

Setting of Blocks

Plot 1 Cow 1 Napier grass	Plot 2 Cow 2 Napier + desmodium	Plot 3 Cow 3 Napier + Commercial supplement	Plot 4 cow 4 Farmers practice of feeding on natural pastures
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**KALRO/NAVCDP/ FFBS/
Brochure No.052/2024**



PARTICIPATORY TECHNOLOGY DEVELOPMENT (PTD) IN DAIRY VALUE CHAIN



Introduction

Participatory Technology Development (PTD) for dairy is the means by which FFBS transfers technology innovation management practices (TIMPs) along the dairy value chain through demonstration trials. This process involves the identification, listing, and ranking of problems before coming up with the opportunities of tackling the highest-ranking problem.

List of production problems and acronyms

- Poor husbandry practices in dairy (PHPD)
- Use of inferior breed technologies (IBT)
- Poor feeding management (PFM)

Pairwise Ranking Procedure

Each problem is listed in a table along the first row and column, as illustrated in the table below. Acronyms are assigned to the listed problems for ease of fitting them into the table.

The problems are then compared, two at a time, and the higher-ranked problem between the two is filled in the table. The filled-in entries are counted, and the problem with the highest count is scored as the prioritized problem.

	PHPD	IBT	PFM	Scores	Rank
PHPD		IBT	PFM	0	3
IBT			PFM	1	2
PFM				2	1

From this example poor feeding management (PFM) is ranked first and hence a participatory technology development (PTD) is developed on this area.



PTD design for different treatments on feeding management; above napier fodder, below on natural pastures

The participatory layout of Dairy PTD is implemented for various treatments, as shown above. These treatments illustrate different feeding management practices. The process of PTD for feeding management treatments is described below to address low milk production resulting from poor feeding management.

Value Chain	Dairy
Learning Enterprise	Dairy
Funded Enterprise	Dairy VC at production level
Background Problem	Low milk production due to poor feeding management
Objective	To increase milk production through use of improved feeds.

Factors to consider

- Dairy Cattle of same size and age
- Same cattle production system
- Same cattle disease management system
- Use of fodder and commercial feeds

Participatory Technology Development (PTD) Blocks

Setting up PTD blocks involves:

- Selecting 4 dairy cows of the same breed or type and age as treatments.
- Implementing different feed treatments for each of the four dairy cows.
- Conducting data collections from each of the 4 dairy cows.
- Applying other Technology Innovations and Management Practices (TIMPs) equally for each cow.
- Ensuring equal application of parasitic control and disease management.

Parameters Measurement

- Milk yields per day
- Milk butter fat content
- Weight of cow