

North Korea / First Steps Program Grows

On May 17th the Air Koryo flight from Beijing to Pyongyang had some very special people and cargo aboard. The Canadian-based charity "First Steps" had a team of 5 travelling to N. Korea to further their long-term program of soymilk and nutritional fortification for schools, daycares and orphanages. The flight's cargo included three more SoyCows, bringing their total number of systems (including VitaGoats) to 98. The team visited five cities and also brought two of the SoyCows with them to two new locations. More than 100,000 children currently receive a daily fresh serving of soymilk under this program, which is now in its 15th year.



Nampo Hangdu daycare and kindergarten supply center with twin SoyCow systems.



Many of the soymilk operations are in centralized facilities with several systems operating and delivering the milk daily to their region, often by bicycle. Protein malnutrition is chronic among many children in DPRK and the daily soymilk serving provides the critical amount of protein needed. First Steps also provides good quality soybeans for all the operations. More systems are planned to be provided for this successful program later this year. www.firststepscanada.org

MM Introduces 3 HP Heat Pump / Solar Hybrid Food Drying System

This new system, developed by our SolarFlex fabrication partners at DryFree, combines the proven superior electrical heating efficiency of a heat pump with the solar capability as a bonus. In addition to the two built-in solar panels, a larger solar air heating array can be added to further expand the solar capacity and save more energy cost. In any case, the 3 HP heat pump provides enough drying power to dry up to 150 KG of wet food product per day, using 40 drying racks. Temperatures can be controlled up to 85C which is more than most foods require. This 220V system requires no installation services and is on sturdy castors to allow easy movement. This commercial hybrid unit is an excellent complement to the SolarFlex all-solar options developed by MM.



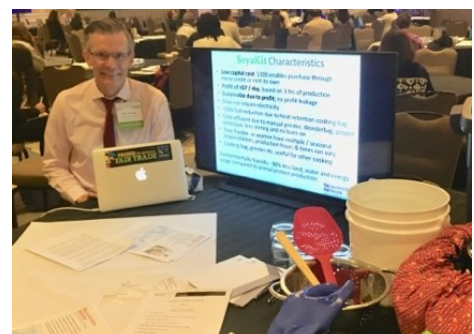
New Soy-Blend Porridge System in Development

Most African school feeding of porridge is based on a starch ingredient, like maize, without any protein component. Meanwhile protein deficiency is a major factor in malnutrition in developing countries. The lack of protein in school feeding is due to the high cost of animal-derived options. A basic adaptation of existing SoyCow technology, replacing the custom pressure cooker with 2-3 large cooking vessels, is now in the planning stages. This will include an insulated cooking jacket which allows a saving of more than 50% of cooking fuel costs. The porridge will only need to reach 100C briefly before the steam-injected cooking is replaced by continued fuel-free cooking inside the jacket. Using the existing wet soy grinder to create the base soy porridge and adding up to 50% of the existing local starch before cooking, allows a soy/carb blend which is high in protein while remaining economical and including whole soybeans. Output will be in the range of 50 - 75 + L/hr which will provide 200 - 300 servings of porridge per hour, each with about 10 grams of protein. A school in Kiryama, Burundi, which currently serves a maize-only porridge to its ~ 800 students, has been identified as the site for the first pilot project. More detail [here](#).



SoyaKit Presented at CORE Health & Nutrition Conference

The CORE Group brought together 300 experts in global health, academic researchers, donors, students and the private sector, around the most urgent community health issues. Malnutrition Matters made a presentation on Sustainable Nutrition with the SoyaKit at the conference in Bethesda MD on June 6th; it complemented a number of other presentations and breakout sessions that focused on nutrition, a very appropriate sub-theme as good health depends on good nutrition. SoyaKit presentation [here](#).



Hart Jansson Presentation