SRI KARAN NARENDRA AGRICULTURE UNIVERSITY

SUBMITTED BY: KRITIKA HADA
CLASS: B.Sc Hons(Ag) Part IV Sem I
BATCH: 2024-25
SUBMITTED TO: DR. B.S. BADHALA

OAT



Botanical name- Avena Sativa

Family - Poaceae

Origin-

→ Russia is the largest producer of oat with 3.8 million ton in the world.

→ Oats are used for human consumption as Oatmeal and rolled oats.

→ One of the most common uses of Oats is as livestock feed.

→ Oats are best grown in temperate regions.

WHEAT





Botanical name- Triticum aestivum.

Family- Poaceae

Origin-

→ China is the largest wheat producer in the world with 136.9 million ton.

→ Wheat is grown on more land area than any other food crop.

→ Wheat normally requires between 110 and 130 days between planting and harvest depending upon climate, seed type and soil condition.

RICE







Botanical name - Oryza Sativa

Family - graminear

Origin - Hastern Himalayas.

→ Traditional method for cultivating rice is flooding the fields while setting the young seedlings.

→ Rice is the staple food of over half the world's population.

→ China is the largest rice producer in the world with 211.9 million tons.

→ Rice production uses almost a third of Earth's fresh water.

MAIZE



Botanical name- Zea mays L.

Family - Poaceae

Origin-

→ Maize has becom a staple food in many parts of the world, with the total production of maize surpassing that of wheat or rice.

→ Maize is also used for corn ethanol, Animal feed, corn starch and corn syrup.

→ United States of America is the largest maize producer in the world with 360.3 million ton

BAJRA



Botanical name - Pennisetum glaucum

Family - Poaceae

Origin - Africa.

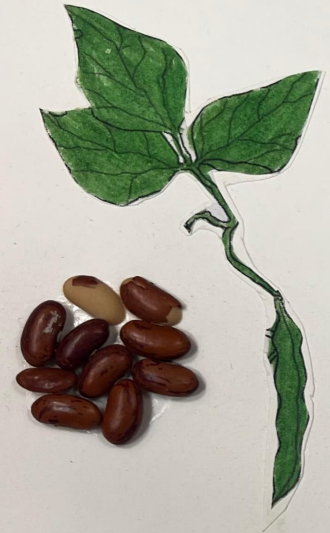
→ Is well adapted to growing areas prone to drought, low soil fertility, low moisture etc.

→ India is the largest producer of pearl millet

→ India gets 80% of bajra from Gujarat, Maharashtra Rajasthan and Uttar Pradesh

→ Maharashtra is the largest producer of pearl millet in India.

RED KIDNEY BEAN



Botanical name- Phaseolus vulgaris.

Family - Fabaceae

Origin - Peru

→ Myanmar is the largest producer of kidney beans in the world with 5.2 million tons.

→ commonly known as rajma in India.

→ They are a rich source of protien.

→ Kidney beans thrive best in tropical and temperate regions with a temperature of around 24°C - 35°C.

→ Kidney bean plant have shallow roots.

LENTILS





Botanical name- Lens culinaris ssp.

family - Fabaceae

Origin -

→ Lentils can grow on various soil types, from sand to clay loam, growing best in deep sandy loam soil with moderate fertility.

→ They are intolerant to flooding or water logging conditions.

→ Canada is the world's leading producer and exporter of lentils.

COWPEA



Botanical name- Vigna unguiculata

Family - Fabaceae.

Origin - Southern Africa.

→ Tolerance for sandy soil and low rainfall have made it an important crop in the Semiarid region.

→ Optimum temperature needed for growth is 30°C, making it available as a Summer crop.

→ Nigeria is the largest producer of cow pea in the World with 3,647,115 tons.

MUSTARD



Botanical name- Brassica nigra

Family- Brassicaceae.

Origin - Asia.

→ Mustard is an annual herb cultivated as oil seed crop or as vegetable or as fodder.

→ Mustard grows well in temperate regions.

→ Mustard seeds are a rich source of oil and protien.

→ Nepal is the largest producer of mustard in the world with 220,250 tons.

SESAME







Botanical name- Sesamum indicum.

Family- Pedaliaceae

Origin-

→ Sesame seed is one of the oldest oilseed crop known, domesticated well over 3,000 years ago.

→ It tolerates drought conditions well, growing where other crops fail.

→ Japan is the world's largest sesame importer.

→ Sesame has one of the highest oil content of any seed.

SOYABEAN





Botanical name- glycine max

Family - Fabaceae

Origin -

→ Traditional unfermented food uses of soyabeans include soy milk, soy-tofu.

→ Traditional fermented food include soy sauce etc.

→ Optimum growing conditions in mean temp. of 20°C - 30°C.

→ Brazil is the largest producer of soyabean in the world.

GROUND NUT



Botanical name- Arachis hypogaea.

Family- Leguminosae.

Origin- South America.

→ Also known as the peanut.

→ groundnut oil is often used in cooking because it has a mild flavour and a relatively high smoke point.

→ China is the largest producer of groundnut in the world with 18million tons.

→ groundnut plant tops and crop residues can be used for hay.

CLOVE



Botanical name- Syzygium aromaticum

Family - Myrtaceae

Origin - Indonesia.

→ The clove tree is an evergreen tree that grows upto 8-12 meters.

→ Indonesia is the leading producer of cloves

→ clove thrives best in a warm humid tropical climate with annual rainfall from 150 - 250 cm.

→ clove plants require good drainage for better yield and quality.

BLACK PEPPER



Botanical name - Piper nigrum

Family - Piperaceae

Origin - India

→ Used for both flavour and as a medicin since traditional times.

→ Vietnam is the largest producer of black pepper in the world with 270,192 million tons.

→ The pepper plant is a perennial woody vine growing upto 4m in height on supporting trees, poles, trellises.

CARDAMOM



Botanical name - Elettaria cardamomum.

Family - Zingiberaceae.

Origin -

→ Guatemala is the largest producer of cardamom in the world with 36,059 million tons.

→ Both forms of cardamom are used as flavourings and cooking in both food and drink.

→ Commercial farming of cardamom is found in the western ghats as this area is more suitable for its cultivation.

FENUGREEK



Botanical name - Trigonella foenum-graecum.

Family - Fabaceae

Origin - Southern Europe.

→ The seeds aroma and taste are strong, sweetish and somewhat bitter, reminiscent of burnt sugar.

→ India is a major producer of fenugreek and over 80% of India's output is from Rajasthan.

→ Fenugreek seeds are also used to feed fish and domestic rabbits.

CUMIN





Botanical name - cuminum cyminum.

Family - Apiaceae

Origin - Western Asia.

→ India is the world's largest producer of cumin accounting for about 70%.

→ cumin is a drought-tolerant tropical or subtropical crop.

→ The optimum growth temperature ranges between 25°C - 30°C.

→ cumin seeds is used as a spice for its distinctive flavour and aroma.

TOMATO







Botanical name- Solanum lycopersicum L.

Family- Solanaceae

Origin- South America.

→ Tomatoes are a good source of vitamin C and phytochemical lycopene.

→ A large percentage of the world's tomato crop is used for processing.

→ China is the largest tomato producer in the world with 67.5 million tons.

→ Tomato is 95% water, 4% carbohydrates.

LEMON





Botanical name- Citrus limon

Family- Rutaceae

Origin- Pakistan and India.

→ Lemon is a rich source of vitamin C, providing 64% it.

→ Lemon juice, rind, and peel are used in a wide variety of food and drinks.

→ Primary commercial source of citric acid before the development of fermentation.

→ India is the largest lemon producer in the world with 3.5 million ton.

POMEGRANATE





Botanical name - Punica granatum

Family - Punicaceae

Origin - Iran, South - west Pakistan.

→ Pomegranates are drought - tolerant and can be grown in dry areas

→ Pomegranates grows easily from seed, but is commonly propagated from 25 to 50 cm hardwood.

→ The leading producers globally are India & china

→ Also grown as ornamental tree in parks.

KIWI



Botanical name- Actinidia deliciosa

Family - Actinidiaceae

Origin- China and Taiwan

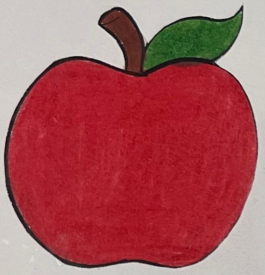
→ Kiwi is a rich source of vitamin C and vitamin K.

→ grown in most temperate climates with adequate summer heat.

→ China is the largest kiwi producer in the world with 4,430,065

→ commonly known as Chinese gooseberry.

APPLE





Botanical name- Malus pumila

Family- Rosaceae

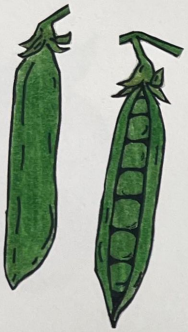
Origin- Kazakhstan, in central Asia east

→ Apples are used commercially for vinegar, juice, jelly and apple butter and are canned as pie.

→ They provide vitamin A and C, are high in carbohydrates and are excellent source of dietary fiber.

→ The soil in which apples trees grow must be well drained.

PEAS







Botanical name- Pisum Sativum

Family - Fabaceae

Origin - Mediterranean region.

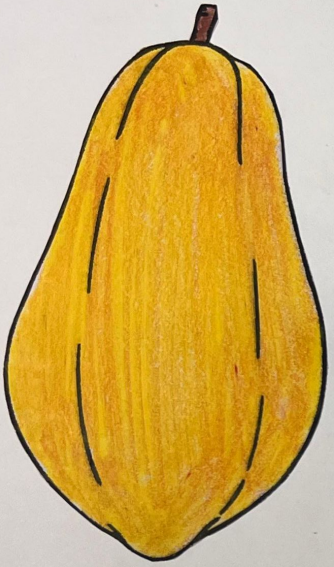
→ Pea is typically a cool season crop and thrives well in cool weather.

→ Ideal pH is 6.0 - 7.5.

→ Usually 3 to 4 harvest at 10 days intervals are possible.

→ Pea is sensitive to drought and excessive irrigation.

PAPAYA





Botanical name - Carica papaya

Family - Caricaceae

Origin - Southern Mexico and Central America.

→ Papaya plants grow in three sexes: male, female, and hermaphrodite

→ India is the largest papaya producer in the world with 6.0 million ton, which was almost 43% of the total world population.

→ Papaya leaves have been used as a treatment for malaria and dengue.

EGGPLANT



Botanical name- Solanum melongena

Family - Nightshade

Origin - China & India

→ It is tropical perennial plant often cultivated as a tender or half-hardy annual in temperate climates

→ China is the largest eggplant producer in the world with 37.4 million ton

→ Eggplant prefers hot weather and when grown in cold climate or in area with low humidity.

OKRA



Botanical name- Abelmoschus esculentus

Family - Malvaceae

Origin - Abyssinian centre.

→ India produces an annual of 6.47 million tons of okra which makes it the biggest producer.

→ contains 90% water, 2% protien, 7% carbohydrate negligible fat.

→ This is an annual / perenial growing crop.

→ This crop can grow upto a height of 2 m.

→ Most common vegetable in India, Turkey, Iran West Africa, Ethiopia.

PUMPKIN





Botanical name - Cucurbita pepo.

Family - Cucurbits

Origin - North America.

→ Pumpkins are a warm-weather crop that is usually planted by early July

→ They produce both a male and female flower.

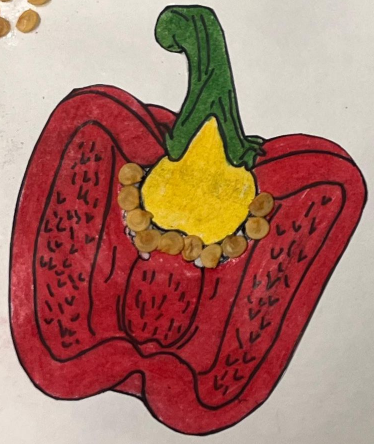
→ China is the largest punkin producer in the world with 7.4 million of tonnes.

→ Highly nutritious and particularly rich in vitamin-A.

CAPSICUM







Botanical name- Capsicum annuum

family- Nightshade

Origin- American tropics.

→ The most common colours of bell peppers are green, yellow, orange and red.

→ A raw red bell pepper is 94% water, 1% protien 5% carbohydrates and contains negligible fat.

→ A red bell pepper supplies twice the vitamin C and eight times the vitamin A

→ global production of bell peppers was 36 million ton, led by china with 46% of the total.

SPINACH





Botanical name- Spinacia oleracea L.

Family- Amaranthaceae

Origin- Central Asia

→ It is an annual plant growing as tall as 30 cm.

→ China is the largest spinach producer in the world with 24,484,507 ton

→ young leaves are commonly sold as baby spinach.

→ It is a rich source of iron, Vitamin A and Vitamin C.

READY PROGRAMME
2024-25

NAME: KEZIA SINGAWAT

CLASS: B.SC. (Hons.) Ag Part-4th Sem-1st

SUBMITTED TO: Dr. B.S. Badhala Sir

SRI KARAN NARENDRA AGRICULTURE UNIVERSITY, JOBNER

Bookmark™

Signature _____

Ajaya
DATE / /
PAGE NO.:

INDEX

CEREAL - 7
- Wheat
- Maize
- Rice
- Sorghum
- Barley
- Pearl Millet
- finger Millet

VEGETABLE - 12
- Tomato
- Bottle guard
- Cluster bean
- Drumstick
- Round Melon
- Pumpkin
- Chilli
- Radish
- Carrot
- Garlic
- Bottle guard
- lablab beans

fruit -
- Mango
- Papaya
- Water Melon
- Musk Melon

Spices - 9
- Black papper
- Clove
- Carom seed
- fennel
- Cumin
- Coriander
- fenugreek
- Turmeric
- Cardamom

Pulses - 7
- Chickpea
- Green Gram
- Kidney pea
- Pea
- Black Masoor
- Cowpea
- Black Gram

Oil Seeds - 5
- Groundnut
- Mustard
- Cotton
- Black sesame
- flax / linseed

Medicinal seed
- Opium.

Teacher's Signature.....



Common Name : Tomato

Scientific Name : Solanum lycopersicum

family : Solanaceae

origin : Peru (Mexico)

Importance :

- Tomato soup is good for Constipation.
- It is a source of nutrients like Vitamin C, potassium.

Teacher's Signature.....

NOVELTY

DATE.....



Common Name : lobia / chawla

Scientific Name : Vigna unguiculata

family : legumes

Origin : West & East Africa

Importance :

- Cowpea is a high-protein food.
- It protection against chronic diseases.

DATE / /
PAGE NO.:

Common Name : Papaya

Scientific Name : Carica papaya

family : Caricaceae

Origin : South Mexico

Importance :

- Anti cancer properties.
- Rich in vitamin C.
- Improves digestion.



Teacher's Signature.....

NOVELTY

DATE.....



Common Name : Wheat

Scientific Name : Triticum aestivum

Origin : South West Asia

Importance : 'King of Cereals'

- Wheat provides energy, protein fiber, vitamin & Minerals.
- Wheat is abundant protein named Gluten.

NOVELTY

DATE.....



Common Name : Maize / corn

Scientific Name : Zea Mays

Origin : Mexico

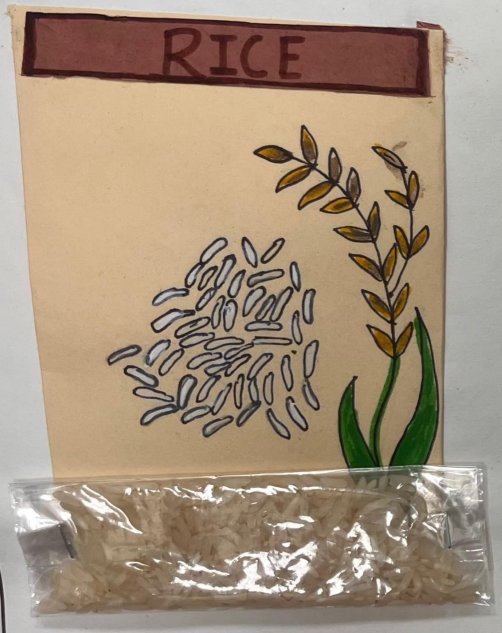
Importance : 'Queen of Cereals'

- High fiber, Maize contains carotenoids, phenolic compounds.



NOVELTY

DATE.....



Common name : Paddy / rice

Scientific name : Oryza sativa

Origin : South east asia

Importance : Rice contain decent amounts of fibre, protein vitamin B, iron.





Common Name : Water melon

Scientific Name : Citrullus lanatus

family : Cucurbitaceae

Origin : Southern Africa

Importance :-

- Highest Alkalising fruit
- Reduce high blood Pressure
- Boosts immune system.
- Effective Kidney cleanser.

Teacher's Signature.....

NOVELTY

DATE.....



Common Name : Sorghum / Jowar

Scientific Name : Sorghum bicolor

Origin : Northeastern Africa

Importance : Sorghum is a nutritious grain that is rich in anti oxidants, minerals & B vitamins.



NOVELTY

DATE.....



Common Name : Barley

Scientific Name : Hordeum Vulgare

Origin : Ethiopia

Importance : Barley is primarily used for malt & beer Production.

- People use barley for heart disease and high cholesterol.





Common Name : Musk melon
Scientific Name : Cucumis Melo
family : Cucurbitaceae
Origin : Persia (Iran)
Importance :
- It is a beneficial summer fruit as it has cooling & diuretic properties that helps to keep the body hydrated.

Teacher's Signature.....

Common Name : Black-papper

Scientific Name : Piper nigrum

family : piperaceae

Origin : Malabar Coast of India

Importance :

- Helps fight Infections
- Rich in antioxidants
- Control blood sugar level.



Teacher's Signature.....

NOVELTY

DATE.....



Common Name : Pearl Millet/Bajra

Scientific Name : Pennisetum Glaucum

Origin : West Africa

Importance : High in Protein and fiber.

- Its helps to prevent Anaemia
- Reducer cholesterol



AJANTA
AJANTA
DATE / /
PAGE NO.:

Common Name: Carom seed / Ajwain

Scientific Name: Trachyspermumm ammi

family: Apiaceae

Origin: Egypt

Importance:

- Effective digestive Aid
- Antibacterial
- Provide Relife from cough & Congestion.



Teacher's Signature.....



Common Name : clove

Scientific Name : Syzygium aromaticum

family : Myrtaceae

Origin : Indonesia

Importance :

- Antimicrobial properties
- Antioxident properties
- Anti Diabetic

Teacher's Signature.....

NOVELTY

DATE.....



Common Name : finger millet / Ragi

Scientific Name : Eleusine coracana

Origin : East African

Importance : finger millet is rich in minerals, It's a good source of calcium, iron.

- Its recommended for conditions of blood pressure, liver disorders.



Common Name: fennel
Scientific Name: Foeniculum Vulgare
family: Apiaceae
origin: Mediterranea region
Importance:
Anti fungal & Anti bacterial.

Teacher's Signature.....

Common Name : bottle guard / lauki

Scientific Name : lagenaria siceraria

family : Cucurbitaceae

Origin : South Africa

Importance :

- Bottle Gourd have cooling property.
- Bottle Gourd Reducing the risk of Cancer.



Teacher's Signature.....

Teacher's Signature.....

Common Name : Cluster beans/guar

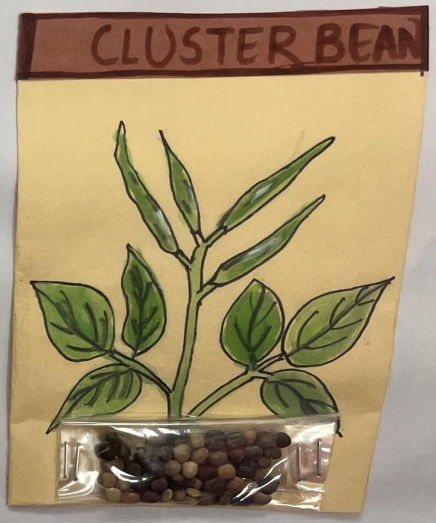
Scientific Name : Cyamopsis tetragonaloba

family : fabaceae

Origin : West Africa / India.

Importance :

- Their role in weight loss. digestive health, blood sugar control, heart health & bone health.



Teacher's Signature.....

DATE / /
PAGE NO.:



Common Name: Cumin / zeera

Scientific Name : cuminum cyminum

family : Apiaceae

Origin : Central Asia

Importance :

- High in Antioxidants.
- May support a healthy body weight
- May lower blood sugar

Teacher's Signature.....

DATE / /
PAGE NO.:



Common Name: Coriander
Scientific Name: Coriandrum Sativum
family: Apiaceae
origin: Netherlands
Importance:
Helps maintain good health of stomach.
Regulates blood sugar.

Teacher's Signature.....

Common Name : Drumstick/moringa

Scientific Name : Moringa oleifera

family : Moringaceae

Origin : South west India

Importance :

- Drumstick being an incredible source of essential minerals calcium, iron & phosphorus



DATE / /
PAGE NO.:



Common Name : Fenugreek / Methi

Scientific Name : Trigonella foenum-graecum

family : fabaceae

Origin : Western Asia

Importance :

- fenugreek may help lower blood glucose levels and increase insulin sensitivity.

Teacher's Signature.....

NOVELTY

DATE.....

Common Name : Round Melon/Tinda

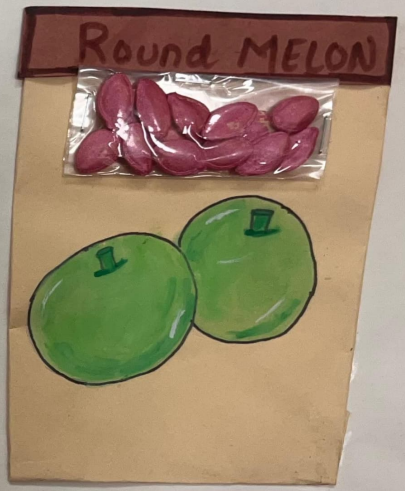
Scientific Name : Praecitrullus fistulosus

family : Cucurbitaceae

origin : North-western India

Importance :

- Round gourd contains vitamin's and corotene that boats the immunity & keeps you healthy.



DATE / /
PAGE NO.:

Common Name : Turmeric / 'haldi'

Scientific Name : Curcuma longa

family : Zingiberaceae / ginger family.

Origin : Tropical South Asia.

Importance :

- Turmeric help's boosts your immune system.
- Improve Skin health.



Teacher's Signature.....

NOVELTY

DATE.....

Common Name : Pumpkin / winter squash

Scientific Name : Cucurbita pepo

family : Cucurbita

origin : North America

Importance :

- lots of 'vitamins A' & Carotenoids.
- Pumpkin's peel has polysaccharides. which help the good bacteria in your stomach.



NOVELTY

DATE.....



Common Name : Chilli / Capsicum

Scientific Name : Capsicum annuum

family : Solanaceae

Origin : Mexico & Central America

Importance :

- Chillies are high in vitamin A & C and antioxidants.
- improving your heart health.

Common Name : Ilaychi

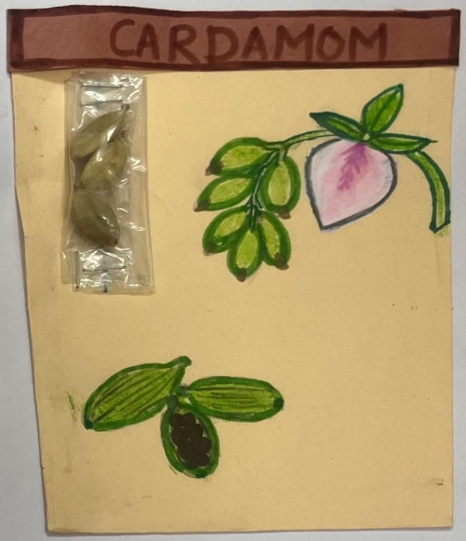
Scientific Name : Eleltaria Cardomomum

family : Zingiberaceae

Origin : South India

Importance :

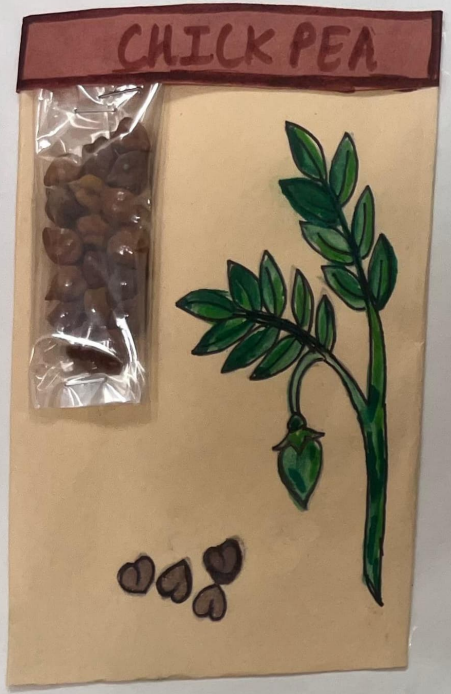
- Boosts digestion
- Improve metabolism



Teacher's Signature.....

NOVELTY

DATE.....



Common Name : Chickpea/Gram

Scientific Name : Cicer arietinum

family : legumes

Origin : Southeastern turkey.

Importance :

- Chickpea is a good source of vitamin, riboflavin
- Its helping to reduce the risk of type 2 diabetes.

NOVELTY

DATE.....



Common Name : Green Gram / Mung

Scientific Name : Vigna radiata

family : legumes.

Origin : Indian sub continent

Importance :

- Green gram is a great source of protein.
- mung bean help to manage diabetes & blood pressure.

NOVELTY

DATE.....

Common Name : Radish / mooli

Scientific Name : Raphanus sativus

family : Cruciferae

Origin : South east Asia

Importance :

- A good source of natural nitrates, which may help improve your blood flow



NOVELTY

DATE.....



Common Name : Kidney pea/ Rajma

Scientific Name : Phaseolus vulgaris

family : fabaceae

Origin : Peru

Importance :

- In Kidney pea/ Rajma rice source of Protein, and full of fibre iron, Anti oxidant.

NOVELTY

DATE.....

Common Name : Carrot

Scientific Name : Daucus carota

family : Apiaceae

Origin : Central Asia

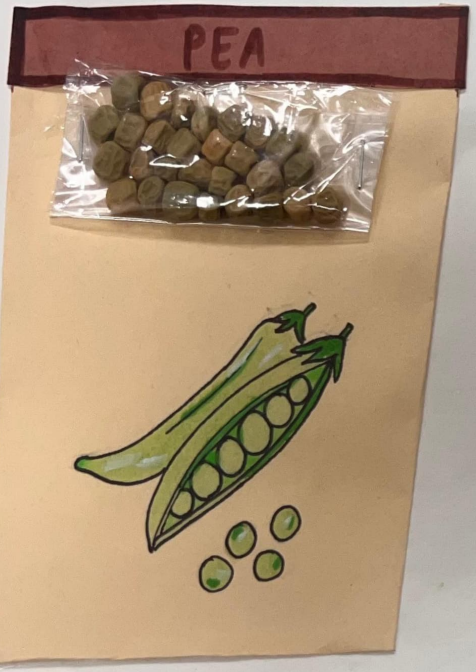
Importance : carrot are rich in nutrients and have many health benefits.

Carrot's contain V-A, B, C & K. as well as calcium & potassium.



NOVELTY

DATE.....



Common Name : Pea / Garden Pea

Scientific Name : Pisum sativum

family : legumes / fabaceae

origin :

Importance :

- Peas are a good source of vitamins C and E, zinc & other antioxidants.

NOVELTY

DATE.....

Common Name : Garlic

Scientific Name : Allium sativum

family : Amaryllidaceae

Origin : Central Asia

Importance :

- Garlic is a powerful antioxidant.
- It Improved Digestion.
- Garlic have Anti fungal Properties.



NOVELTY

DATE.....



Common Name : black lentils/masoor

Scientific Name :

family : fabaceae

origin : Southwestern asia

Importance :

lentils add essential vitamins, minerals and fiber to the diet.

They decrease their risk of heart disease.

Common Name : Bitter Gourd / Karela

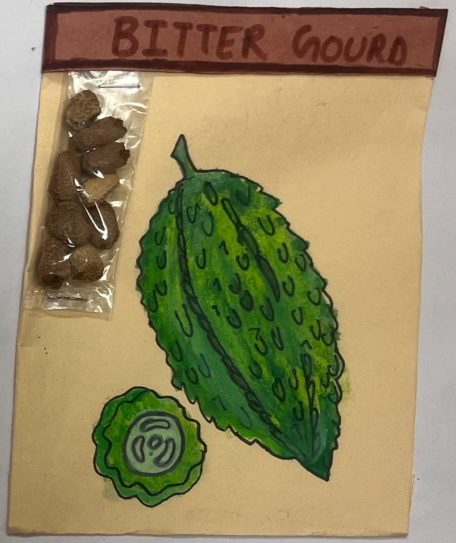
Scientific Name : Momordica charantia

family : Cucurbitaceae

Origin : Africa & Madagascar

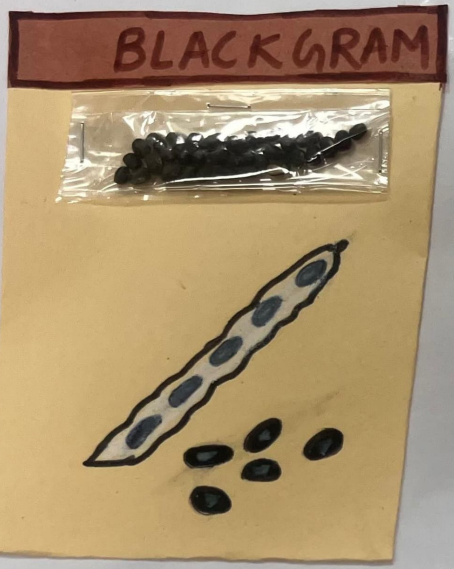
Importance :

- Bitter gourd has a high Concentration of antioxidants.
- It help with cancer, hair, and skin issues.



Teacher's Signature.....

AJAYA
DATE / /
PAGE NO.:



Common Name : Black gram / Urad

Scientific Name : Vigna mungo

family : fabaceae

Origin : India

Importance :

- Black gram is a rich source of minerals and fatty acids.
- It is the chief constituent of papad, idly & dosa.

Teacher's Signature.....

NOVELTY

DATE.....



Common Name : Hyacinth bean/lablab beans

Scientific Name : lablab purpureus

family : fabaceae

Origin : Tropical Asia & Africa

Importance :

- They are a good source of Protein and can be eaten as vegetables.

Common Name: Mango

Scientific Name : Mangifera Indica

family : Anacardiaceae

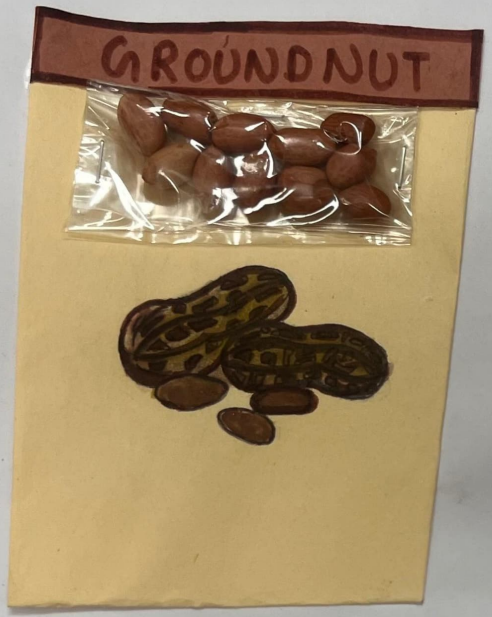
Origin : Indo burma

Importance :

- The King of fruit
- India is the largest Producer of Mango
- Mangoes play an important role in strengthening bones.



Teacher's Signature.....



Common Name : Groundnuts / Peanut
Scientific Name : Arachis hypogaea
family : fabaceae
Origin : South America or Mexico
Importance :

- Groundnut oils unstaurated fats may help improve insulin sensitivity.
- It's rich in Vitamin E.
- Helps in improving heart health.

Teacher's Signature.....

DATE / /
PAGE NO.:



Common Name : Mustard/ rai

Scientific Name: Brassica nigra

family : Brassicaceae

Origin : North Africa

Imporatance :

- Mustard oil has natural anti-microbial properties.
- It's prevent Hair loss
- yellow mustard oil has high smoke point of about 480°f.

Teacher's Signature.....



Common Name : Cotton / Kapas

Scientific Name : Gossypium herbaceum

family : Malvaceae

Origin : Eastern Sudan

Importance :

- Cotton is the most widespread profitable non-food crop in world.
- Cotton oil manufacture for 'margarine', and its also used for frying potato chips.

Teacher's Signature.....

DATE / /
PAGE NO.:

Common Name: linseed / flax seed

Scientific Name: Linum usitatissimum

family: linaceae

Origin: West Asia

Importance:

- linseed oil is omega-3 & omega-6 fatty acids help regulate blood pressure & cholesterol.



Teacher's Signature.....



Common Name : Opium poppy.

Scientific Name : Papaver Somniferum

family : Papaveraceae

Origin : Southwest Asia

Importance :

- It medical / medicinal use opium was used to treat asthma, stomach.
- Narcotic, painkiller.

Teacher's Signature.....