

Natick tube foods keep U-2 pilots flying high

U.S. Army

NATICK, Mass. (Jan. 18, 2013) -- Imagine Key lime pie with the consistency of baby food squirting out of a container roughly the size of a toothpaste tube.

The thought of it might make your stomach churn, but one group of high-flying consumers has given two thumbs up to the dessert choice. These discerning diners also think beef stew, truffle macaroni and cheese, chicken a la king, and, especially, home fries and bacon from a tube, are out of this world -- or at least in the upper atmosphere.

That's because they fly U-2 reconnaissance aircraft for the Air Force and its NASA research equivalent, the ER-2. Try chowing down while wearing a pressurized suit and helmet at the edge of space, and you'll soon discover why these elite pilots have come to regard the tube foods, produced only by the Department of Defense Combat Feeding Directorate at Natick Soldier Research, Development and Engineering Center, as the very height of culinary achievement.

"We've been making these for years and years," said Dan Nattress, a food technologist with Combat Feeding.

Combat Feeding has been supplying tube foods to U-2 pilots for five decades. For a community of only about 100 pilots, CFD supplies approximately 28,000 tubes annually of the food, which has a shelf life of three years at 80 degrees.

The silver containers attached to feeding probes insert through ports in their helmets and provide nourishment on flights that can last as long as 12 hours. That makes caffeine a popular ingredient among pilots.

"The aircraft itself is every difficult to fly, and it's actually very difficult to land," Nattress said. "They want to be very alert when they land. Fairly soon before they're landing, they'll open up a caffeinated product."

The tube food menu also needed a boost three years ago, when the Air Force asked CFD to bring its products into the 21st century.

"Things change," Nattress said. "In the 1970s, your expectations were different than what they are in the 2000s. We had no direct communication with the user prior to 2010."

To rectify that, Nattress and Deborah Haley, chef and physical science technician with CFD, visited Beale Air Force Base, Calif., from which the U-2s fly.

"Since then we've had a few pilots who have come here and walked through," said Nattress, "and they are just totally amazed at what we do to make these."

Natick tube foods keep U-2 pilots flying high

Published on Electronic Component News (<http://www.ecnmag.com>)

At Beale, Nattress and Haley got a taste of a pilot's life, even trying on the pressurized gear.

"Things are a lot more difficult," Haley said. "Once you're fully suited and under pressure and connected to oxygen, there's no movement inside the helmet, except when you breathe in and breathe out.

"So swallowing is a conscious effort. You have to actually think about that, because there's no air movement. It's a lot different sort of feeling to it."

Once pilots are fitted to the four-layer suits by a pair of technicians, they are then shoehorned into the U-2 cockpits, which actually do have heaters to warm the food.

"I mean, the suit itself is one thing, and you look inside the cockpit -- it is just very small," Nattress said. "It really gave us a much better idea of what they go through on a regular basis."

The Air Force asked CFD to produce four products identified by pilots -- Peach Melba, Beef Stroganoff, Key lime pie, and a breakfast item, which became bacon with hash browns. They were added to a revamped 15-item menu, all made with fresh ingredients ground to fit in the tubes.

"They didn't want us to completely revise all of the products, but we knew that there were things that we could do to improve them that wouldn't be major," Haley said. "We made some suggestions to develop layers of flavors, and that's my whole thing, is really developing layers of flavors in these tubes.

"So that was the thing just tweaking it and taking it (to) the next level," he continued. "Now the pilots are getting really excited about the food. It's so much better."

Certainly, Nattress and Haley have faced challenges and experienced a failure or two along the way. In the early stages of developing the now successful Peach Melba, Nattress recalled that it had a "dirty sock kind of taste."

Much the same as the pilots they serve, however, the CFD staff continues to push the envelope. In the near future, for example, chicken tortilla soup will find its way onto the menu.

"We're constantly thinking ahead," Haley said. "It takes a while to find just the right balance so that when it comes out of the tube, you've hit just the right flavor profile."

Haley said that she just wants people to know about the science and hard work that go into improving the quality of life for Air Force and NASA U-2 pilots.

"We're such a unique program," Haley said. "There's no one else doing what we're doing."

Natick tube foods keep U-2 pilots flying high

Published on Electronic Component News (<http://www.ecnmag.com>)

Source URL (retrieved on 12/28/2014 - 3:53am):

<http://www.ecnmag.com/news/2013/01/natick-tube-foods-keep-u-2-pilots-flying-high>