

Neem plant essay sample

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THE NEEM TREE

Neem is a fast-growing tree that can reach a height of 15–20 metres (49–66 ft), rarely to 35–40 metres (115–130 ft). It is evergreen, but in severe drought it may shed most or nearly all of its leaves. The branches are wide spread. The fairly dense crown is roundish or ovular and may reach the diameter of 15–20 metres (49–66 ft) in old, free-standing specimens. Neem is considered a weed in many areas, including some parts of the Middle East, and most of Sub-Saharan Africa including West Africa where in Senegal it has been used as a malarial drug and Tanzania and other Indian Ocean states where in Kiswahili it is known as ‘ the panacea’, literally ‘ the tree that cures forty [diseases]’, where Ayurvedic uses are practiced. Ecologically, it survives well in similar environments to its own, for example replacing the babul acacia tree from India with Africanacacia species.

USES

Traditional medicinal use

In India, the plant is variously known as “ Sacred Tree,” “ Heal All,” “ Nature’s Drugstore,” “ Village Pharmacy” and “ Panacea for all diseases”. Products made from neem trees have been used in India for over two millennia for their medicinal properties: neem products are believed to be anthelmintic, antifungal, antidiabetic, antibacterial, antiviral, contraceptive and sedative. It is considered a major component in Ayurvedic and Unani medicine and is particularly prescribed for skin disease.

Pest and disease control

Neem is a key ingredient in non-pesticidal management (NPM), providing a

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natural alternative to synthetic pesticides. Neem seeds are ground into a powder that is soaked overnight in water and sprayed onto the crop. To be effective, it is necessary to apply repeatedly, at least every ten days. Neem does not directly kill insects on the crop. It acts as an anti-feedant, repellent, and egg-laying deterrent, protecting the crop from damage. The insects starve and die within a few days. Neem also suppresses the hatching of pest insects from their eggs. Neem cake is often sold as a fertilizer.

Other uses

* Neem oil is used for preparing cosmetics such as soap, neem shampoo, balms and creams as well as toothpaste. * Besides its use in traditional Indian medicine, the neem tree is of great importance for its anti-desertification properties and possibly as a good carbon dioxide sink. * Practitioners of traditional Indian medicine recommend that patients with chicken pox sleep on neem leaves. * Neem gum is used as a bulking agent and for the preparation of special purpose food. * Traditionally, slender neem branches have been chewed to clean one's teeth. Neem twigs are still collected and sold in markets for this use, and in rural India one often sees youngsters in the streets chewing on neem twigs. * Neem blossoms are used in Andhra Pradesh, Tamil Nadu and Karnataka to prepare Ugadi pachhadi. "Bevina hoovina gojju" (a type of curry prepared with neem blossoms) is common in Karnataka throughout the year. Dried blossoms are used when fresh blossoms are not available. In Tamil Nadu, a rasam (veppam poo rasam) made with neem blossoms is a culinary specialty. * A mixture of neem flowers and bella (jaggery or unrefined brown sugar) is prepared and

offered to friends and relatives, symbolic of sweet and bitter events in the upcoming new year. * Cosmetics. Neem is perceived in India as a beauty aid.

Powdered leaves are a major component of at least one widely used facial cream. Purified neem oil is also used in nail polish & other cosmetics. * Bird repellent. Neem leaf boiled water can be used as a very cost effective bird repellent measure, especially for sparrow. * Lubricants. Neem oil is non-drying and it resists degradation better than most vegetable oils. In rural India, it is commonly used to grease cart wheels. * Fertilizers. Neem has demonstrated considerable potential as a fertilizer. Neem cake is widely used to fertilize cash crops particularly sugarcane & vegetables. Ploughed into the soil, it protects plant roots from nematodes & white ants, probably due to its contents of the residual limonoids. In Karnataka, people grow the tree mainly for its green leaves & twigs, which they puddle into flooded rice fields before the rice seedlings are transplanted. * Resin. Exudates can be tapped from the trunk by wounding the bark.

This high protein material is not a substitute for polysaccharide gum, such as gum Arabic. It may however, have a potential as a food additive, and it is widely used in South Asia as “Neem glue”. * Bark. Neem bark contains 14% tannin, an amount similar to that in conventional tannin yielding trees (such as *Acacia decurrens*). Moreover, it yields a strong, coarse fibre commonly woven into ropes in the villages of India. * Honey. In parts of Asia neem honey commands premium prices & people promote apiculture / apiary by planting neem trees. * Soap. India’s supply of neem oil is now used mostly by soap manufacturers. Although much of it goes to small scale speciality

soaps, large scale producers also use it, mainly because it is cheap. Generally, the crude oil is used to produce coarse laundry soaps.

NEEM TREE PARTS

NEEM SOAP RECIPE #1

- * 176 grams sunflower oil
- * 176 grams olive oil
- * 50 grams coconut oil
- * 40 grams palm oil
- * 18 grams castor oil
- * 40 grams neem oil
- * 66 grams caustic soda
- * 200 grams water
- * 15 grams essential oil (which fragrance or essential oil you use is your choice, but you want to make sure you mask the smell of the neem oil)

NEEM SOAP RECIPE #2

This neem soap recipe is actually a recipe for a neem shampoo, but a solid one. A neem shampoo bar, so to say. It is for daily use. It is mild and good for all hair types. It leaves hair shiny and strong, and for kids, it could also prevent head lice infestation. * 125 grams coconut oil

- * 125 grams olive oil
- * 90 grams palm oil
- * 35 grams almond oil
- * 35 grams neem oil

- * 90 grams castor oil
- * an additional 3 tbsp castor oil to add at trace stage (the extra castor oil creates a really frothy lather, great for a shampoo)
- * 71 grams caustic soda
- * 200 grams water (infused with nettle, rosemary, fennel and melissa)
- * 1 tsp each of rosemary, lavender, tea tree, and lemon essential oils

UTENSILS NEEDED:

- * An accurate scale
- * A thermometer
- * A large bowl or pot, made from pyrex, stainless steel or enamel.
- * A pyrex jug
- * Another small jug or cup
- * A clean stick or spoon, plastic or stainless (to stir the lye solution)
- * A wooden or slotted spoon (if you use a wooden spoon, do never use the spoon for anything else other than soap!)
- * A mold for your soap. (You can buy pretty molds, but old margarine tubs work just as well. You need enough to hold about 500 grams.)
- * Rubber gloves, goggles, a heavy apron. Also some long sleeved top and long pants that you don't mind throwing out... Better ruining the clothes than your legs!

NEEM OIL SOAP RECIPE – METHOD:

Put on all your protective gear, grab the caustic soda, and read the label and all the warnings. Make sure you understand everything. This stuff can burn big holes into you! Put it down again. Sure you want to proceed? Ok. Here's what to do.

- * Tare the jug on the scale (so the scale with the jug on it shows

zero) and weigh your cold water. Never, ever use warm water with caustic soda! * Weigh your caustic soda into the cup

* Slowly add caustic soda to water – Slowly! – and stir it with your clean spoon or stick. Keep stirring! (Note, I said add lye to water, NOT the other way round. Never add water to lye. Never!!) * Your mix will get hot, very hot. And it will give off nasty fumes. Don't breathe in the fumes. (Don't do this in a confined space. Ideally you should be outside.) * Ok, set the jug aside so it can cool down a bit.

* Put all your oils in the big bowl.

* Heat them to about 175F/80°C (either very carefully in the microwave, on the stove, or over another pot of boiling water) * Both the oils and the lye solution should be at 175F/80°C. * Now slowly pour the caustic soda solution into the oils while stirring, stirring, stirring, stirring, stirring, ... you get the idea. * Keep stirring. The color and consistency of the mixture changes as the chemical reaction happens (the saponification which turns lye into soap). * Once the mix has turned into something like custard, pull your spoon out and draw over the surface. If it leaves a trace that falls back slowly, you are done. The stage is called trace or tracing. Another way to describe it is that when you pull out the spoon and let some mix fall back into the bowl, it leaves a dent on the surface. * Now is the time to add any essential oils, fragrances or color if you like, (and, if you are making the shampoo bar also the three extra tbsp castor oil). Stir everything well. * Done! Pour the mix into your molds.

* Cover the mold (use a plate if you have no lid for your mold) and insulate everything by wrapping it into an old towel. * After 24 hours you can pop the soap out of the mold and cut it into individual bars. * Do not use it straight away! Leave the soap to cure in the open air for another four weeks. This makes sure that saponification is complete and absolutely no lye is left. * After the 24 hour setting period you can also wash up your utensils. (If you do it sooner you are pouring pretty raw soap which still contains pure lye into your drainage system.)

There is an easier way to make neem soap. It's called melt and pour soap.

The problem with this neem soap recipe is that you can only add small amounts of neem oil to your soap, about 5%. (Maybe 10%, at the very most, but that will result in a very oily neem soap bar.) You still get great neem soap for everyday use that will benefit your skin or hair a lot. What you can't do is produce extra strength neem soap to treat parasite infections or other serious skin problems. Extra strength neem soap has a neem oil content of at least 20%, often more. Then again, in my personal experience neem oil is so potent that you don't really need extra strength. Plus, there is another way to increase the medicinal value of your neem soap... But first the basic neem soap recipe:

Ingredients:

* Clear glycerin soap can be bought in large blocks. Craft shops sell it as "Melt and Pour Soap Base". You can cut it into chunks and melt it down. When you buy your soap base make sure you get a good quality soap. The neem soap you're making will only be as good as the base you use. Make sure you <https://assignbuster.com/neem-plant-essay-sample/>

get a very mild soap, with a good smell, made from real saponified natural oils, not chemicals. * The only other necessary ingredient is neem oil.

Method:

* Cut off whatever amount of soap you want to use.

* Weigh it, and then weigh out 5% neem oil. (If you have a 500 gram chunk of soap you add 25 grams of neem oil.) * Melt the soap in a bowl in the microwave or a double boiler. (If using microwave stir frequently and make sure it doesn't overheat or boil.) * Stir in neem oil.

* You can also stir in colors, fragrances or essential oils. * Pour into molds.

CENTRO ESCOLAR UNIVERSITY

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MANUFACTURING NEEM SOAP

* The Neem Tree

* Neem Soap Recipes

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