

## Dairy Hub Training Booklets

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- |  |                              |
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| 2) Fodder                                  | 10) Calf Rearing             |
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## De-Worming

“Regular De-Worming – Healthy Animals and more Production”



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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

We would appreciate your comments

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## De-Worming of Animals:

According to a careful estimate, 42% animals are affected by different types of worms. The worms adversely affect efficiency of the animals and cause a financial loss to their owners. That is why it is important to overcome the worms to improve production of the animals.

The worms in animals are more in those areas where animals graze more, than in those areas where animals graze less. There are more worms in those animals which eat dried feed than in those which eat green fodder. Similarly, more worms are found in younger animals than in older ones. One important reason of lesser rate of growth in younger animals in Pakistan is the presence of worms in them.



### Signs of worm infested Animals:

- Diarrhoea
- Loss of weight
- Soil licking and eating pieces of cloth
- Delay in puberty
- Weakness and slow growth
- Decrease in milk production
- Death at an early age
- Thin and rough skin



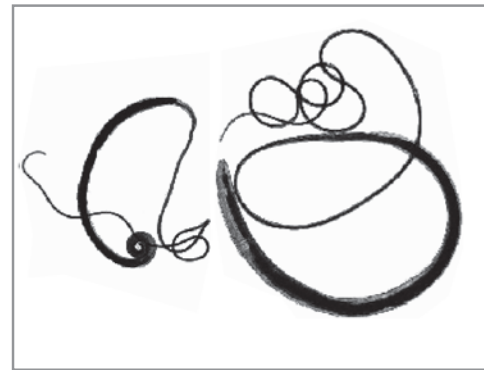
### Types of Worms:

Worms are usually of two types:

1. Internal parasites (worms)
2. External parasites

## Internal Parasites (Worms):

According to an estimate, the mortality rate among the younger animals of 6 months to one year old due to internal worms is 25-30%. Internal worms include round worms, stomach worms, lung worms, liver flukes and intestinal worms.



## Worms of stomach and intestines:

These worms attack the animals mostly at the end of the summer season and the beginning of the winter season. They stick to the walls of the stomach and intestines and suck the blood of the animal.

## Symptoms:

- Animals become anaemic
- The animals take up more feed, yet become weaker
- Loss of water in the body, diarrhea and sometimes presence of blood in excretions
- Rough and dry skin

## Lung Worms:

These worms grow in the lungs or in the trachea/windpipe. Their presence causes swelling in the trachea/windpipe, and the animal breathes with difficulty.

## Symptoms:

- Coughing
- Phlegm in nostrils
- Pneumonia is possible
- The animal breathes with open mouth in case of intensity of sickness



## Liver flukes:

These worms are flat like a leaf. They occur mostly in animals residing in areas affected by water-logging and salinity. When animals swim in polluted ponds and drink their water, these worms go into the stomach. Their larvae reach the liver of the animals through blood vessels.

## Symptoms:

- The animal becomes weaker and thinner and produces less milk
- Blurry eyes
- Hair fall
- Swelling of the body part between the fore limbs, on the neck and under the jaws





### External Parasites:

These parasites are found on external skin. They are mostly blood-sucking parasites and they cause spread of fatal diseases in the animals. They include lice, ticks, flies and mosquitoes, etc.

### Ticks:

These parasites not only suck the blood of the animals but also cause the spread of fatal diseases. They are mostly found on the softer parts of the animals' skin like the udder and between the legs. A very dangerous disease Theileriosis (tick fever) is due to the fever caused by ticks.

### Symptoms:

- The animal becomes weak because of loss of blood
- Their skin becomes rough and dry.
- Milk production decreases.
- The animal becomes restless.
- The possibility of abortion rises.
- Paralysis attack is possible.
- Holes appear on the skin and they become like wounds.

## Lice:

Lice are of two kinds:

1. Biting lice
2. Blood-sucking lice

The lice stick to the skin of the animals and their eggs stick to their hair.

## Symptoms:

- The animal shows restlessness.
- The animal becomes weak.
- Continuous scratching or rubbing of the skin with the walls makes the skin red and these scratches become wounds.







### Flies:

The animal fly is a bit bigger than the housefly and its colour is dark orange and brown. It flies fast and creates a sound when it flies. It is usually found in the summer season and it lays its eggs in the skin of the animal.

### Symptoms:

- Milk production decreases suddenly.
- Swellings and scars appear on many parts of the skin.
- Sometimes the animal stops cudding and rumination.
- The animal urinates again and again and remains restless.

### Kinds of adverse effects of Parasitic Infestation:

The adverse effects of infestation can be divided into two types.

1. Hidden
2. Apparent

Hidden diseases include:

- Decrease in milk production.
- Enlargement of the belly.
- Loss of weight.
- No pregnancy etc. are the hidden effects of worms.

These adverse effects cause financial losses to the owners of the animals.

Apparent diseases include:

- Thinness of skin,
- Anaemia,
- Scars and swellings on the body,
- Cough,
- Constipation
- Diarrhea etc. which show the apparent adverse effects of the worms.

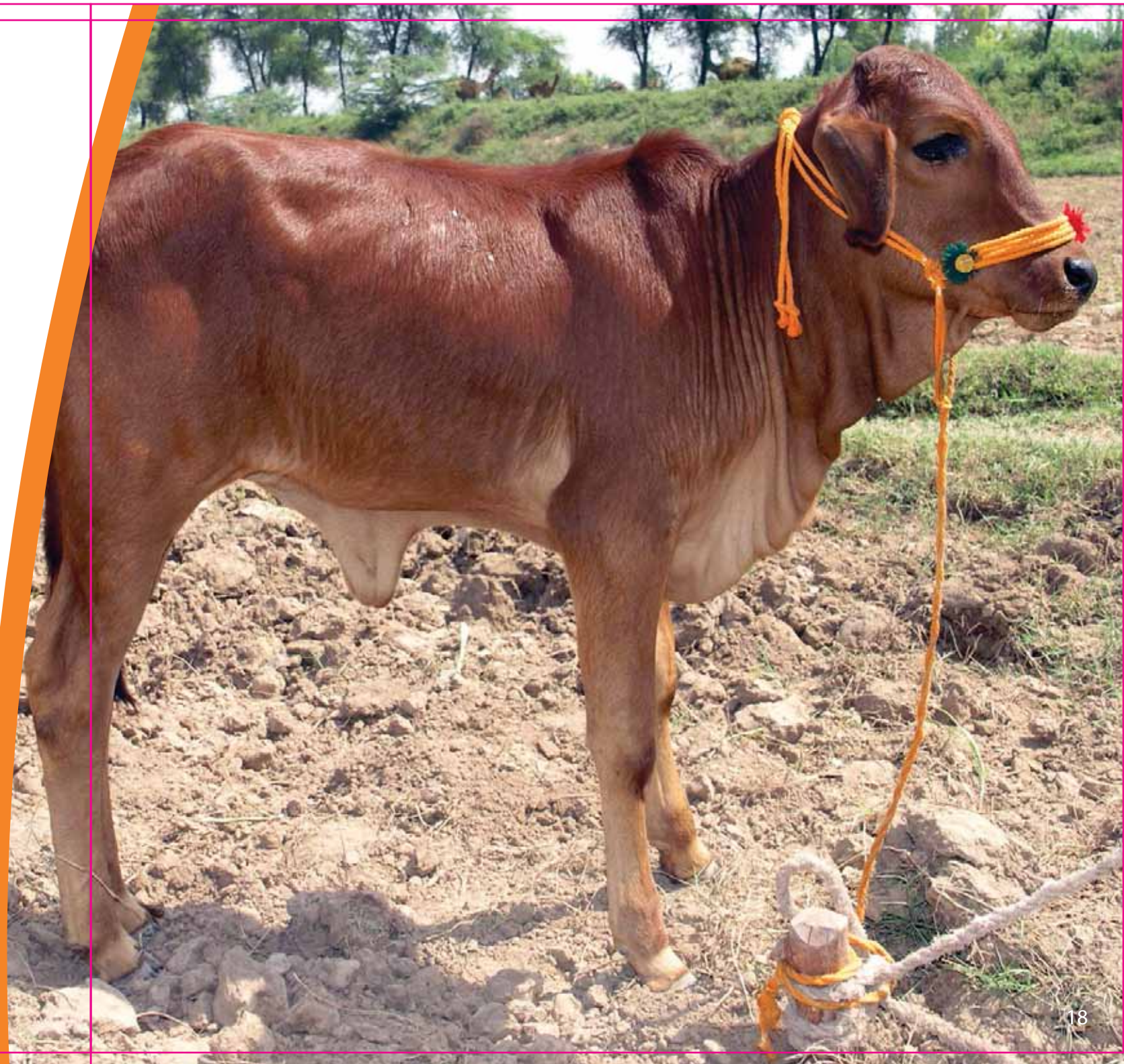
### Control of Parasites:

- Keep animals' sheds clean.
- There should not be any holes/cracks in the walls or roofs of the sheds, where these external parasites can hide or lay eggs.
- Spread limestone powder in sheds from time to time.
- Spray sheds with insecticides after removing the animals from their sheds.
- In case of ticks, get it treated by a veterinary doctor.
- Protect chopped fodder from dust and dirt and give the animals clean feed.
- De-worm animals regularly.
- Give a variety of de-worming medicines so that the worms cannot build immunity against any medicine.
- Whitewash the water troughs of the animals with limestone powder for protection against microbes.



Instead of finding treatments for the affected animals, special attention should be paid to the effective prevention of an attack of the disease. Many farmers treat the affected animals only. But if it is found that there are worms in the farm, then all animals must be de-wormed.

The farmers bear huge financial losses when de-worming medicines are not used in time and regularly.



### **Economic Benefits of De -Worming:**

- An increase in milk production of the animal gives the farmer a benefit of at least Rs 4000 in a year.
- With regular de-worming of calves, their daily growth is enhanced 100 to 400 gms more than the normal; which gives minimum Rs 13,500 benefit to the farmer in one year.
- Regular de-worming keep the animals healthy and their feed proves useful.

### **Selection of De -Wormer:**

These points should be kept in mind when de-worming medicines are being chosen:

- Determine the quantity of the medicine according to the weight of the animal.
- Easy to administer
- Choosing the most effective medicine
- Less expensive
- Personal safety
- Effectiveness of the medicine / A reliable company

Note: It is safe to drink the milk and/or eat the meat of the animal 3-4 days after de-worming.

### **De-Worming the Herds of Cows and Buffaloes:**

The production of milk increases by ½ to 1 litre of milk when lactating animals are de-wormed. The effects of the parasites are different on cows, buffaloes, bulls and on younger animals. Therefore, the methods of their treatment should also be different.

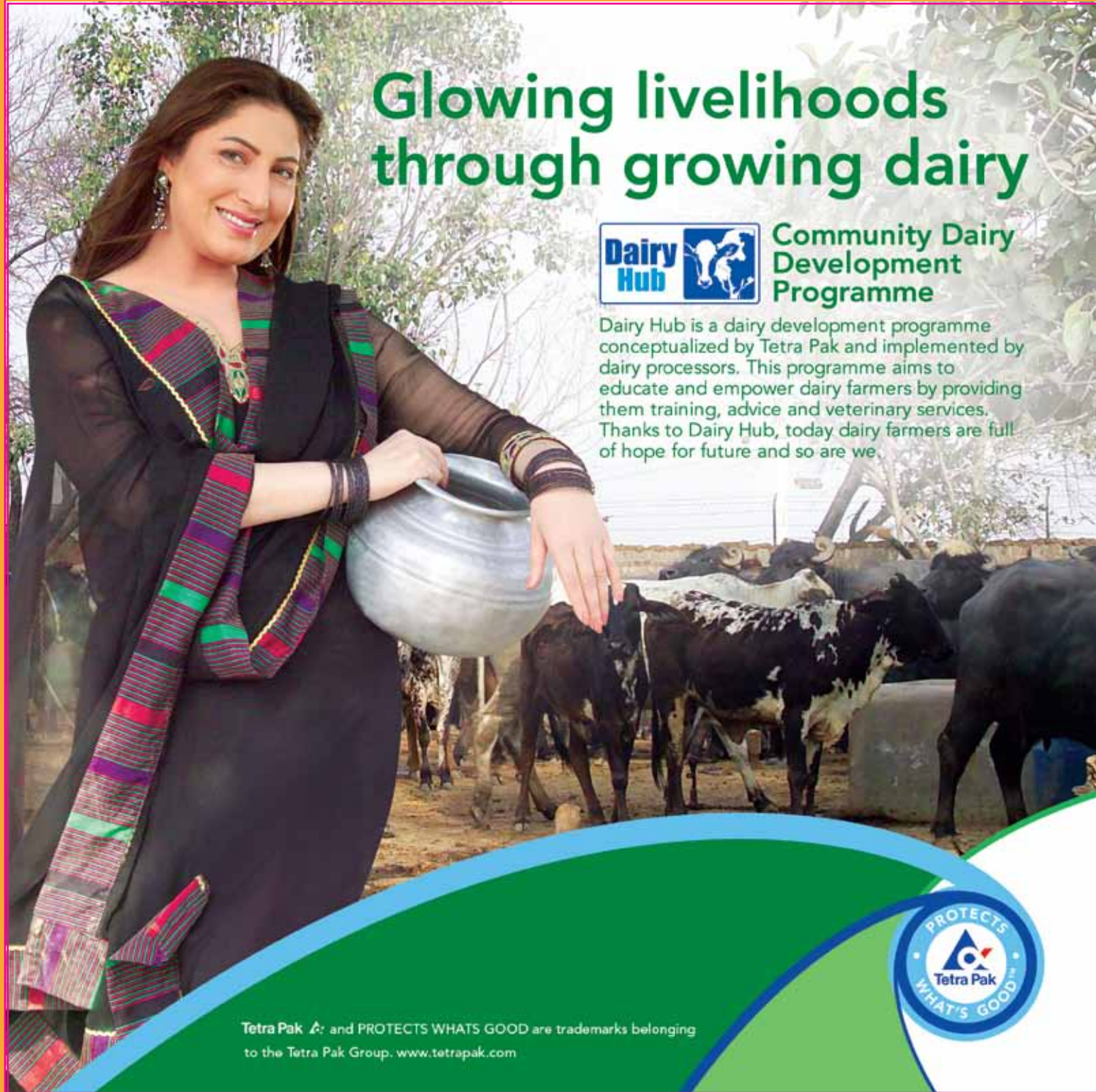
De-worming medicines should be administered at least thrice a year to the adult and four times to the younger animals.

# 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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