

A review of dairies and pig-keeping in the twin-city of Hubli-Dharwad, in the State of Karnataka, illustrates the role of livestock in household livelihood strategies in Indian cities. Small urban dairies and roaming pigs are a common sight in Hubli-Dharwad and make an important contribution to household livelihoods and urban food supplies. However, the future of livestock keeping in urban centres can be questioned, given public concerns at city and national level and recent moves by city authorities to evict pigs.

Photo by F. Nunan



Urban Dairy in Hubli-Dharwad

## Livestock and livelihoods in Hubli-Dharwad, India

**R**oaming livestock is a common sight in most urban areas of India.

Livestock keeping, particularly of buffaloes, is a tradition, but buffalo, cattle, pigs and chickens are also kept in towns and cities to contribute to household livelihoods and food security.

Urban centres provide a number of incentives for keeping livestock, such as foodstuffs (food waste from hotels and vegetable waste from markets and homes) and

opportunities for using a mix of income generating opportunities, which urban centres provide, make livestock an attractive option, providing space and fodder can be obtained.

### URBAN DAIRIES

In and around the city there are large and small dairies. About twenty commercial enterprises keep between ten and twenty buffaloes and crossbred cows, while a number (30–40) of smaller dairies keep crossbred cattle. By far the largest number of urban dairies belong to traditional buffalo keepers, known as *gowlies*. Some of these households rely solely on the milk produced by buffaloes as their source of income, others may rely more on urban-based work, but keep one or two buffaloes as a source of milk for their family and as an additional source of income. Keeping buffaloes is also part of tradition. Animals may be impounded in a *vada* or *go-shala*, which are cattle shelters, including pounds where roaming cattle are taken. Owners of cattle have to pay a fine for the latter.

The main source of fodder for the urban dairies is from the adjoining rural areas. The urban dairies purchase sorghum and grasses during the harvest season and store it for use during the year. The owners of large urban dairies have their own resources for growing fodder,

including cereals and legumes. Additionally, food waste from hotels and cafés and vegetable waste is fed to the buffaloes.

Milk is sold once or twice a day in Hubli-Dharwad, depending on demand. There are several different methods of marketing the milk. *Gowlies* sell their milk directly to hotels, boarding houses and households. Some *gowlies* milk the buffaloes in front of the consumers, to assure them of the freshness of the milk, which is also carried out in certain locations, for example at fixed hours in the morning and evening. A premium price is paid for such fresh milk. Sometimes loans are given to the *gowlies* for the purchase of buffaloes, with the loan repaid in the form of milk. A further marketing route involves vendors collecting milk directly from dairy owners and delivering the milk to organised milk booths in Hubli-Dharwad.

The milk collected by the Karnataka Milk Federation (KMF) from the rural areas, along with dried milk, poses a significant source of competition to the traditional urban dairies. People can obtain milk when they want it, rather than wait for it to be delivered, and its sale appears to be increasing, despite the fact that, in some cases, it is a little more expensive than buffalo milk,

### Families who keep a small number of livestock in urban centres often rely on additional sources of income

easily accessible markets, particularly for fresh milk from urban dairies. There are also, however, a number of problems with keeping livestock in urban centres, including access to grazing land and water (both for drinking and washing buffaloes and cows) and storing dung for sale. The difficulties for the urban authorities include roaming and herded animals contributing to traffic chaos, dung and fodder in storm drains, complaints about smell and concerns about health hazards.

Families who keep a small number of livestock in urban centres often rely on additional sources of income, from construction work to cleaning and laundry. The

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retailing at around Rs. 11 a litre (exchange rate is approximately Rs 41: US\$ 1).

Milk produced in the urban areas is, however, not a substantial source of supply to the city. From livestock census data, it is possible to estimate approximately how much urban dairies contribute to the milk supply of the city, working out at 0.03 – 0.06 litres per person per day in 1997. Although these figures are estimates, and the numbers of cows and buffaloes given in the census may not be entirely reliable, the figures are quite low. Milk from KMF and more commercial dairies dominate the market, and these dairies are likely to increase their dominant position if the constraints on urban dairies are not reduced, and if consumers increasingly prefer pasteurised milk and modern forms of purchasing.

### URBAN SCAVENGING PIGS

Hubli-Dharwad also has a significant number of scavenging pigs, owned by quite distinct communities within the city. These communities include the Hindi ‘Gollar’ communities and the Bhils community from the Punjab, whose main occupation is hammering scraps of metal into utensils. As with buffalo keeping, pig owning is a tradition, handed down from generation to generation. Pig owning communities can be found in several areas of Hubli-Dharwad, depending on tradition, but also on proximity to areas where pigs can roam for food. There does not appear to be a significant amount of coordination between the pig-owning communities, though the areas are marked out between them. Although there is little coordination, there have not been reports of conflict between the communities either. In fact, collaboration would seem a more appropriate response to recent constraints on their source of livelihood.

The pigs represent a source of cheap protein, for certain social groups which consume pork, as they rely on low cost sources of feed - street rubbish, waste from hotels and restaurants, soil and vegetation. The pigs, or pork, are transported to the consuming markets in Goa and at Hassan, Mangalore and Bangalore, in Karnataka. The pre-Christmas period is the busiest for sales.

The perception dominates that pigs are a nuisance and pose a threat to health, despite the role they play in consuming

nightsoil and other organic wastes. The degree to which they constitute a health hazard, however, varies considerably and is unclear. For instance, Japanese encephalopathy - a disease carried by pigs but transmitted by a mosquito, which lives in irrigated rice paddies - is not a problem in the city, as there are no paddy fields. Public safety is at times at risk due to pigs dashing out into traffic on the roads, though this is obviously a danger for the pigs as well.

In response to complaints about roaming pigs and potential health threats, the Hubli-Dharwad Municipal Corporation

## The urban dairies illustrate important rural-urban linkages

(HDMC) has been rounding up pigs and sending them out of the city. The Corporation announces in the local newspapers beforehand when such a pig clearance is going to take place. The Environmental Health officers of HDMC have been attempting to shift hundreds of pigs out of the city for about ten years. The pig owners’ association went to the High Court and obtained a

“stay”, but in 1997 the High Court revised its decision in favour of the Municipal Corporation. The municipality began catching 50-60 pigs per week in 1997. This has prompted some pig owners to sell their pigs before they are seized. The police have stopped owners from going into the forest areas to look for their pigs and return them to the city.

There does not appear to be any obvious resolution to this conflict, unless the pig owners can restrict the movement of their pigs, perhaps by limiting the number of pigs. This would have income implications. Stall feeding pigs appears on the surface to be an option in which use of wastes could continue. It would, however, involve more labour as waste would have to be brought to the pigs, which would have a cost. Pig owners also believe that the variety of pigs would not thrive if they were stall-fed. The market prefers local pigs, as the taste of pigs suitable for stall-feeding is considered inferior, so a change in the types of pigs bred could have income implications. Stall-feeding, however, is not being pursued as an option either privately or by the public authorities.

**Table: Issues associated with livestock keeping in Hubli-Dharwad**

Main Advantages	Main Problems	Possible Solutions
<b>Cows and buffaloes</b> <i>Farm level</i>	<ul style="list-style-type: none"> <li>• income (milk and dung)</li> <li>• status</li> <li>• maintaining tradition</li> </ul>	<ul style="list-style-type: none"> <li>• disease</li> <li>• space</li> <li>• fodder shortage</li> </ul>
<b>Cows and buffaloes</b> <i>City level</i>	<ul style="list-style-type: none"> <li>• certain consumer groups are happy</li> <li>• dung cakes reduce demand for fuelwood,</li> <li>• cows have spiritual significance</li> </ul>	<ul style="list-style-type: none"> <li>• traffic congesting</li> <li>• public health</li> </ul>
<b>Pigs and Chickens</b> <i>Farm level</i>	<ul style="list-style-type: none"> <li>• food security</li> <li>• easy access to food (scavenging)</li> <li>• income</li> </ul>	<ul style="list-style-type: none"> <li>• pigs being evicted from city</li> </ul>
<b>Pigs and Chickens</b> <i>City level</i>	<ul style="list-style-type: none"> <li>• food source</li> <li>• consumption of nightsoil along roads by pigs</li> <li>• consumption of organic waste in streets</li> </ul>	<ul style="list-style-type: none"> <li>• dialogue and compromise between owners and authorities</li> <li>• collaboration between pig-owning communities</li> <li>• ban stray animals</li> <li>• official assistance in penning animals</li> </ul>

## PROBLEMS AND OPPORTUNITIES ASSOCIATED WITH URBAN LIVESTOCK

Examples of the types of problems and opportunities associated with keeping livestock in Hubli-Dharwad city are noted in the table.

The urban dairies illustrate important rural-urban linkages, where fodder is brought into the city and dung and poultry manure are taken from the city to the rural and peri-urban areas. Although these resource flows may not be substantial, dung and manure is always in demand by farmers and there is never enough in the peri-urban and rural areas, so the urban supply is a welcome contribution.

## THE FUTURE OF LIVESTOCK IN HUBLI-DHARWAD

The future of livestock keeping in urban centres is questioned, given concerns about roaming cattle at city and national level and because of moves to evict pigs. Legislation on keeping livestock in urban areas is set out in the Karnataka Municipal Corporations Act 1976, which states that permission is required to keep more than ten animals within a corporation area. The annual fee for permission to keep animals is a minimum of

Rs.200, which is paid by poultry and commercial dairy owners. There are very few permitted dairies or poultry farms in Hubli-Dharwad, and most small-scale livestock keeping remains informal.

There is concern within the Urban Authorities that the presence of livestock in the urban areas obstructs their responsibilities regarding maintaining the infrastructure of the urban area, including keeping streets clean and delivering drinking water supplies to urban dwellers. There are a number of indications that measures will be taken that further discourage urban livestock keeping, or even make it illegal.

For instance, the HDMC is evicting pigs from many areas of Hubli-Dharwad, and the Supreme Court Interim Report (1998) states that cattle should not be allowed to roam freely and that cattle sheds should be phased out in cities with a population of more than 500,000.

The Interim Report is largely concerned with recommendations for improving solid waste management in cities. There is one section, however, that refers to the 'cattle nuisance' in cities:

### REFERENCES

-The Hon. Supreme Court of India (1998) *Interim Report of the Committee Constituted by the Hon. Supreme Court of India on Solid Waste Management in Class 1 Cities in India*, The Hon. Supreme Court of India, Delhi.

"No stray cattle should be allowed in cities above 5 lac (500,000) population. All existing cattle sheds, vadas and go-shalas should be removed in phased manner from such cities. Until then no animals should be allowed to move around the streets. They should be stall-fed and the waste produced in such stables should be disposed of by the cattle owner on daily basis at the community storage sites. Owners of these animals should be suitably charged for the disposal of such trade waste in the municipal system" (1998:66).

The future for livestock keeping in urban centres in India appears uncertain. Banning animals is not the answer, as this would deprive many urban families of a vital source of livelihood. In the case of Hubli-Dharwad, there could, however, be room for compromise, if all stakeholders could be involved in decision-making processes to find ways of addressing health and environmental concerns.

# The stray-cattle controversy in Delhi

**In the streets of urban India, many cows can be seen scavenging around. At first glance it may appear as though the cattle are an undisputed part of city life, but the case of Delhi shows that the issue is surrounded by controversy. The persistence of dairy farming in the city is related to how villages and their people become urbanised. Since 1951, about 140 villages have become completely incorporated into the city of Delhi (Census of India, 1991). Caste-specific economic traditions and constraints cause certain households to continue dairy farming despite the spatial constraints.**

**A**s the villages on Delhi's fringe undergo a radical transformation in land use, the sources of livelihood 'urbanise' as well (Bentinck, 2000). So why does dairy farming persist? One of the factors that contribute to this situation is the Indian caste system.

Most villages in India have one dominant caste group, both in numbers and in terms of local power. In the rural areas around Delhi these are usually the cultivating castes such as the *Jats*, *Rajputs* and *Tyagis*, or the *Gujjars*, who are small landowners and particularly



Photo by J. Bentinck

Woman washing a buffalo

involved in dairy farming. The more resource-poor groups, mostly low caste people with no land, often do not possess cattle. The influence of castes on occupation has changed considerably, to a large extent due to urbanisation. Much diversification has

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