

Marine *Newslink*

March 2021



FEATURE ARTICLE

Ginger

PHOTO(S) OF THE MONTH

Ever Given

BACK TO BASICS

Question Of The Month

GINGER



Ginger is a tropical flowering plant that originally grew in Southeast Asia but is now widely available from growers around the world. It is classified as a member of the Zingiberaceae family, making it a close relative of turmeric. The scientific name for ginger is *Zingiber officinale*, which is believed to come from the Sanskrit name for the spice (singabera).

The leafy plant grows to about three feet tall and produces clusters of greenish-purple flowers. Ginger's root or rhizome is the part used as a spice or healing aid. Depending on the variety, the inside of the root can be yellow, red, or white. It is harvested by pulling the entire plant out of the soil, removing the leaves, and cleaning the root.

Ginger is very important commercial crop grown for its aromatic rhizomes



which is used both as a spices and medicine. Ginger is valued for the dried ginger spice and preserved, crystallised ginger. Ginger is a perennial plant but is usually grown as an annual for harvesting as a spice. Ginger is best grown in partial shade and can be incorporate as an intercrop in coconut, coffee and orange plantations.

Ginger possesses a warm pungent taste and a pleasant odour; hence it has a wide use as a flavouring in numerous food preparation, beverages, gingerbread, soups, pickles and many soft drinks. There are two general types of ginger viz. fresh green ginger used for the preparation of candied ginger (in sugar syrup) and dried or cured ginger applied in the spice trade, for extracts, oleoresins and for the distillation of its volatile oil.

An increasing demand for ginger in India coupled with a drop in domestic production is resulting in India becoming

a net importer. India is the world's 2nd largest producer and highest consumer of ginger. Several cultivars of ginger are known in different ginger growing areas and are generally named after the localities where they are grown. Some of the prominent indigenous cultivars are Maran, Kuruppampadi, Ernad, Wayanad, Himachal and Nadia. The exotic cultivar 'Rio-de-Janeiro' have also become very popular among cultivators.

Ginger is one of the excellent spice crops cultivated in Asia and India accounts for 35% of the world's ginger production. Ginger root has high demand in national and international markets due to its excellent uses and benefits. Farmers can make gold out of it. It belongs to the Zingiberaceae family, and is closely related to turmeric, cardamom, and galangal. At the local market, households go for ginger because of its health benefits.

While ginger helps common illnesses, it is positive effect on more serious health conditions cannot be disregarded.

- Ginger has been used as a digestive aid for thousands of years by ancient cultures. Its carminative properties promote the elimination of intestinal gas to prevent bloating and flatulence, while its intestinal spasmolytic properties

relax the gastrointestinal muscles to soothe an upset stomach.

- Ginger contains chromium, magnesium and zinc which can help to improve blood flow, as well as help prevent chills, fever, and excessive sweat.
- Fungal infection one of the trickier issues to control because they are increasingly resistant to conventional medicine, fungal infections do not stand a chance against ginger.

Ginger can be processed into a wide variety of products. Many products can be manufactured from ginger like dehydrated ginger, ginger candy, ginger powder, ginger oil, and oleoresins and so on. Ginger is an important commercial crop with versatile applications. As condiment, ginger is used for flavouring many food products like tomato sauce or ketchup, salad dressings, meat sausages, gravies, pickles, curry dishes and so on.

In the food industry, its powdered form is widely used as a condiment/flavouring agent in salad dressings, tomato ketchup and sauce, pickles, gravies, meat sausages, curry dishes, etc. It can be used as pharmaceuticals for the production of herbal medicines in the treatment of cold fever. Ginger powder is also used for fragrance in soaps and cosmetics. Ginger

oil obtained by the steam distillation of the dried ginger is mainly used in the flavouring of beverages, confectionery, and perfumes. Powder ginger has very good domestic as well as export market.

There is a large market for both fresh and dried ginger. Ginger oil is obtained from the root of the herb *Zingiber officinale*. The peculiar hot taste and pungent taste of ginger can be attributed to the presence of an acrid compound called gingerol. The demand of ginger oil is ever increasing. It has good export and domestic demand is expected to reach at 4,212 tonnes by the year 2022.

PACKAGING

Ginger can be packaged in jute fabric bags, Polypropylene mesh bags (25-50 kg), among other things and even in boxes/cartons.

Ideally domestic markets will use jute fabric gunny bags to save on packaging cost but for exports, mesh bags & ventilated boxes/cartons in reefer containers are ideal method for transportation.



TRANSPORTATION

Standard containers may be used, subject to compliance with lower limits for water content of goods, packaging, and container flooring.



CARGO HANDLING

In damp weather (rain, snow), the cargo must be protected from moisture since this may lead to mold and spoilage.

Hooks must not be used in handling bagged goods as they subject the bags to point loads, so damaging them. Due to their shape, plate or bag hooks apply an area load and are thus more suitable for handling bags.

RISKS DURING TRANSPORTATION

• Temperature

Favourable travel temperature range: 5 - 25°C

Ginger should be transported in areas which exhibit the lowest temperatures during the voyage and are dry. In any event, storage beneath the weather deck or, in the case of shipping in containers, in the uppermost layer on deck, must be avoided as the deck or container is strongly heated by the intense tropical sun and at temperatures of > 25°C, essential oils may be lost.

Dried ginger requires particular temperature, humidity/moisture and possibly ventilation conditions.

• Humidity

The risk of mold growth is naturally at its greatest in warm, damp air and the product may become musty hence

ginger should be loaded only in a properly dry condition and protected from heat and moisture during transport.

Ginger has poor moisture tolerance: the intrinsic moisture content of inadequately dried goods and moisture from external sources may cause mold growth. Contact with water in any form (seawater, rain, or condensation water) may result in significant depreciation. For this reason, moisture measurements should ideally be carried out at the time of acceptance of a consignment.

In order to prevent condensation on the ship's side care should be taken to leave an adequate gap between the cargo stack and the ship's side. For container

walls from affecting the cargo, it is best to line the walls & floor of dry container with adequate kraft or corrugated paper.

Reefer container, if being used, do not require any such measure when set at adequate temperature & humidity but loading height must be strictly regulated to allow free flow of cool air in the container.

- **Infestation**

Insect infestation is a not uncommon risk with ginger. Consignments of ginger may be infested, for instance, by tobacco beetles, rust-red grain beetles, flour beetles and merchant grain beetles. If the product was not adequately dried, it may also be infested by maggots.

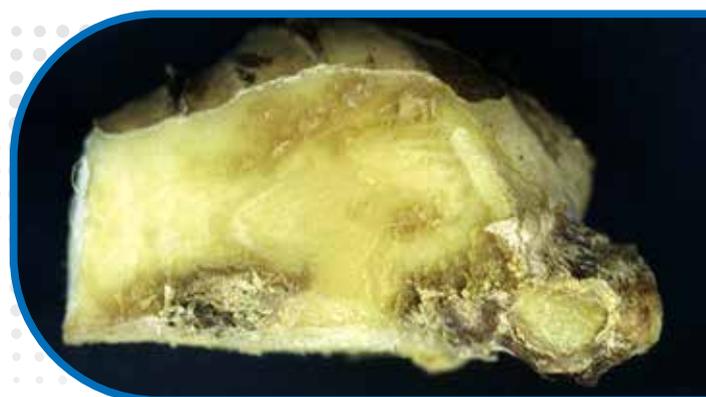
Mold & Mildew



Infestation



Pest & Rot



What Are the Science-Backed Health Benefits of Ginger?



Ginger contains more than 400 chemical compounds, but researchers believe the gingerol compounds are the ones responsible for the root's health benefits. They're also responsible for its smell and flavor. Gingerol has powerful antioxidant and anti-inflammatory properties that can help the body in a variety of different ways.

1. Soothes an Upset Stomach

The chemical compounds in ginger are believed to ease stomach pain and aid digestion. Modern research has found evidence that it can help.

Ginger has long been proposed as a remedy to ease morning sickness during pregnancy - studies have shown it's a safe and possibly effective way to help reduce nausea.

But its ability to help with stomach issues goes beyond pregnancy. Ginger may also help relieve nausea and vomiting after surgery and in people going through

chemotherapy.

Eating ginger may improve indigestion symptoms by helping the stomach empty faster. One small study found that taking 1.2 g of ginger capsules before a meal sped up the digestion process in people with indigestion.

2. Reduces Inflammation

Ginger is sometimes taken as a supplement for rheumatoid arthritis and osteoarthritis (two painful conditions causing joint damage). Since ginger is an anti-inflammatory, it may also be able to ease joint pain due to inflammation from arthritis.

An older study found that people with knee osteoarthritis who took ginger extract had less pain and used less pain medication. But they did experience some mild stomach upset because of the higher concentration of ginger extract.

More recent research has focused on applying ginger extract to the skin of the painful joint. Topical ginger treatments may be effective in reducing arthritis pain without causing the side effects.

3. Lowers Blood Sugar

Adding ginger to your diet could help improve blood sugar levels and lower your risk of developing type 2 diabetes. In one study on people with type 2 diabetes, researchers found that those who took

1600 milligrams (mg) of ginger powder for 12 weeks had improved insulin sensitivity, lower triglycerides, and lower total cholesterol when compared with the control group.

Another study found that 2 g of powdered ginger supplement per day significantly lowered fasting blood sugar in people with type 2 diabetes.

4. Reduces Cancer Risk

The root might be a powerful weapon in the fight against cancer. Researchers have found evidence that gingerol (an active compound in ginger) has cancer-fighting abilities. Namely, it may help in the prevention and treatment of gastrointestinal cancers. (5,13) Its high antioxidant content is likely responsible for fighting off cancer cell growth. In fact, the antioxidants in ginger may even help to slow the aging process.

5. Relieves Menstrual Cramps

When it comes to period pain, ginger might actually be right up there with pain medications, like Advil (ibuprofen). One study found that women who took 250 mg ginger capsules four times a day had the same pain relief as those who took 250 mg of mefenamic acid or 400 mg

ibuprofen capsules four times per day.

6. Shortening or Preventing the Common Cold

We often think of orange juice as the go-to drink for warding off a cold, but fresh ginger juice may be a better choice. The root has a warming effect, which is believed to help with cold symptoms. Drinking ginger can keep you warm, while also helping the body sweat and get rid of infections.

In addition to its many other benefits, gingerol might help prevent infections. One study found fresh ginger may be effective against the respiratory syncytial virus (HRSV), a common cause of cold-like symptoms and respiratory infections.

The ginger compounds gingerol and shogaol may help fight off a cold because they can lower a fever, reduce pain, and suppress a cough.

PHOTOS OF THE MONTH

Ever Given



Ever Given Night Lights



BACK-TO-BASICS

QUESTION OF THE MONTH

Q1: Ginger is closest spice to which other medicinal spices & what is their family name?

LAST MONTH'S QUESTION

Q1: Which ship's containers when lost overboard were not carrying any hazardous or polluting cargo?

Q2: How many containers were lost among the ONE ships?

LAST MONTH'S ANSWER:

A1: MSC PALAK

A2: ONE AQUILA 100 CONTAINERS & ONE APUS 1850

CORRECT ANSWERS SENT BY: (In order of replies received)

- P LAKSHMI PRASANNA - Dr. Reddy's Laboratories Ltd., Hyderabad
- SOHAG PARIKH - Cadila Healthcare Ltd., Ahmedabad
- AZAD KUMAR - UIB Insurance Brokers (India) PVT. Ltd., Mumbai
- HEMA RAGHAV - Optima Insurance Brokers Pvt Ltd., New Delhi
- JAYA SOPHAN - Bharat Re-Insurance Brokers Pvt Ltd
- AKTA DESAI - Troth Insurance Broking & Consultants LLP., Ahmedabad
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