Ethnoveterinary medicines from the tribal areas of Bankura and Medinipur districts, West Bengal

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Ethno-veterinary medicine preparations from different plants used by the tribal/local communities of Bankura and Medinipur districts, West Bengal, against sixteen common ailments of cattle, have been reported.

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Cattle and their products occupy a unique position in the national economy of the country, which is predominantly dependent on agriculture. While the female progeny supplies milk, the male progeny continues to be the principal source of draught power for agriculture and rural transport. Milk is consumed as such, and as butter, ghee (clarified butter oil) and cheese. Among other products obtained — meats, hides, bones and hoofs, and the by-products of the meat industry, such as guts, glands and blood, are important. Hence it is imperative that cattle population remains healthy and productive. In many areas of the country, traditional veterinary practices are quite prevalent.

Both Bankura and Medinipur (previously Midnapur, Midnapore) are the tribal inhabited districts of West Bengal. The tribals are mostly Santhals, Lodha, Mahali, Munda, Bhumij, Oraons and Koras. They are associated with cattle as herdsmen. These men, remaining well below poverty level, have their own systems of herbal medicine practiced since time immemorial. Human involvement in depletion of the plant resources of the nature and rapid modernization of curative systems, have gradually replaced the ancient but effective systems of tribal medicine. The present report aims at preservation and dissemination of the traditional knowledge of such systems of herbal medicine. There have been earlier reports of herbal medicine applicable to cattle in Bankura district1,2.

Methods of survey
The present work is based on information collected from tribal informants concerning common ailments of cows, buffaloes and goats. The survey was
conducted during 2000, among the folk doctors, tribals and local communities. Information was collected from them through personal contact. The names of some informers from Bankura district are:—Gurupada Kisku and Ramkrishna Sahis (Danardi, Bishnupur), Gour Lohar (Rajsole, Joypur), Prafulla Mishra and Samar Tudu (Panchal, Sonamukhi), and Sunil Hembram (Sara, Raipur). Similarly, Bhim Kalsar (Kushpata, Ghatal), Nisith Ghosh (C. K. Rd), Pachai Kisku (Jhargram), and Baneswar Mandi (Manikpara) were from Medinipur.

**Findings of survey**

People collect the raw materials for medicine preparations from the fields, forests, and sometimes, purchase from local market also. Medicines are prepared at home, whenever necessary, by boiling, crushing, mixing the materials, preparing the pastes, etc.

The plant drugs are arranged alphabetically in the order of their botanical names; first name is considered in case of multi-component preparations. The plants, their local names, parts used, and method of application against various ailments, have been documented. These are as follows:

- **Achyranthes aspera** Linn. (Amaranthaceae) (Apang).—Root is hung in tail for placental retention during parturition.

- **Adina cordifolia** (Roxb.) Hook.f. ex Brandis (= *Holdinia cordifolia* (Roxb.) Ridsdale (Rubiaceae) (Keli-kadam) and *Curcuma longa* Linn. (Zingiberaceae) (Halud).—A paste of equal amounts of stembark of *keli-kadam* and *halud* rhizome is locally applied to the skin where loss of hair has occurred.

- **Albizia lebbeck** Benth. (Mimosaceae) (Siris).—A paste prepared from the stembark is applied around the wound of rabbit.

- **Alocasia macrorrhiza** (Linn.) G. Don syn. *A. indica* (Lour.) Spach. (Araceae) (*Mankachur*).—A lukewarm paste prepared from the rotted petiole is applied to the swelling of throat due to cold twice a day for 3 days.

- **Anthecephalus chinensis** (Lam.) A. Richard ex Walpers syn. *A. cadamba* (Roxb.) Miq. (Rubiacaeae) (*Kadam*).—The juice extracted from the leaves and mixed with old molasses is fed to animals in colic pain.

- **Bryophyllum pinnatum** (Lam.) Oken syn. *B. calycinum* Salisb. (Crassulaceae) (*Pathar-kuchi*).—Tender leaves (7 in Nos.) crushed in 50 gm mustard oil, with 25 gm molasses and 10 gm ajowan, are fed, 2-3 times a day, to animals suffering from poisonous insect bite.

- **Caesalpinia crista** Linn. (Caesalpinaceae) (*Koranji*).—The oil extracted from the seeds is locally applied to the shoulder wound.

- **Coccinia grandis** (Linn.) Voigt syn. *Cephalandra indica* Naud. (Cucurbitaceae) (Telakucha) root, *Nerium indicum* Miller (Apocynaceae) (Swet Karabi) root, *Borassus flabellifer* Linn. (Palmaceae) (Tal) tender leaf, and *Nigella sativa* Linn. (Kalojira) fruits.—A mixture made up of 10+2+2+2 parts of these plant parts is fed to the animals suffering from typhoid fever.

- **Curcuma longa** Linn. (Zingiberaceae) (Halud)—The powder of the rhizome is
locally applied during leech sucking. It helps in blood coagulation.

Datura metel Linn. (Solanaceae) (Dhatura).—A paste made of root with 5 gm pepper is locally applied on head region thrice a day for 2-3 days to cure typhoid fever.

Ipomoea aquatica Forsk. (Convolvulaceae) (Kolmi-shak).—The stem is fed to cows in case of snakebite.

Manilkara achras (Mill.) Fosberg syn. Achras zapota Linn. (Sapotaceae) (Safeda) and Papaver somniferum Linn. (Papaveraceae) (Afining gach).—The crushed fruits of safeda and dried latex of unripe capsule of afining gach are mixed with a pinch of lime earth and fed to animals suffering from blood dysentery, twice a day in the beginning; later the dose is reduced.

Moringa oleifera Lam. (Moringaceae) (Sajina).—Powder of the seeds is given to cows immediately after snakebite.

Paederia foetida Linn. (Rubiaceae) (Gandhal) leaf, Vitex negundo Linn. (Verbenaceae) (Nishinda) leaf, Datura metel Linn. (Dhatura) leaf, and Cissus quadrangularia Linn. (Vitaceae) (Harjora) stem.—A lukewarm paste prepared from these plant parts is applied to the bone fractures/joints pain.

Piper nigrum Linn. (Piperaceae) (Golmorich).—10 seeds are crushed along with a pinch of rock salt and mixed in 100 gm molasses, and fed to cattle 2-3 times a day with rice gruel to treat flatulence.

Solanum melongena Linn. (Solanaceae) (Begun).—A paste of the root and pepper (1 root + 3 pepper) along with curd is fed to cow, once a day for 2-3 days in case the cow has ingested cast-off skin of snake.

Spondias pinnata (Linn. f.) Kurz (Anacardiaceae) (Desi-amrah).—The stem bark is fed to cows in case of snakebite.

Tamarindus indica Linn. (Caesalpinienceae) (Tendal) leaf & Amaranthus spinosus Linn. (Amaranthaceae) (Katanote) plant.—The leaves of tendal and plants of katanote are boiled in water with broken rice and a pinch of rock salt is added and then fed to cattle once a day for higher milk production.

Discussion
It is observed from the foregoing account that the tribals of Bankura and Medinipur districts use locally available plants alone or in various combinations to treat some common diseases of cattle. All the preparations are very effective, and cheaply available in both districts and used by them as alternative to allopathic medicines. The treatments show no adverse side effect. Further research on these uses/claims on scientific lines may help in developing effective and cheap drugs for animal health care.

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References