

## Dairy Hub Training Booklets

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## Breeding

“Better breed, better yield”



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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,

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Feedback

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Dairy farming is being practiced in Pakistan's rural areas in a traditional way since centuries. The farmers have not been able to make dairy farming a profitable enterprise, due to many reasons. One major element is that due attention has not been paid to breeding. Breeding means acting upon specific genetic principles, due to which the production and characteristics of every new generation of the animals is better than those of the previous generation.



## Objectives of Breeding:

1. To maintain productive capability even in unsuitable environmental conditions
2. Early puberty
3. Increased lactation length (305 days)
4. Decrease in calving interval
5. Normal parturition (calving)
6. Immunity against diseases
7. To improve the economics of the farmer by making the farm more profitable



## Why Breeding Needs to be Improved?

If we study current breeding practices in dairy farming, we learn that though the number of animals has increased considerably during the last six decades, unfortunately the average milk production has decreased considerably. The main reason being that, instead of following basic rules at the mating of milch animals giving animals, our farmer loses not only the chance of getting the best breed but also decreases the production of his farm. It has been observed that most of the farmers use the same bull for mating in his own farm. This is called in-breeding and it not only decreases the animals' production but also makes the new generation prone to various diseases.

## Disadvantages of In-breeding:

1. Decrease in body weight and size of the next generation
2. High mortality rate
3. Decrease in immunity
4. Delayed puberty
5. Various physical disabilities

## Selection of a Bull:

Following points should be considered when selecting a bull:

1. Muscular and compact physique
2. Free from any physical abnormality
3. Mother of bull should have high milk production
4. The previous record of the bull should show that more female calves have been produced with the semen of the bull
5. Previous record of better production of milk of his female progeny
6. The bull must be free from venereal diseases

## Remember!

Venereal diseases of the bull definitely transfer to the next generation. So be sure that the bull is not suffering from any disease.

"If a healthy bull is not available, do not use an ordinary bull for mating. It is better to use artificial insemination."

## Artificial Insemination:

Artificial insemination means making the female animal pregnant by putting semen in her uterus.

## Advantages of Artificial Insemination:

1. Maximum number of inseminations from a proven sire (bull). (about 150,000 semen doses can be obtained from one bull in one year)
2. Semen of proven bull can be stored for years.

3. Save the cost of rearing a bull.
4. The semen of animals of different breeds is easily available.
5. It helps to control diseases.
6. The semen of the best bull of the world can be provided in far flung areas.

## Choosing Semen:

No	Breed	Possible Crossing
1	Local	Frisian, Jersey, Sahiwal
2	Sahiwal	Frisian, Jersey, Sahiwal (If proven semen is available)
3	Cross bred cow	Frisian, Jersey, Sahiwal
4	Pure Frisian , Jersey	Frisian, Jersey, Sahiwal
5	Buffalo	Use the semen of a proven Neeli Ravi bull

## Economic Effects of Artificial Breeding:

### A Comparative Study

No	Name	Desi breed	Hybrid breed	Difference
1	Milk (in a year)	1500 litres	3000 litres	Rs 45000/-
2	Price of the animal	Rs 25000/-	Rs 75000/-	Rs 50000/-
3	Price of Calf	Rs 10000/-	Rs 15000/-	Rs 5000/-
4	Gestation period (days)	210 days	305 days	95 days

## Economic Effects of Breeding on a Farm Comprising of 10 Cows only after Six Years:

Following are the beneficial aspects of improved breeding after six years

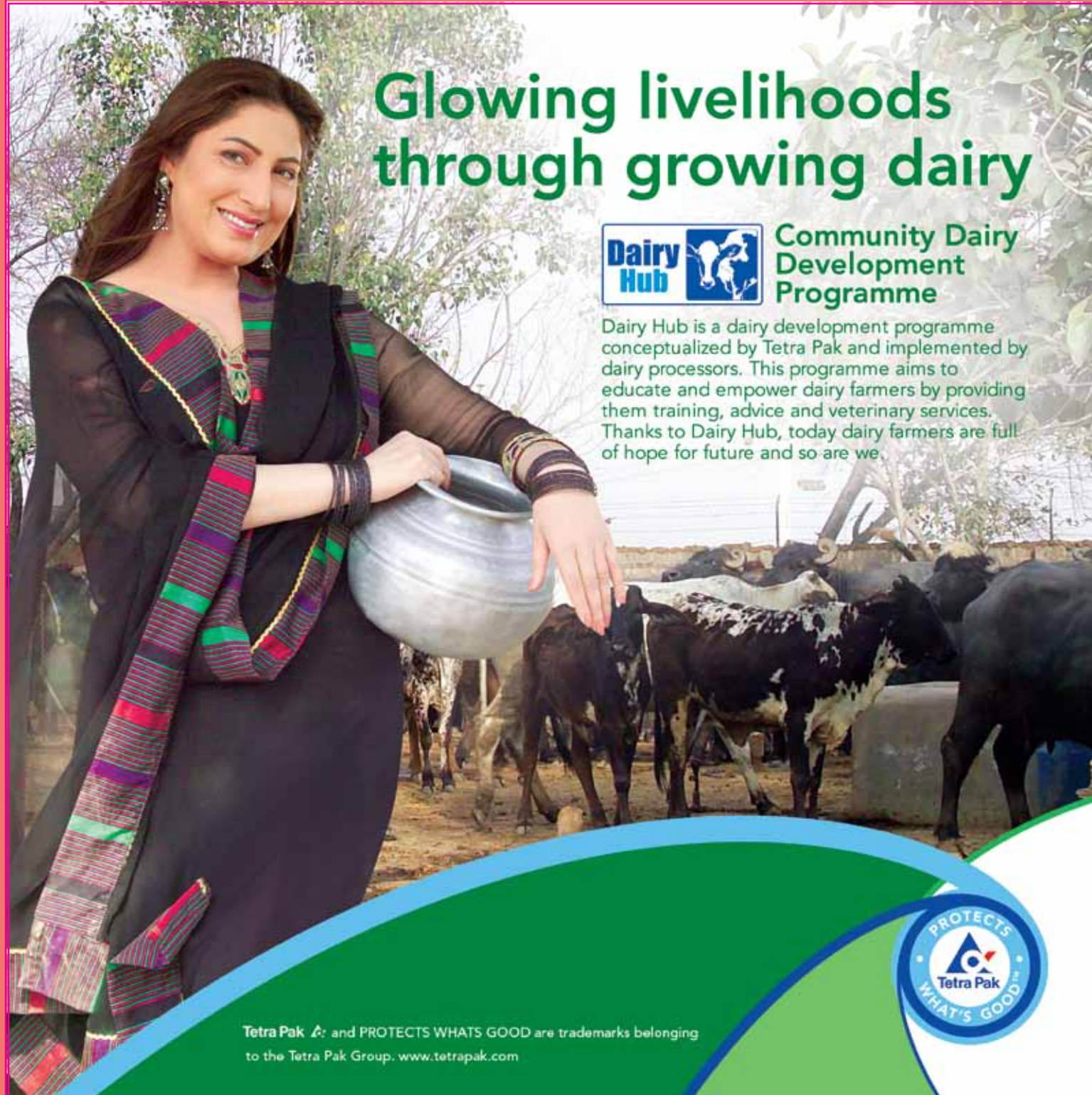
1. The potential for milk of all the animals will increase from 10 litres to 20 litres per day. (100 percent extra income from the production of milk)
2. Less calving interval
3. All heifers will be ready to get inseminated in 14 months instead of 24 months. (This way they can start giving milk 10 months earlier)
4. Lactation length will increase from 210 to 305 days. (The animal will give milk for 95 days more.)
5. The price of all the animals will increase two-fold in the market.
6. All animals will have some extra qualities.

# 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.



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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.

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