

Achievement of UMMB¹ Supplementation Project

1. The Project has socio-economic impact
 - it has resulted in better utilization of low quality feed resources (by product and crop residues)
 - has generated enhance income for livestock farmers in all participating Member States
 - involves 25,000 animals (cattle, buffalo, yaks and goats) and 6,2000 farmers

2. The project has demonstrated successful transfer of technology to end-users
 - at least 4 Member States has established micro-financing schemes for farmer groups in the revolving fund for UMMB manufacture
 - co-operatives have been established

¹ Urea Molasses Multinuient Block

3. Some achievements in some Member States

Country	UMMB produced (Kg/yr.)	No. Farmers using UMMB	No. Animals fed UMMB	Extra income from milk ²	Training conducted (man-days)
China	30,000	~250	~2,500	~Yuan 2 per cow/day	Farmers ~ 50 Technical staff 6
Indonesia	120,000	~500	~4,000	~Rupiah 500 per cow/day	Farmers ~ 100 Technical staff 10
Myanmar	45,000	~700	~1,500	~Kyat 50 per cow/day	Farmers ~225 Technical staff 104
Sri Lanka	20,000	~300	~1,000	~Rupees 25 per cow/day (from reduced feeding costs)	Farmers 153 Technical staff 295
Thailand	80,000	>200	>1,600	~Bhat 3-6 per cow/day	Farmers 680
VietNam	900,000	>1,000	>3,500	~Dong 5,000-10,000 per cow/day	Farmers 1,900 Technical staff 48

4. The project is sustainable

Continuous training and demonstration is done at farmers level.

² Note-this does not include other benefits from increased growth of young and better reproductive performance of dairy animals, and higher rate of weight gain in beef animals.

ISOTOPE APPLICATIONS IN INDUSTRY AND ENVIRONMENT

Gamma Scanning of Industrial Process Columns

Success Story

- **Technology well established in RCA region and being used for troubleshooting and process optimisation.**
- **All major petroleum/petrochemical industries are the users of this technology.**
- **Types of columns include, fractionating, separator, extractor, depropaniser, hydrogenation etc. Both tray type and packed bed type.**
- **Various types of sources like Am-241, Ir-192, Cs-137 and Co-60 and associated equipment have been used to carry out these investigations.**
- **A variety of collimators giving planer, directional, and cylindrical beam geometries and made of tungsten and lead have been used.**
- **Use of neutron back-scatter gauge for level/interface monitoring has been established.**