International Food Aid and Development Conference (IFADC)

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Session: New Product Development and Implementation Strategies

Moderator: Ms. Sandra Wood, Assistant Deputy Administrator, Commodity Operations, Farm Service Agency (FSA), USDA

Remarks by Joan Parker, Senior Advisor, US Dairy Export Council

First, I would like to thank the organizers of the conference, and especially Sandra Wood of USDA, for identifying the topic of new product development, and for inviting the US Dairy Export Council to share some of our observations.

I will be speaking primarily from the perspective of US companies that participate in new product development, rather than focusing on developing country innovations.

Introduction:

The dairy community finds itself at the middle of a push for higher quality foods for children:

- To treat not only severe malnutrition, but moderate malnutrition as well
- To prevent malnutrition by reaching children under 2 and pregnant/lactating mothers

This focus on food quality to address moderate malnutrition has emerged from multiple leading international and US institutions:

- Doctors without Borders through their "Starved for Attention" campaign
- WHO/WFP/UNICEF/UNHCR through the Consultation 2009, which focused on moderate malnutrition
- USDA and USAID through the Tufts Food Aid Quality Review (FAQR), NIFA/FANEP, and new commodity specifications (draft RUSF/RUTF Commodity Item Descriptions)

The scientific evidence points to animal-sourced proteins as key ingredients for both severe and moderate malnutrition, and especially to prevent physical and cognitive stunting. As a result of this evidence on the importance of animal-sourced foods, we at the US Dairy Export Council are getting lots of phone calls as people want to learn more about dairy proteins: what they deliver nutritionally, how to use them, their price and availability, and how to choose among the main categories of dairy proteins.

Overall, we see that orders are already flowing to new supplementary products that deliver the protein-energy combination outlined in the WHO/WFP/UNICEF Consultation 2009 (see our 4-page handout for full reference, if you do not have this publication). And we see a strong

affirmative response from US companies that are ready to create and market both supplementary and therapeutic foods: they are ready to spend R&D funds, and to accept narrow margins for the final products.

Despite the serious interest on the part of companies, we see important challenges to new product development. I want to speak of three of these challenges, which I will call: (1) ambiguity; (2) complexity; and (3) cost-effectiveness. Let me take each in turn.

(1) Ambiguity

Until 2009, product developers operated under significant ambiguity about whether treating or preventing moderate malnutrition would be prioritized by large food aid purchasers (UNICEF, WFP, USAID). Since then, there have been several notable developments that have reduced some of this ambiguity:

(a) Buyers have officially committed to focus resources on moderate malnutrition, with special attention on the "under 2s".

(b) Michael Golden's nutritional specification to address moderate malnutrition – as laid out in the WHO consultation of 2009 – provides a reasonable guide on which to begin R&D, and has provided direction from the major UN buyers.

(c) In the last few weeks, USDA released a draft Commodity Item Description (CID) for ready-to-use supplementary foods that aligned with Golden's/UN's recommendations for moderate malnutrition. Once approved, this will provide direction to US producers.

While there are many unanswered questions remaining, these initial steps go a long way to reducing the risk of new producers interested in developing and pilot testing a supplementary food specifically aimed at the "under 2s".

Where is there continuing ambiguity? Perhaps the largest question mark is around the results (expected by June 2011) of USAID's Food Aid Quality Review led by Tufts University – which will provide direction on nutritional composition for a range of target groups, including further direction for the "under 2s", but also is expected to address nutritional requirements for populations in emergencies, school-age children, people living with HIV/AIDS, and other key target groups. Once the Tufts Project results are published, we can expect to see an even larger R&D response as the level of ambiguity declines further.

(2) Complexity

Enhanced food aid products of today are much more complex than food aid products of the past, many of which were basic commodities. New products not only have more ingredients, but are more processed, require more complex packaging, and ultimately cost more per unit. The product we hold up today as the lipid-based standard, Plumpy'Nut®, is a complex product resulting from significant R&D, not only on recipe, but also on processing and packaging.

Complexity throws up major barriers to innovation in food aid products. Let me use the example of World Food Programme's 2009 specification for "corn-soy blend plus plus" (CSB++), where the first plus is added micronutrients, and the second plus is 8% milk powder. This is a

requested adaptation to fortified corn-soy-blend, in order to have a formula specifically for children under two years of age. This new specification seemed pretty straight-forward: just add a little dried milk and stir. But in fact, it is much more complicated than expected, and I'll give you a few examples.

- First, the traditional "corn-soy blend" was packed in large 25 kg bags, fairly standard for millers. The new CSB++ is to be packed in 3 kg bags, which require the finished product to be shipped to a separate facility for packaging.

- Second, traditional CSB had some settling in the bag: micronutrients (with smaller particle size than the corn or soy) tended to settle in the large bags. But when you are going to feed the product to infants and small children, you must have a highly homogenous product from bag to bag, and from day to day. The top scoop from the bag can't be micronutrient-free, and the last scoop micronutrient-dense. So new food processing technologies are going to be required to create a mix where milk and micronutrients don't settle over time, maybe using an agglomeration method.

- Third, because the new corn-soy blend is aimed at children under 2, different Codex Alimentarius safety standards apply which are more stringent than what is required for traditional corn-soy blend. These standards may be excessive in the case of CSB++, given that the final product will be cooked in the home, but because of the target group, it still requires a waiver or clarification to deviate from Codex standards.

These three factors – which are only a few that the new CSB++ raises – show that traditional CSB producers will have to make significant process and capital investments to participate. Alternatively, they may choose to switch from final product production to input supply, in which case a new type of producer will need to step forward to make this product available under Title II. In total, a seemingly simple change – adding a little milk powder for children under two– has stopped private sector R&D in its tracks on this product.

(3) <u>Cost-effectiveness</u>

As complexity increases, cost of ingredients, processing, and packaging are also increasing. How are we going to keep our focus on food quality while pushing for efficiencies? What we have in products like Plumpy'Nut® or Nutty-Butta or the Challenge Dairy RUTF is the "gold standard" as set by WHO. We know that this recipe works to treat severe acute malnutrition. It includes about 25% dairy, which is the most expensive ingredient. Now, as you would guess, I like milk, and I believe that dairy is an essential part of a successful recipe. But I'm not convinced that 25% is the <u>minimum</u> amount that can do the job. Dr. Mark Manary of University of Washington/St. Louis conducted a trial about a year ago comparing RUTF with 25% milk (the WHO standard) with a similar formula with only 10% milk. The children with 10% milk did not thrive, and he quickly switched them back to the 25% formula. So now we know that 25% is enough, and 10% is too little. But might 20% dairy be enough? Or 15%? Our goal should be to get life-saving foods into as many mouths as possible. So if there is anyone out there who wants to join USDEC's efforts to test 20% and 15% dairy recipes for therapeutic foods, let me know. The same goes for the new supplementary food products: we need to find the least amount that gets the health results we demand.

The sorts of trials I am suggesting here are in the "sweet spot" for public-private partnerships. It may be inappropriate to use a single proprietary label: instead, the US government can partner

with industry associations or with companies that agree in advance to share results widely as “pre-competitive” information.

Let me stop here. I would like to hear your views on how we can best deal with the challenges of (1) ambiguity, (2) complexity, and (3) cost-effectiveness, and at the same time incentivize new product development for these vulnerable populations.

Thank you.

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