

Herbal medication for Mastitis

State Award
Gujarat

Ukhardiyabhai Raot
Dang, Gujarat



Scout: Mahesh Parmar, SRISTI, Ahmedabad

Ukhardyabhai (67), a native of Gavdahaad village, lying in northern forest region of Dang district, Gujarat, is a farmer and an expert herbal healer. He has developed a very effective cure for Mastitis, a common health problem affecting cattle.

Gavdahaad is a small village where people mostly engage in agriculture. The main crops grown are rice, pigeon pea, black gram and soyabean. As irrigation facility is not available, the villagers cultivate one monsoonal crop a year only. Proposals to construct two wells are under consideration though. Three years ago, through the "Paani Purwath" program, the government has made a huge water storage tank, which provides potable water to Gavdahaad and two other nearby villages- Burthadi and Girma. Including Ukhradyabhai, there are four other Bhagats (traditional healers) and two trained *Dais* in the village. ANM also visits the village weekly.

His father was an industrious farmer and had a limited knowledge of herbs and their use in treating animals and humans. As a child, Ukhardyabhai





was keen to learn and study but could continue only up to class two. His whole family had to engage in agriculture due to financial and work related pressures. His initiation in herbal healing tradition was due to his father, and thereafter, his interest in herbal medicines grew. He then started learning more from his uncle Mangalbhai Janubhai Raot and other elders of the village.

His family comprises his wife Mangiben, three sons and two daughters, and grandchildren. His wife has always remained a constant support for him. She never complains about his erratic work and travel schedules while practicing herbal healing. More so, she took complete charge of the familial responsibilities to let him focus solely on his work. But, a paralytic attack in June 2009 left her bed ridden. Both, husband and wife, always believed strongly in the importance of education and made sure that their children studied well as a result of which all of them are well placed now.

Ukhardyabhai has been practising herbal healing for the last fifty five years. People from his village and nearby regions visit him for consultations, especially for animals. He develops the medicine for curing wounds on body parts as well as on the udder of the cattle.

The problem

Mastitis is an infection of the tissue of the breast that causes pain, swelling, redness, and increased temperature of the breast. The primary cause of mastitis in cattle, goats and sheep are well-recognized groups of microorganisms, Streptococcus sp., Staphylococcus sp., Pasteurella sp. and coliforms, Escherichia coli, Enterobacter sp., and Klebsiella sp. Sometimes, due to the infection, visibly abnormal milk (eg, color, fibrin clots) is also produced. As the degree of the swelling increases, changes in the udder (swelling, heat, pain, redness) may also be evident. Apart from giving pain to the animal, it also affects the quality and quantity of milk.

The solution

Ukhardiyabhai simply grinds the bark of the local herb along with little water and applies the paste topically over the affected udder with encouraging results. This process has been practiced and perfected over many years.

The detailed prior art reveals that the local herb possesses antibacterial properties. Its leaves are reported to cure inflammation of lymph gland. The stem bark is used as an anti-inflammatory agent for curing ophthalmic injuries. No patent literature was found on this medication for curing mastitis; hence NIF filed a patent (1985/MUM/2008) in the name of Ukhardiyabhai for the same.

The antibacterial activity tests were conducted in Sadbhav SRISTI Sanshodhan Laboratory, Ahmedabad, which indicated positive results against disease causing bacteria like *Escherichia coli*, *Staphylococcus aureus*, *Pseudomonas aeruginosa* and *Bacillus subtilis*. Clinical trials conducted over 10 experimental animals indicated the efficacy of the intramammary formulation over subclinical, clinical and chronic mastitis. An efficacy over heamorrhagic milk due to mechanical injury was also well established. The milk culture sensitivity testing was carried out on the affected animal population, which confirmed the bacterial infection *Staphylococcus aureus*. Overall, the formulation showed very positive results.

Karnataka Antibiotics, a national pharmaceutical company, has shown interest in this technology and is willing to take its non-exclusive right. This is being facilitated by NIF on the behalf of Ukhardiyabhai.