

Research Article

## The Study of *Erigeron Canadensis* in the treatment of Dengue

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**Abstract** From centuries there are many species of plants and animals which have been discovered and are used in the treatment of some or the other disease for serving mankind. Similar to this another specie of a plant was also discovered and was used to treat more than one kind of disease named *Erigeron Canadensis*. It was found that it is affect full in treating a disease named dengue (CDC). It is a plant whose parts grow above the ground usually used for medicines. People use it for many medication purposes but there is no good scientific evidence to support these uses. It was predicted that it may be useful in dengue prevention used in mosquito repellents or for other factors but still there is n't enough information known about *Erigeron canadensis* to know how it might work. The use of *Erigeron, Canadensis* is mostly in urban or local areas worldwide as it is one of the prevention method from dengue.

**Keywords** *Aedes aegypti*; *Erigeron Canadensis*; plant essential oils; medication; Fleabane

### 1. Introduction

#### Dengue (CDC)

Before knowing about the treatment for a specific disease we should be familiar with the basic information about the disease also. Dengue is common in more than 100 countries over the world. It is estimated that about forty percent of the world population live in the areas where there is risk of dengue and yearly 400 million people get infected with dengue. It is a mosquito-borne viral infection which causes severe flu like illness.



### First discovered

Dengue was first recognised in 1950's in Thailand and Philippines but today it is affected in Latin America and Asian countries over the globe and it has become one of the leading causes of hospitalization and death among the children and adults as well.

### The main vector of transmitting virus

The *Aedes aegypti* mosquito is the main vector of transmitting the virus which causes dengue. It was passed on to humans by the bite of female *Aedes* mosquito which transmits the virus while feeding the blood of an infected person. Once the person is infected by the virus it becomes the main multipliers and the carrier as well of the virus.

### Symptoms and prevention

During mild cases of dengue fever many people especially children and teens, may experience no signs or symptoms or when symptoms do occur they usually begin after four to seven days after the person is bitten by the infected mosquito. Some of the symptoms mostly observed are:-

- i. Vomiting
- ii. Nausea
- iii. Pain behind eyes
- iv. Swollen glands
- v. Rash
- vi. Headache
- vii. Muscle, bone or joint pain

Most people recover soon within a week or so but in some cases symptoms worsen and can become life threatening. If you see symptoms and doubt then you should see your health care provider.

### Dengue preventions using plants

In the world the incidence of dengue has increased significantly as we know there is no specific medication or treatment for dengue but there are many precautions from which you can be safe. From the numerous preventions discovered to avoid dengue one of them is the use of *Erigeron Canadensis*. As we know that to avoid mosquito bites one of the best strategies is the use of mosquito repellents as resources increased the interest of using plants as mosquito repellents has increased significantly.

### What is Erigeron Canadensis?

Horseweed is termed as *Erigeron Canadensis* in scientific language. It is also known by other names like Canadian Fleabane, Colt's-Tail, Hogweed and Fleabane etc. The horseweed was boiled to make steam for sweat lodges. During cold it is taken as snuff to stimulate sneezing. It is also burned to create smoke that warded off insects. This plant is termed as a strong competitor of water and is huge nuisance for farmers.



*Erigeron Canadensis*

### Distinguishing Features

Horseweed is a profusely leafy and branched annual plant. It normally has an upright that grows up to a height of seven feet. It emerges from a cluster of basal of leaves which wither afterward. Mature plants are erect and can grow up to 2 metres tall. The leaves of horseweed are lance shaped having a deep green hue. It is distinguished by bracts that contain a brownish inner surface and no red dot at the tip. They are free of hairs found mostly in other species on their bracts.

### Habitat and distribution

*Erigeron Canadensis* is a native plant found mostly throughout the North America and Central America also. It is widespread in North America but has also spread inhabited areas, most of the temperature zone of Asia, Europe or Australia.

### Culture of growing

Horseweed does not require much plant's environment. It prefers to grow in gravel and sand, but then their sizes differ according to the nutrients present in the soil they grow in. When they are grown in poor soil it may be of few centimetres as a dwarf size and when grown in soil which is rich it grows as high as seven feet. All the species in this genus are remarkably adjustable because they possess the aptitude to germinate during spring or at any time in summer however they are also found in abundance in growing in urban locales.

### Other health benefits of *Erigeron canadensis*

Horseweed is an astringent herb which is also useful in treating diarrheal and dysentery. The crushed flowers of *E.canadensis* are inserted in nostrils to cause sneezing, relieving rhinitis. Other Americans also used as a preparation of plant leaves to treat sore throat and dysentery. A decoction is prepared with horseweed which is highly useful in treating bleeding haemorrhoids. It is also employed to treat gastrointestinal disorders. By scientific research it is observed that horseweed is an effective natural medication. In contemporary times, many herbalists continue to recommend this herb for all these purposes.

### How it is useful in dengue prevention?

#### Used as mosquito repellent

*Aedes aegypti* mosquito is an important vector of dengue and many other viruses like chikungunya and yellow fever. By research it was predicted that plant based essential oils may serve as good alternatives to mosquito repellent that are commercially available. By using *Erigeron Canadensis* steam distillation was used from fresh collected aerial parts of plans for extraction of essential oils. For mosquito repellent activity against laboratory reared *Ae. aegypti* by human bait technique was used for testing essential oils. The essential oil of *E.canadensis* exhibited 80% mosquito repellent activity respectively. The *E.canadensis* essential oil completely inhibited the attractiveness of human hands toward female mosquitoes for more than 45 minutes.

This study suggests that the dilute solution of *E.canadensis* essential oil could be used as potent mosquito repellent. For more information you can check the site article.

<https://www.sciencedirect.com/science/article/abs/pii/S0926669019306193>

### Mosquitoes away by smoke

When this herb horseweed is burnt it was observed that mosquitoes fly away from the place where it is burnt as smoke is created when this herb is burnt and people in urban places often use this technique to avoid mosquitoes and dengue.

### Used as insecticide

*E.canadensis* is also used as insecticide as scientific researchers have corroborated the use of this plant as an insecticide, horseweed is also named as *Fleabane* since horseweed produces oil which is similar to turpentine that keeps fleas away or it owns the fact that the tiny seeds of this herb have resemblance to fleas.

### Conclusion

*Erigeron Canadensis* in dengue fever can be of great use for the recovery of a patient. Homeopathy also plays a pivotal role in modern medical sciences. Homeopathic medicines are very useful in the viral, infectious and bacterial diseases.

### Declaration

All the information provided above is for knowledge purpose. If any reader takes *Erigeron Canadensis* without consulting a homeopath or a medical expert, we are not responsible for any kind of side-effect of loss.

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