-10 days to birth a jelly bean—but it can take up to 21 days to achieve perfection for some flavors. The production process involves four stages, plus packaging.

**Cooking stage**

**Kitchen:** The center of the each jelly bean is mixed in a kettle. While still hot, the gooey mixture is colored and flavored.

## Molding stage

**Mogul:** The hot center mix is then individually dispensed by machine into tiny impressions in large trays.

**Dry Room:** In their trays, the still-soft center mixtures are moved to drying rooms to cool off and become firm.

**Sanding:** When firm, the centers are sent through a moisture steam bath before having sugar poured over them. They are then set aside for another 24-48 hours before getting their outer shells.

## Panning stage

**Panning:** Jelly bean centers are heaped into a rotating metal drum, called an engrossing pan. As the beans tumble, the employees add four layers of flavored syrups and sugar, building shells around the centers over a two-hour period.

## Finishing stage

**Finishing:** Jelly beans are then dropped into rotating stainless steel pans while having confectioners glaze poured over them. The beans rotation causes them to roll over one another, creating a high-gloss finish on each one. They are again set aside for another 24-48 hours. "The beans have to talk to us," says Rowland.

**Bean Printing:** The beans are again placed in trays, then passed under a printing roller filled with food coloring. The roller prints the Jelly Belly name on each and every bean, even the white ones.

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After careful consideration, Jelly Belly chose to build its 50,000 square foot plant in the free-trade zone in the Rayong Province of Thailand. Herman G. Rowland, Jr., a fifth-generation candymaker and current Managing Director of the Thailand Jelly Belly plant, recalls the decision:

"We spent a year looking around the world for the right location. At the suggestion of a friend, my father (Herman Rowland, Sr.) took a trip out to Thailand. When he returned, we knew we had found our location."

Three years ago, Rowland Jr., who was part of the team initially managing the Thailand building project from the U.S., made the decision to relocate to Thailand and manage the plant onsite.

Jelly Belly was careful to assure its customers that producing candy in Thailand would not impact North American distribution, manufacturing or jobs. Instead, the Thailand facility supplies customers in 43 countries outside the United States. The facility has helped Jelly Belly to better serve Europe and reach emerging growth markets in China, India and the Middle East.

In addition, the Thailand facility brought Jelly Belly closer to the ingredients it was sourcing, such as tapioca syrup, used for sweetening.

Customers initially were skeptical about jelly bean quality.



"Our customers were most worried about getting the same quality of candy as in the U.S. We had to assure them that Jelly Belly Thailand would have to pass the same standards as we have in U.S.," notes Rowland.

Just like in its U.S. facilities, if the candy produced in Thailand is not perfect, it is "belly flopped" or scrapped completely. Belly flops refer to jelly beans that are irregular shapes, sizes or colors but that taste as good as normal jelly beans. For more scientific results, the Thailand plant also has an onsite lab and performs extensive quality inspections of incoming raw materials.

### Addressing challenges

The Thai factory, which first became operational in late October, 2008, was not

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immune to growing pains. Rowland notes initial struggles finding the right contractor for the job.

"We spent a significant amount of time searching for an overseas contractor. There was a lot of building going on in Thailand and they had a shortage of contractors. Our goal was to finish building in one year, but two years later, the facility was not complete."

Jelly Belly replaced the contractor and sent their own staff out to Thailand to oversee the final completion of the project.

In addition, the weather in Thailand is warmer and more humid than the U.S., making it extremely important to regulate the temperature and the humidity inside the plant, as well as during shipping. The Thai factory was designed with more insulation and different AC units than U.S. facilities to protect the beans from the climate.

"Due to the difference in climate, we very quickly discovered that the same formulas used in the U.S. were not yielding the same results," says Rowland. The recipes and process had to be altered slightly to produce identical jelly beans to those manufactured in the U.S.

In addition, international concerns about genetically modified organisms (GMO's) are much stronger than those in the U.S. International regulations are so strict that Jelly Belly Thailand sourced tapioca syrup as a key ingredient in order to avoid the possibility of genetically engineered corn altogether.

### International assistance

**According to plant personnel, the following equipment has played a significant role in the success of Jelly Belly's Thailand facility:**

- Action Pac Scales
- Frazier & Son conveyors
- Hayssen baggers
- Lawson Software
- Mettler Toledo metal detectors
- Trane air conditioning solutions

Jelly Belly's Thailand plant is located in a Thailand Board of Investment (BOI)-promoted industrial estate. The BOI, the principle government agency for encouraging investment in Thailand, aided Jelly Belly by offering tax incentives as

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well as helping the plant source local raw materials and hire local employees.

Since April 2007, the BOI has offered a series of investment privileges for confectionery manufacturers in order to stimulate Thailand's cane sugar production. Confectionery manufacturers who obtain BOI promotion also receive an exemption on machinery import duties. Jelly Belly shipped a lot of its plant equipment over to Thailand from the United States (see sidebar at right).

### The future of Jelly Belly Thailand



Currently, the Thailand facility employs 90+ local employees (plus one Canadian, one American and one British employee), working five to six days per week. Plans are in the works to double the production facility's size in 2011, for a total of 99,000 square feet. While the plant did fall short of initial production goals during its first full year of operation, Rowland is confident the plant will hit its five million-pound goal in 2010. In addition, strict FDA regulations and permit requirements have previously prevented Jelly Belly Thailand from selling its products to the Thai population, but Rowland hopes to see sales in Thailand in the next month.

"Thailand has wonderful people and a great culture. We are looking forward to many more years in Thailand."

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