

Breathing More Profit into Chocolate Bars

As commodity prices soar, candy makers are adding air to recipes

By Tom Mulier

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The recipe for chocolate bars is fairly standard: cocoa, cocoa butter or other oils, sweeteners, and perhaps some nuts or a fruity filling. Now, with prices for cocoa, sugar, and other commodities soaring, candy makers are finding a simple ingredient—air—can help pump up profits. Nestlé is making a big push for its aerated chocolate brand, Aero, Barry Callebaut is adding more air to fillings, and Cadbury last year launched a new version of its aerated Wispa bars after reintroducing the brand in 2007.

In the past four years, cocoa prices have more than doubled amid poor harvests and growing demand. On Feb. 22, cocoa hit \$3,608 a metric ton, a level it hadn't reached in three decades. The price of sugar, the additive candy makers have often looked to when cocoa prices soar, is also on the rise as bad weather has damaged crops in Brazil. Refined-sugar futures reached \$857 a metric ton on Feb. 2, the highest level since at least 1989.

That makes air a natural progression. Chocolate density can be cut by as much as half by using carbon dioxide or nitrous oxide to make bubbles, says Stephen Beckett, the author of *The Science of Chocolate* and a former researcher for Nestlé. "If you aerate [chocolate], it tends to be creamier," Beckett says. "Its density is so low it melts very easily, and gives you a different taste."

Chocolate makers say air bubbles make the sweets creamier and easier on the waistline. An added benefit is that air bulks up the candy while adding little cost, though there are limits to the strategy since most bars are priced by weight. *"Air equals less calories, and you can actually sell that," says James Amoroso, a food industry consultant in Walchwil, Switzerland. "If you've got something light ... you can make money."* Nestlé Chief Executive Paul Bulcke says there's a lot of "efficiency potential" in confections. But, he adds, "I would not play around too much replacing cocoa. ... We don't have these products just to say, 'How can we take chocolate out?'"

Nestlé will spend £15 million (\$24 million) to market Aero in the U.K. and Ireland this year, the company's biggest promotional budget ever for the bubbly chocolate brand. Callebaut, which makes bulk chocolate for Nestlé, Hershey (HSY), Kraft Foods (KFT), and others, is introducing "textured" aerated fillings such as caramel and hazelnut in some of its bars. Adding air pockets offers a better "mouth experience," says Paul Pruet, chief executive officer of Bubble Chocolate, a Salem (Mass.) company that began selling aerated chocolate in the U.S. in 2009.

Companies have long sought ways to make cheaper mass-market treats. Cadbury has begun selling a shorter Dairy Milk bar in the U.K.; with two fewer squares, the bar weighs 120 grams rather than the previous 140 grams. Another alternative is to add vegetable oil, though many countries regulate the ingredients for any candy claiming to be chocolate. In the European Union, for instance, the fat content in confections labeled as chocolate must be at least 95 percent cocoa butter.

The first aerated bars hit store shelves in 1935, when Rowntree, later acquired by Nestlé, launched Aero. In 1937, Nestlé started selling aerated chocolate under its Cailler brand.

Later in the 1930s Rowntree sold aeration machines to rivals such as Lindt & Sprüngli and Van Houten, and in the 1980s confectioners in the Soviet Union started making aerated bars.

While the technology has endured over the years, consultant Amoroso warns that manufacturers shouldn't introduce too many changes too quickly. "It's got to turn the consumer on," he says. "Otherwise, forget it."

The bottom line: Adding air to chocolate bars reduces costs to candy makers, though there are limits to how much they can save with the technique.

Mulier is a reporter for Bloomberg News.

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