# Economic and Ecologic Effects of Breastfeeding

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**Summary**

The paper compiles a few facts and figures pertaining to the economic and ecologic aspects of breastfeeding. Apart from protecting and promoting the Child's health and benifitting the mother, breastfeeding as against actificial feeding saves money for the family and the country and conserves ecologic balance. It is imperative that promotion protection and support of breast feeding should be a concern of not only the parents and the health providers but also of the employers, public administraters and the policy makers.

**Introduction**

The superiority of nutritional, immunologic, antimicrobial and emotional aspects of breastfeeding are now scientifically proved. It has been estimated that lives of more than one million childen can be saved every year if all mothers were to give their babies nothing except breast milk for the first 4-6 months (UNICEF, 1992). Breastfeeding has been an essential component of the 'child survival and development revolution' of the UNICEF (UNICEF, 1985).

The importance of breast milk to the child can never be over emphasized. However, its economic advantage and eco-friendliness needs some more emphasis.

Breast milk is one of the few products which reach the consumer directly from the producer - without any processing, packing, storing any intermediary shopkeepers and vendors, and without any contamination or adulteration. Fig. 1 shows the various steps between the producer and the recipient and indicates what each step involves. It will be realised that each step adds to the financial buden and to the risk of contamination and also adds to the environmental pollution and disturbs the ecological balance.

**Economic Benefits of Breast Feeding**

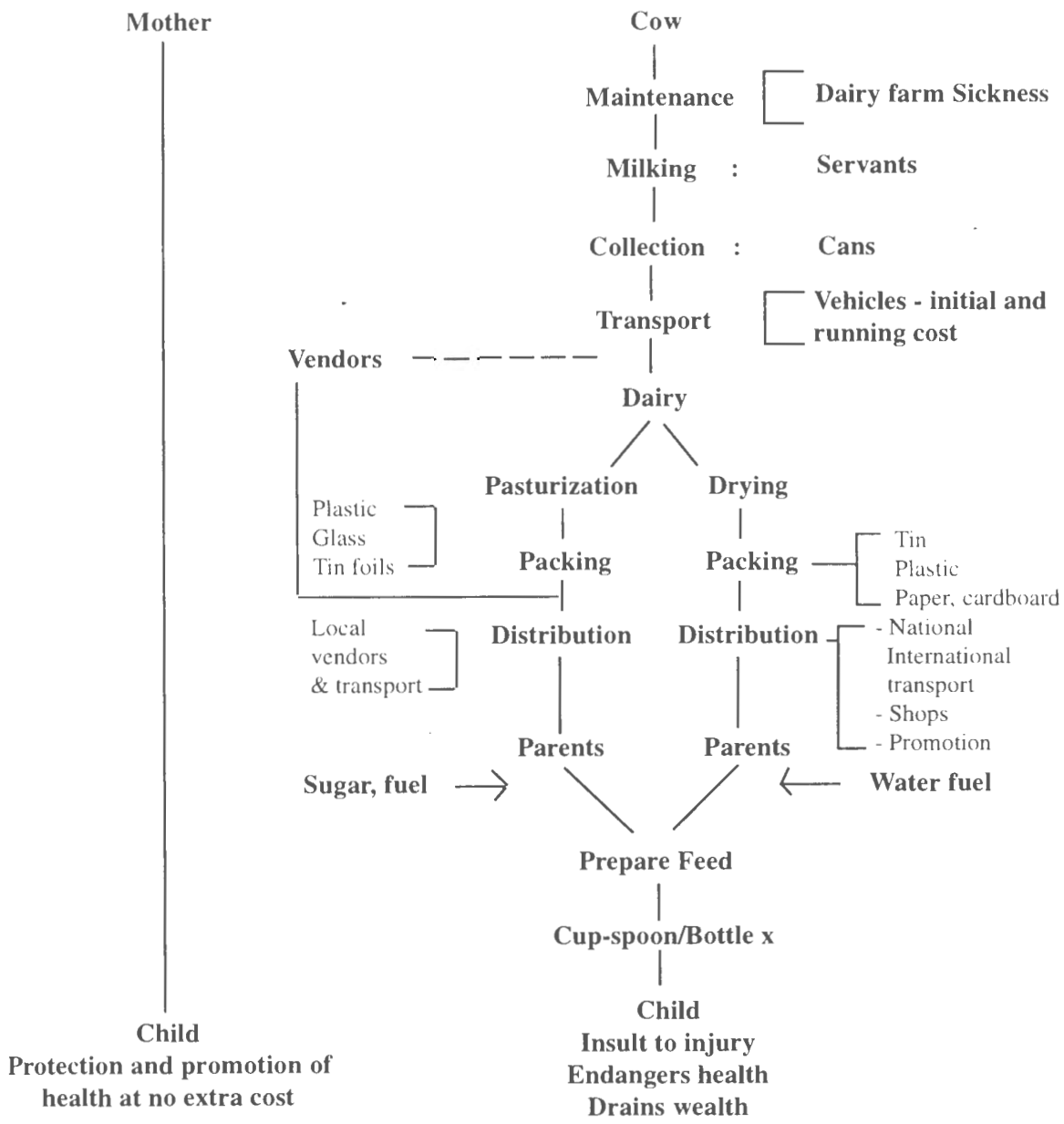
**A. Benefits to the family**

It is estimated (Gupta and Rhode, 1993) that in India, the expenditure for feeding non-humans milk to a healthy infant is, on an average Rs. 450/- per month. There is an additional expense of Rs. 6-10/- for the fuel. It is known that infants fed artificially since birth, are at a high risk of morbidity and mortality due to infections. The medical treatment imposes an additional financial burden on the parents.

**B. Benefits to the community / country**

Based on the capacity of production of milk by ages of surviving children, the total capacity of production of milk by Indian women is estimated to be 8000 million litres annually (Gupta and Rohde, 1993). But some women do not lactate and some do not suckle their babies (wholely or partially) and the realistic estimate of annual milk production is 4400 million litres. This would be worth 2985 crore rupees of fresh milk and 5968 crore rupees of milk powder. The latter amount is slightly more than the allocation for health sector outlay and family welfare outlay for 5 years in the 7th 5 - year plan and equals the expenditure on import of petroleum products during 1989-90.

**Fig -1: Human Milk and Non-Human Milk**




On the basis of the family expenditure, it is estimated (Gupta and Rhode, 1993) that more than one hundred crore worth of firewood is consumed each year for preparation of artificial feeds and that rupees 40 crores are spent for hospital treatment of diarrhoea. Much more will be spent for the treatment of respiratory infections which too are common in the artificially fed babies.

Exclusive breastfeeding is the most important factor inhibiting return to ovulation (Laurence, 1989). In India, the average duration of lactation is 10 months with an average lactation amenorrhoea of 8 months (Gupta and Rhode, 1993). Data collected from peri-industrialised societies in India indicates even longer duration of breastfeeding (16.5 months) and of lactation amenorrhoea (12 months) (Laurence, 1989). The couple protection rate of Lactation amenorrhoea is 16.5. If the current duration of breastfeeding dropped to half, the fertility rate could go up by 17% - 37% (Gupta and Rhode, 1993). Thus lactation amenorrhea though not very dependable

**Table 1: Effects of breast feeding and artificial feeding**

| Breastfeeding | Artificial Feeding |
|---|---|
| * Natural activity | * Artificial activity |
| * Human milk | * Non-human (?In human) milk |
| A product of natural need | A product of commercial greed |
| * Production matches requirement | * Production exceeds requirement |
| (Demand and supply) | (Aggressive promotion) |
| * Protects recipient | * Harms recipient |
| * Benefits producer's health | * Benefits producer's wealth |
| * Saves money for | * Increases expenditure of |
| - family and country | - family and country |
| * Preserves ecologic balance | * Disturbs ecologic balance |

for individual couples, prevents in the community more births than by all other forms of contraceptive measures put together.

**Ecologic Benefits of Breastfeeding.**

Every step of artificial feeding (Fig. 1) from the grazing cows to preparation of the feed for the baby (and the way of feeding) can damage the ecology.

Intensive cattle breeding is uneconomical. Ten acres of land, if cultivated as pasture for grazing cattle can support 2 people; the same land can support 24 people if wheat is grown and 61 people if soyabean is grown (Radford, 1991).

About 1,000 million litres of breast milk is lost annually because of supplementary artificial feeding. Three lacs of high yielding (10 L/day) cows are required to produce this amount of milk and the cows will need 75,000 acres of pasture land for grazing (Gupta and Rhode, 1993). Pasture lands are created by deforestation. Deforestation leads to depletion and erosion of soil.

The flatulent gases emitted by the cows contain methane and contribute to green house effect. The excreta pollutes the river and ground water and causes acid rains. The pollution of lakes and ponds by nitrate fertilizers may promote eutrophication. In Great Britain, more than 200 million pounds were spent for clearing the nitrate pollution resulting from intensive cow rearing.

The factories processing milk (and the quarters for staff) create concrete jungles and pollute the environment with gases and effluents.

Bottling, canning, packing require plastic, rubber, tin glass, silicon, paper which are rarely recycled. Bio-degradation of paper requires 6 months while plastic is virtually indestructible-burning liberates dioxines and other toxins. If every baby in USA were to be artificially fed the milk, packing would need 86,000 tons of tin plate and 1200 tons of label paper. Apart from the pollution by gases and effluents during the manufacture of these raw materials, its disposal also creates problems.

Some side issues also become ecologically important. Menstruation starts much earlier in mothers who do not breastfeed their babies. It is estimated that if every mother in UK breastfed her baby, saving on sanitary protection products would include 3000 tons of paper and a lot more cotton. This would contribute to conservation of environment by reducing deforestation and gases and effluents of the chemical processing for pulping, bleaching, etc.

**Concluding Remarks**

The major economic and ecologic effects of breastfeeding are summarised in Table. 1.

It should be realised that the commercial greed respects neither nature nor life. There is still a need for all out effort to promote and support breastfeeding by implementing the ten steps (WHO, 1989). This is important not only for the baby and the mother but also to the nation and the nature. The obstetrician is at an advantage since she/he has the opportunity to convince the mother during the receptive antenatal period, to initiate breastfeeding within half an hour of birth, to ensure that the baby is exclusively breastfed, no prelactal feeds are given and rooming in (or bedding in) is practiced.

## References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