

Dairy Hub Training Booklets

Titles

- | | |
|--|------------------------------|
| 1) Importance of Water | 9) Breeding |
| 2) Fodder | 10) Calf Rearing |
| 3) Wheat Straw Enrichment | 11) Diseases and Health |
| 4) Silage (Fodder Pickle) | 12) Mastitis |
| 5) Hay Making | 13) De - Worming |
| 6) Balanced Ration | 14) Mechanized Dairy Farming |
| 7) Dairy Farming as an Enterprise/Business | 15) Vaccination |
| 8) Heat Stress | |

Importance of water

“Pure Water 24 Hours a Day – Guarantees Increase in Production”

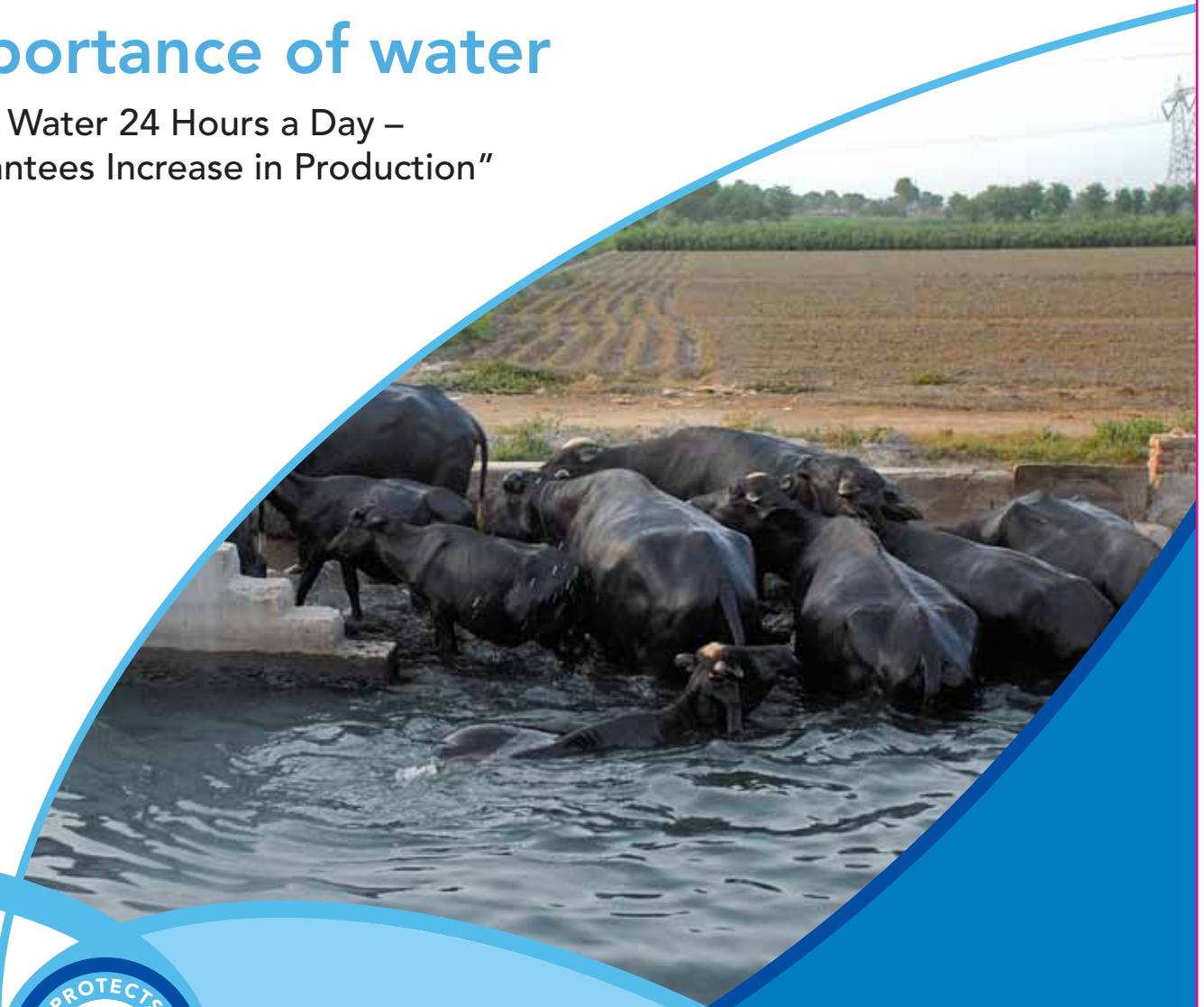


Tetra Pak and PROTECTS WHAT'S GOOD are trademarks belonging to the Tetra Pak Group. www.tetrapak.com

 **Tetra Pak**

Lahore Office: 316 Upper Mall, Lahore - 54000 - Pakistan, Tel: +92 42 35710070-77, Fax: +92 42 35710064-65

Karachi Office: 602, The Forum, Block 9, Clifton, Karachi - 75600 - Pakistan, Tel: +92 21 35301377-80, Fax: +92 21 35301381



Dairy Hub is a Community Dairy Development Programme, which has been initiated for the development of small farmers. The aim of this programme is to keep farmers informed about modern ways of dairy farming, to provide practical help for improving their skills and to increase production of their animals. This programme will increase not only the average production of animals but also the income of farmers, and thus decrease considerably the rate of poverty in rural areas. This booklet is a part of this programme.



Yours truly,

Azhar Ali Syed,
Managing Director,
Tetra Pak Pakistan
Limited

Project Management:

Kashif Bhatti
Marketing Director, Tetra Pak, Pakistan Ltd.

Umer Ghumman
Marketing Manager, Tetra Pak, Pakistan Ltd.

Written by:

Dr. Muhammad Nasir Javed

Editor:

Farzeen Zaidi

Technical Team:

Dr. Waseem Shaukat
Shabana Afreen

Implementing Partner:

Haroon M.K Lodhi
Solve Agri(Pvt)Ltd.

Design agency:

Red Communication Arts

Printer:

Vantage Printers

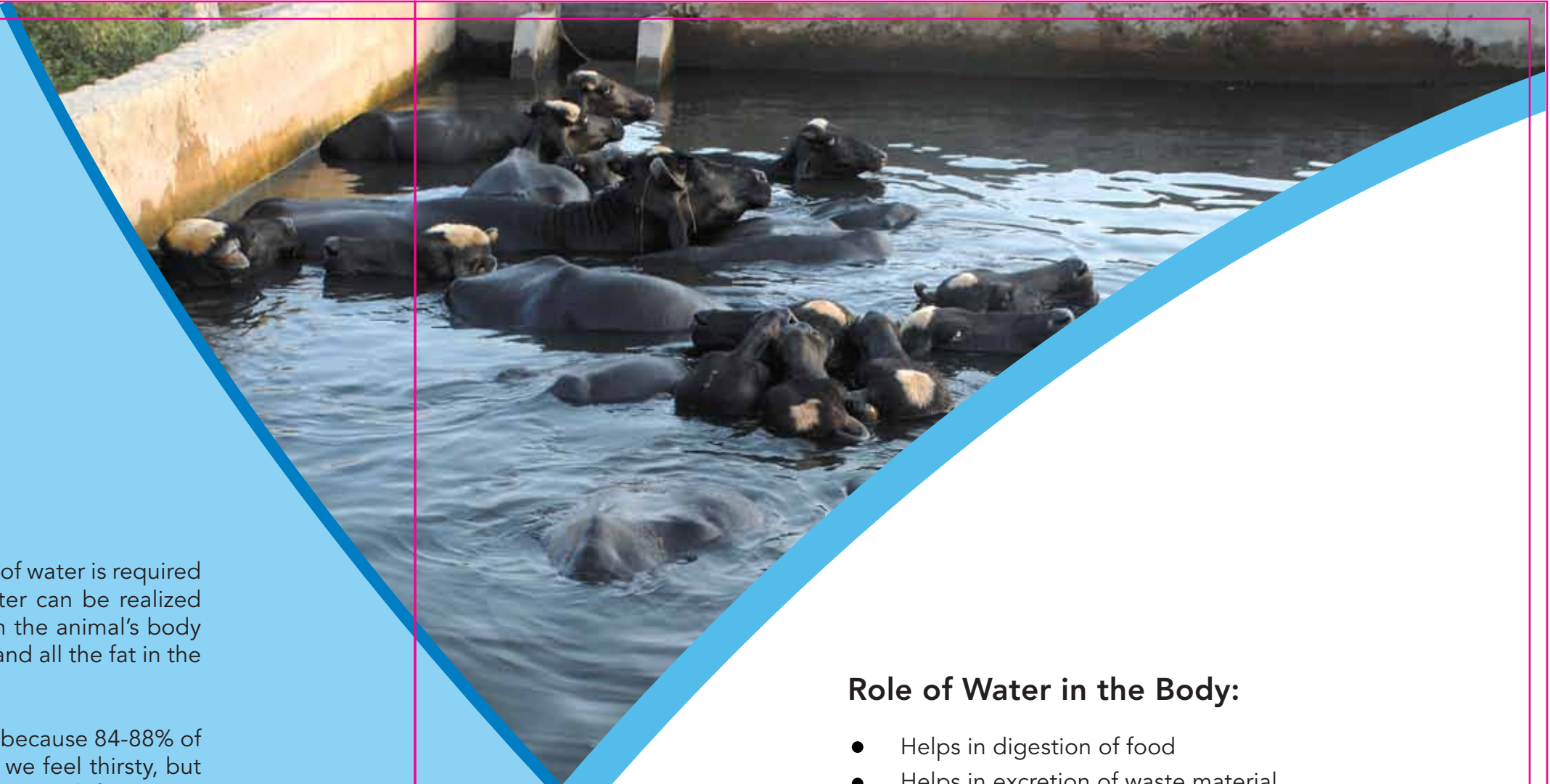
Feedback

We would appreciate your comments

Please email

dairyhub.pk@tetrapak.com

No.	Topic	Page no
1.	Importance of Water for Animals	1
2.	Role of Water in the Body	2
3.	Water Needs of Animals	3
4.	Effects of Water Deficiency	4
5.	Benefits of Water	5
6.	Quality of Water and its Effects on Animals	6
7.	A Substantial Amount of Pure Water Means More Milk	7
8.	An 8-Day Test of Low Water Consumption	7
9.	Things to Remember	10



Importance of Water for Animals:

Water is very important for the nutrition of animals. A lot of water is required at every stage for their growth. The importance of water can be realized from the fact that the loss of even one tenth of water in the animal's body can cause its death whereas a loss of half of the protein and all the fat in the body does not kill it.

Amongst all animals, lactating animals need more water because 84-88% of milk is water. We human beings can ask for water when we feel thirsty, but the animals cannot do so. They are at our mercy and water deficiency in their body is not only harmful for their health but may also cause financial loss to their owner.

Role of Water in the Body:

- Helps in digestion of food
- Helps in excretion of waste material
- Plays an important role to regulate body temperature
- Protects against harmful effects of heat
- Controls acidity levels

Water Needs for Animals:

The animals' need for water can vary according to the weather, food and their production status. For example, they need more water in the summer season than in the winter. The reason is the intensity of heat and a lesser ratio of water in their feed. In the same way, they would drink more water when they eat dried fodder or wheat straw and they would drink less water when they eat soft 'berseem'.

Similarly, they would need more water when concentrates are fed to them. They would also drink more water when they eat 'silage' (fodder pickle) or dried hay. Their calves would need more or less water according to the weather. Calves being fed on concentrates eat more when they drink water, which enhances their growth.

Water should be given many times to lactating animals, or it should be within their reach all the time to recompense the excretion of water due to the milk producing process. 2-4 litres of water is needed to digest one kilo feed.

Lactating animals should be given water many times or they should have free access to water 24 hours so that they can compensate the excretion of water in the form of milk. Furthermore 2-4 liters of water is required to digest 1 kilogram of feed.



Effects of Water Deficiency:

- Less intake of feed
- Decrease in production of milk
- Constipation
- Weakness
- Increase in quantity of urea in urine and bad smell
- Incomplete digestion

Utility / Efficacy of Water:

Lactating animals need 3-5 litres of water to produce one litre of milk. They require additional water if they are suffering from fever or loose motions (diarrhea) or if the weather is very hot. Their health improves and milk production increases considerably if they are untied and provided with fresh and pure water all the time.

Quality of Water and its Effects on Animals:

Animals will drink more water if the water has good taste and normal temperature ie not too hot or cold. According to an estimate, they drink more water when the water temperature is 25°C. The animals need as much pure water as humans. They remain healthier and produce more milk if they are given germ and additive-free, pure water. Impure water produces internal worms, specially those found in the liver. Because of these worms animals cannot digest their feed well, and their health and milk production are adversely affected.

A Good Amount of Pure Water Means More Milk:

Tied animals should be offered water at least 5 times in a day or put a pot full of water near them. Water mangers must always be clean. They do not completely digest their feed if they do not get as much water as they need. It adversely affects their health and decreases milk production.

An 8-Day Exercise to monitor Low Water Consumption:

Decrease in water consumption	Decrease in feed consumption on the 2nd day	Decrease in feed consumption after 8 days	Milk production the next day	Milk production after 8 days
25%	11%	21%	11% decrease	25% decrease





Things to Remember:

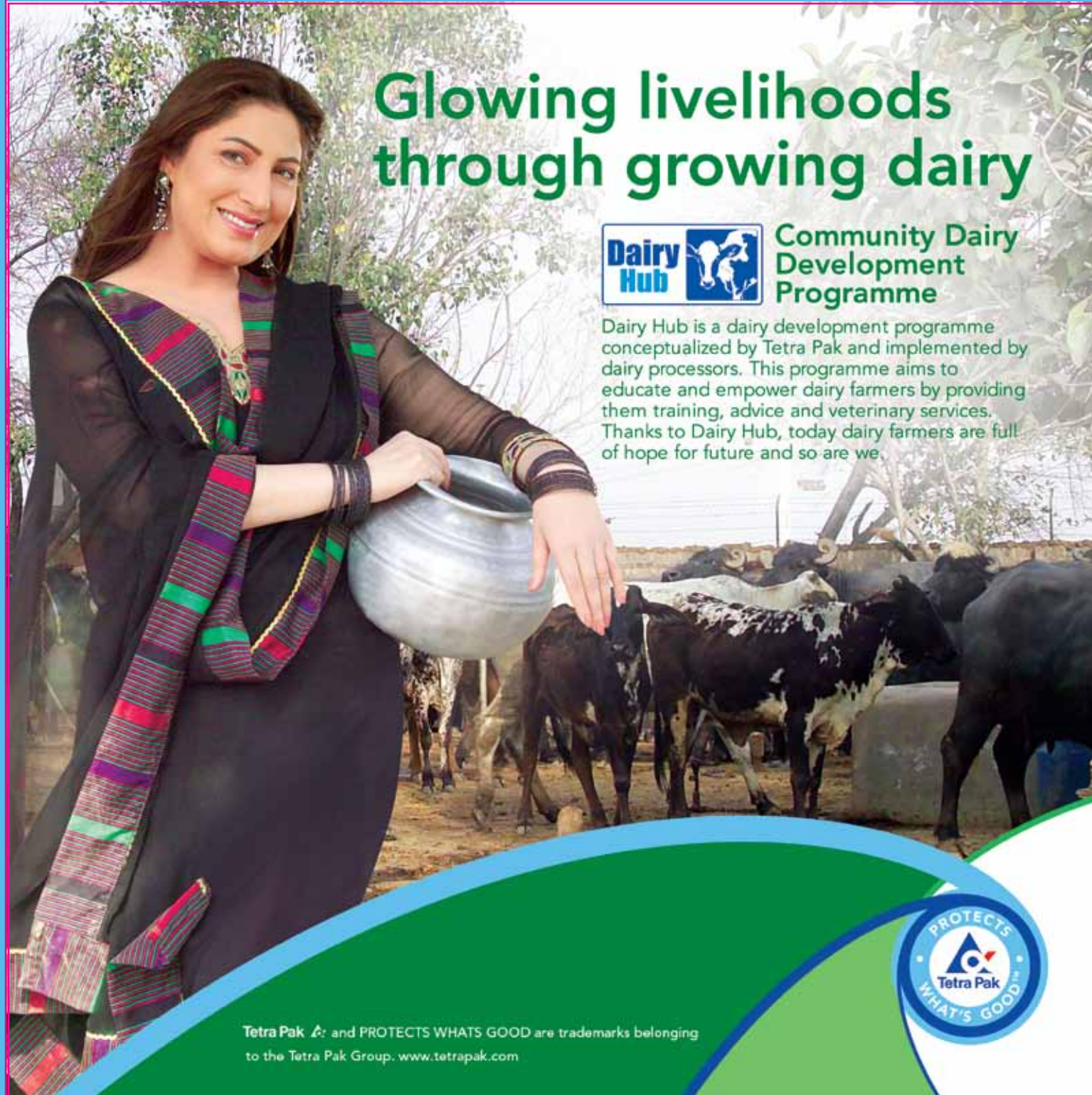
- Water should be available for animals all the time
- Always offer them pure and fresh water
- Clean the water mangers daily
- Whitewash the mangers with limestone once a month
- Keep the water temperature according to the environment
- Offer water to the animals 5 times a day in the summer and at least 3 times a day in the winter if they remain tied to one place.
- Animals must be offered water after milking because animals need one third of their daily water consumption after they are milked
- No matter how rich the feed is in nutrition, if animals are not given plenty of water the feed cannot be effective

Glowing livelihoods through growing dairy



Community Dairy Development Programme

Dairy Hub is a dairy development programme conceptualized by Tetra Pak and implemented by dairy processors. This programme aims to educate and empower dairy farmers by providing them training, advice and veterinary services. Thanks to Dairy Hub, today dairy farmers are full of hope for future and so are we.



Tetra Pak and PROTECTS WHAT'S GOOD are trademarks belonging to the Tetra Pak Group. www.tetrapak.com



Dairy Hub is an important step by Tetra Pak towards the well-being of dairy-farmers. It will certainly open new vistas of progress for dairy farmers. I congratulate Tetra Pak on the opening of a new era for the prosperity of dairy farmers. All these training booklets are a part of this developmental programme and they have been written specially for the help and guidance of dairy farmers.

Based on various topics, these training booklets contain important pieces of information and suggestions which will help the farmers in better rearing of their animals, protecting them from different diseases and to increase their milk production.

I do hope that this effort by Tetra Pak will be useful for the prosperity of the farmers and help them solve their problems regarding health of their animals.

Prof. Dr. Talat Naseer Pasha,
Dean, Faculty of Animal Production and
Technology,
University of Veterinary and Animal
Sciences, Lahore