

# Traditional Medicines Gain Scientific Recognition

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The beekeeping industry produces honey, wax, and other bee products – the fruits of beekeeping – that have a number of medicinal applications. Their use in medicine, called 'apitherapy', has been practiced for centuries in many parts of the world. This practice is receiving renewed and increasing attention from scientists.

Bee products, being easy to harvest from beehives, are inexpensive. Honey, pollen, and beeswax are readily available to any beekeeper or honey collector. Modest training will suffice to enable people to harvest and process bee products like royal jelly, propolis, and bee venom. These products are safe and organic.

**Honey** is rich in carbohydrates and contains numerous trace elements, vitamins, minerals, amino acids, and enzymes. In the Himalayan region, honey has been used as a medicine for over a thousand years by rural people, and in recent years by ayurvedic companies as the chief ingredient in tonics, vitamins, and herbal medicines. Recently, a team of researchers from New Zealand proved that honey has antibiotic (antivi-

ral, antibacterial and anti-fungal) qualities. Studies have also indicated honey as an effective treatment for ulcers, bad sores, and other surface infections resulting from burns and wounds. Honey increases appetite, helps control gastritis and offers relief from allergies,



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Honey, beeswax, and other honeybee products



Paste of honey and herbal extract used to heal wounds.

sinusitis, arthritis, and asthma. Most of the ayurvedic companies in Nepal, India, and Pakistan use honey as an ingredient in their formulations. A survey conducted by ICIMOD in Kathmandu revealed that some of these companies have long term supply contracts with the honey suppliers in the region, and special care is taken about the honey's origin from the point of view of bee species and flora.

**Beeswax** is an important ingredient in the preparation of beauty and healing products, medicinal skin creams, and ointments. These are highly efficacious in the treatment of dry and chapped skin and lips, cuts, abrasions, and grazes. Recognising the value of these products, ICIMOD's honeybee project has been providing training in the harvesting, processing, and use of beeswax for manufacturing healing and cosmetic products.

Some entrepreneur beekeepers and a partner NGO, 'Surya Social Service

Society (4S)' have started producing beeswax-based creams and ointments. There is a considerable interest and positive response from users and consumers about the efficacy of beeswax-based healing products.

**Pollen** contains multiple vitamins (A, B1, B2, B6, C, E and H), amino acids, and minerals such as calcium, iron, potassium, phosphorus, and sodium. Bee-bread – pollen collected by bees and packed into the cells of a comb after mixing with nectar – is effective in treating intestinal disorders such as constipation. It also helps reduce hair loss, strengthens brittle nails, and is ideal for treating prostate problems. In the Himalayan region people consume honeycomb together with beebread without organised markets and collection systems being in place for these products. China and Myanmar are exceptions in that they have organised collection and marketing systems for pollen and beebread.

**Royal jelly**, also known as 'bee milk', produced by the hypopharyngeal glands of worker bees to feed young larvae and the queen, is rich in protein, vitamins and minerals and is a hormone source which can be used for convalescence and fatigue, growth problems, aging, stress, and infertility. Royal jelly promotes weight gain

and growth and may be mixed into milk as a food supplement for growing children, pregnant and lactating mothers, and people with malnourishment problems. China is taking the world lead in the production and marketing of royal jelly. However, beekeepers in other Himalayan countries are not yet benefiting from this product although they have a basic understanding of the importance of royal jelly and few consume queen cells and larvae.

**Propolis** is a vegetable mastic (a pasty substance used as adhesive or filler) made by honeybees, mainly *Apis mellifera*, *A. florea*, and stingless bees, from resins collected on the bark and buds of certain trees and balsamic plants. It is known to have a spectrum of important antibiotic properties covering a wide range of bacterial groups. Its remarkable healing properties are attributed to its stimulating effect on tissue growth. Propolis is also used in agriculture to fight plant viruses in crops such as tobacco and cucumber. However, in the Himalayan region this product is fairly new and mainly harvested by commercial *Apis mellifera* beekeepers.

**Bee venom** in the form of bee stings (bee acupuncture therapy) has many therapeutic applications, particularly for arthritis, rheumatism, chronic pain, and multiple sclerosis. Directing sting on the point and area of pain or on associated

acupressure points has been known to bring remarkable results. Bee acupuncture therapy is an important part of

traditional Chinese medicine and very recently, has been gaining popularity in other Himalayan countries.

There are over 500 diseases and health conditions that can be prevented or treated with bee products. The use of bee venom therapy, royal jelly, and other bee products is common in China but bee products other than honey and beeswax are not yet widely used in medicine in other countries. In Nepal where health services are severely limited, apitherapy is finding enormous application. To further familiarise communities with the apitherapy practice there is a need to incorporate this component in beekeeping training curricula and to popularise the information through the media. It is also necessary to persuade medical professionals and nutritional scientists about the medicinal value and health promoting effects of bee products. Furthermore, placing the system of apitherapy in action at the village level is expected to generate enormous livelihood opportunities for the mountain poor, not to mention health and medical benefits that are within their reach.

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