Report Card on Carbon Footprints due to Breastmilk Substitutes (BMS)

Breastfeeding is a sustainable and natural source of food and nutrition. On the other hand, industrially manufactured Breastmilk Substitutes are made from dairy and other agricultural products, which generate greenhouse gases (GHG) including methane and nitrous oxide during production, transport and use. Their use also generates a sizable volume of waste, which needs disposal. GreenFeeding is a call to make feeding decisions that have dual benefits i.e. Practicing breastfeeding which is a natural and sustainable source of food and nutrition for infants and young children (and contributes to achieving global nutrition targets), as well as avoiding BMS and helping conserve the natural environment.

However, the use of milk formula is increasingly driven by sub-optimal implementation of policies and programmes, particularly regulation of marketing of commercial baby foods to enhance optimal breastfeeding practices. This report-card provides estimates of GHG emissions arising from BMS sale in Philippines. This is set alongside assessment of the implementation of policies and programmes on infant and young child feeding in the country and some suggested actions to improve the situation.

Estimating GHG emissions due to BMS

This report card has used the method developed by IBFAN Asia to estimate the GHG emission [kg CO₂ eq. emissions, that is, the GHG amount that would have the same global warming potential as a kilogram of carbon dioxide gas (CO₂)] per kg of BMS sold. It took into account the GHG emissions due to constituents of BMS like milk powder, vegetable oils and sugars, as found from a literature review. Proportions of ingredients in various BMS products were calculated using Codex Alimentarius guidance on macronutrient composition. Published industry data from Euromonitor International for milk formula sales provided data on volumes of milk formula sold in the country.

Estimated GHG emissions per kg of BMS ranged from 3.95 kg eq. for standard infant formula and special baby milk formula and 4.04 kg eq. for follow-up formula and growing up milks.

Sales of BMS in 2016 and projected sales in 2021 (‘000 Tonnes)

- In 2016, total sale of BMS in Philippines was 54,700 tonnes, out of which 26,400 tonnes was growing up milks, 12,500 tonnes was follow-up formula, 14,400 tonnes was infant formula and 1400 tonnes was special baby milk formula.
- Total projected sale of BMS in Philippines in 2021 is 62,000 tonnes out of which 29,000 tonnes is growing up milk, 14,600 tonnes is follow-up formula, 16800 tonnes is infant formula and 1600 tonnes is special baby milk formula.
- Projections show that sale of all categories of BMS will increase substantially by 2021

GHG Emissions due to BMS in 2016 and projected emissions in 2021 (‘000 Tonnes CO₂ eq.)

- Total GHG emissions due to BMS in 2016 was 219,560 tonnes of CO₂ eq. out of which 106,650 tonnes was due to growing up milks, 56,880 tonnes was due to infant formula, 50,500 tonnes was due to follow up formula, and 5,530 tonnes was due to special baby milk formula.
- Projected total GHG emissions in 2021 due to BMS is 248,820 tonnes of CO₂ eq., maximum contribution to it will come from the growing up milks.
IYCF Practices

A high bottle feeding rate of 48.8% coupled with a low exclusive breastfeeding < 6 months along with a median duration of breastfeeding of 8.2 months need immediate attention. It shows that BMS are introduced early and they replace breastfeeding during the infancy and in the second year of life.

Policies and Programmes on IYCF

To enhance breastfeeding rates and to restrict use of BMS, strengthening of policies and programmes on IYCF is required. WBT assessment 2015 has revealed many gaps in policies and programmes on IYCF.


- There is a need to have a robust national IYCF policy, effective programme to improve breastfeeding practices in hospitals, enhanced maternity protection and effective policies and programmes on HIV and infant feeding.
- More importantly there is a need for effective implementation of the International Code of Marketing of Breastmilk Substitutes by:
  - Strengthening the Code legislation to bridge the gaps being exploited by the manufacturers to promote baby foods by prohibiting advertisements and contacts with mothers and banning nutrition and health claims.
  - Establishing International Code/national legislation monitoring mechanisms which are independent and transparent and free from commercial influence.