



ORGANIC MICROGREENS



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MICROGREENS

Microgreens are young vegetable greens consisting of roots, stems, and cotyledon leaves. The stem and leaves of microgreens are concentrated in nutrients making them a potent superfood.

Microgreens are the first true leaves produced from a seedling of vegetables and herbs that are about 2-3 inch tall. There are so many varieties of plants including turnips, radishes, broccoli, cauliflower, carrots, celery, chard, lettuce, spinach, arugula, amaranth, cabbage, beets, parsley and basil, to name a few, that can be grown as a microgreen for a wholesome and nutritious addition to your daily meals. The tiny leaves of most of the microgreens get ready for harvest in 12 to 14 days and are packed with nutrition and intense flavours imitating their mature counterparts. For example, if you are eating the microgreen shoots of radish, the taste and flavour will be a lot like a radish. Similarly, beetroot microgreens taste just like beetroot and coriander microgreens taste like coriander.

Microgreens contain considerably higher levels of vitamins and carotenoids - about five times on an average - than their mature counterparts. Such soaring levels of nutrients help lower the risk of cancer, Alzheimer's, osteoporosis and boost heart health.

Microgreens first made their appearance as a garnish in the early 80s but soon caught up as the healthiest trend due to their nutritional superpowers. Microgreens in India, however, are still at the outset of becoming a part of our daily diet. The fine-dine restaurants in metro cities like Delhi, Bengaluru, Mumbai have recently started adding microgreens to their salads, appetizers, sandwiches, desserts, mock tails and such.

Microgreens are ideal for the people who are struggling with time and space for maintaining a garden but want to start eating natural and healthy.



Difference between sprouts and microgreens

Sprouts are simply seeds that have germinated while microgreens undergo a different planting and growth process that allows them to grow fully developed stems and leaves, allowing them to possess a significantly rich nutritional composition than sprouts. Sprouts are harvested within 2-5 days whereas, microgreens are harvested between 7-21 days depending on the type of vegetable.

Microgreens are much healthier, has more nutritional value and enhanced taste than sprouts as they are concentrated with enzymes, flavonoids and natural flavour. The potential for bacteria growth is much lower in micro greens than in comparison to sprouts. Microgreens require slightly less warm and humid conditions than sprouts do, and only the leaf and stem are consumed.

Microgreen have three basic parts

1. a central stem
2. cotyledon leaf or leaves
3. first pair of true leaves

Importance of Microgreens:

1. **Easy to Grow:**

Microgreens are incredibly easy to grow due since they are harvested at the first true leaf stage and can be grown effortlessly on a sunny windowsill.

2. **Quick to harvest:**

Microgreens get ready to eat in just two weeks.

3. **Packed with flavours:**

Though microgreens are tiny, the concentration of flavours makes them a favourite of chefs and food lovers around the world.

4. **Loaded with nutrients:**



Microgreens have a higher concentration of nutrients than mature vegetables and herbs. Some microgreen varieties are having up to 40 times more nutrition than grown vegetables.

How to grow microgreens at home

Microgreen Seeds:

Microgreens cannot be grown from regular seeds, one should use microgreen seeds only.

Potting Soil:

Planting Soil works the best and it should not contain any chemical or pesticide quantities, in order to grow microgreens organic and healthy.

Pot/Tray:

A container to grow microgreens can be a seed or regular planting pot or a vessel with 4-5 inches deep.

Light Source:

Microgreens require an essential amount of sunlight /natural light for at least 3-4 hours a day. A bright windowsill or a balcony that receives sunlight will be a good spot for the plant.

Water:

Water is a necessary element for Microgreens. The soil being used is to be kept moist at all times. A hand sprinkler works best for the plant, due to its micro outlets that do not let open a huge downpour of water.

Mode of intake

Microgreens can be consumed raw in salads to get the highest possible nutritional intake. They can also be cooked, garnished on soups, added in sandwiches, burgers, or smoothies or used as toppings.



Steps in cultivation of fresh, flavoursome and healthy microgreens:

1. **Filling the tray/container with soil.** Since the roots of Microgreens do not reach that deep, 3-4 inches soil height should be good enough.
2. **Sow the seed:** Microgreen seeds are to be spread on the soil surface. The spacing between the seeds does not need to be completely even, so hand sprinkling works fine.
3. **Cover the seeds:** cover with a very thin layer of soil and gently pat the surface in order to make the seeds settle well in the container.
4. **Damp the soil:** Spray enough water over the soil surface in order to make the surface completely moist, but do not flood it with water.
5. **Place the container at room temperature:** keep the container for about two days until germination occurs. Then choose a sunny spot to place the plant, where it receives a good amount of sunlight for at least 3-4 hours in a day.
6. **Sprinkle water twice:** sprinkle the water over the growing greens, twice a day. In 3-4 days' time, small leaves grow over the soil with little shoots at the bottom.
7. **Harvesting Microgreens** Once the plants are 2-3 inches taller, they are ready to be harvested. Cut the microgreens with a pair of scissors or a sharp knife and cut the Microgreens, holding them vertically, from just over the roots.
8. **Washing:** wash the harvested microgreens with cold running water and use it in a meal. Microgreens provide the best of nutrition when consumed fresh, right after the harvest. Dry them after washing and store in a paper wrap in the refrigerator.

Micro Green Name	Germination Time	Estimated time to Harvest
Amarantha Red Desi	3-5 Days	9-12 Days
Amarantha Red Garnet	2-3 Days	7-10 Days
Alfa Alfa	1-2 Days	7-9 Days
Carrot	3-5 Days	10-12 Days
Chia	2-3 Days	8-10 Days
Flax	2-3 Days	8-10 Days
Garden Cress	2-3 Days	8-12 Days
Lettuce Green	1-2 Days	7-9 Days
Mustard Yellow	1-2 Days	7-9 Days
Red Onion Desi	2-3 Days	8-12 Days
Pakchoi / Bak Choy	1-2 Days	8-12 Days
Radish Daikon	1-2 Days	7-10 Days
Radish Desi	1-2 Days	7-10 Days
Radish Purple	1-2 Days	7-10 Days
Radish Pink	1-2 Days	7-10 Days
Red Cabbage	2-3 Days	9-12 Days
Sesame White	2-3 Days	7-10 Days
Spinach / Palak	3-5 Days	10-14 Days
Swiss Chard	3-5 Days	10-14 Days
Turnip Desi	1-2 Days	7-10 Days



Health Benefits of Microgreens

Eating vegetables is linked to a lower risk of many diseases as they contain high amounts of vitamins, minerals and beneficial plant compounds which may reduce the risk of the following diseases:

- **Heart disease:** Microgreens are a rich source of polyphenols, a class of antioxidants linked to a lower risk of heart disease. Studies show that microgreens may lower triglyceride and “bad” LDL cholesterol levels.
- **Alzheimer’s disease:** Antioxidant-rich foods, including those containing high amounts of polyphenols, may be linked to a lower risk of Alzheimer's disease.
- **Diabetes:** Antioxidants may help reduce the type of stress that can prevent sugar from properly entering cells. In lab studies, fenugreek microgreens appeared to enhance cellular sugar uptake by 25–44%.
- **Certain cancers:** Antioxidant-rich fruits and vegetables, especially those rich in polyphenols, may lower the risk of various types of cancer. Polyphenol-rich microgreens may be expected to have similar effects
- **Chronic Disease:** Inflammation is a major indicator of disease in the body. Microgreens and vegetable intake in general is shown to reduce inflammation markers as well as lower the risk of several types of cancer.

Most Popular Variety of Microgreens:

Cauliflower, broccoli, cabbage, radish, carrot, garlic onion, Amaranths, beetroot, spinach, melon cucumber and squash.

Cereals such as rice, oats, wheat, corn and barely, as well as legumes like chickpeas, beans and lentils.

They are varied in taste, which can range from neutral to spicy slightly sour or even bitter, depending on variety.

Rainbow of Microgreens:

Fruits and vegetables are available in different colors. Microgreens of different colors represent different healthy compounds called phytochemicals, as well as other micronutrients.

- **Red vegetables** contain lycopene, which is a powerful antioxidant.
- **Orange and yellow** vegetables contain carotenoids like beta carotene and lutein, which the body converts into vitamin A.
- **Blue and purple** vegetables contain anthocyanin which can help protect cells from damage.
- **Green vegetables** contain a wide range of different phytochemicals including saponins, indoles, and carotenoids.
- **Brown and white** vegetables like garlic contain allicin which has antibacterial properties.



Nutritive Values of Microgreens

Many fresh plants products provide vitamins, minerals and fiber. These nutrients can help with:

1. Preventing a range of diseases.
2. Managing weight
3. Boosting both mental and physical health well-being.

A 100g of serving of sunflower and basil microgreen mix will provide:

- 28 calories
- 2.2 g of protein
- 4.4g of carbohydrate
- 2.2g of fiber
- 15.9mg of iron
- 66mg of magnesium
- 66mg of phosphorus
- 298mg of potassium
- 11mg of sodium



RECIPES

1. Microgreens salad

Ingredients

Quantities

Microgreens	-	100g
Orange- peeled and cubed	-	1
Avocado peeled and cubed	-	1/2
Shredded carrot	-	1/2
Chopped walnuts	-	10g
For the Dressing	-	
cold-pressed olive oil	-	1 Tbsp
lemon juice	-	1 Tbsp
clove chopped garlic	-	1
Salt and pepper	-	To taste

Procedure:

- If your microgreens have some soil on them, give them a light wash and air dry them in a strainer for a few moments. (They are very fragile so need to be handled with care).
- Place them in a bowl and add the remaining salad ingredients.
- Stir up your dressing in a little jar and pour on top of the salad.



2. Green peas and mint soup:

Ingredients

Quantities

Green peas	-	150g
Butter	-	15g
Salt	-	To taste
Milk	-	125ml
Black pepper powder	-	2.5g
Mint leaves powder	-	5g



Procedure;

- Heat the butter in a non-stick pan, add the onions and sauté on a medium flame for a few minutes.
- Add the green peas, 1 ½ cups of water and salt and bring to a boil.
- Simmer for 15 minutes or till the peas are cooked
- Cool and blend in a mixer to a smooth puree and keep a side.
- Combine ½ cup of water and ½ cup of milk in a broad non-stick pan, add the prepared green pea puree, mix well and cook on a medium flame for 3 to 4 minutes while stirring occasionally
- Add the pepper, mint leaves, mix well and cook on medium flame for 1 to 2 minutes, while stirring occasionally.

3. Amaranth Dal

Ingredients

Quantities

Moong dal	-	100g
Amaranth leaves	-	50g
Turmeric	-	2.5g
Coriander powder	-	2.5g
Cumin powder	-	2.5g
Vegetable oil	-	15g
Cumin seeds	-	5g

Salt	-	To taste
Chilli powder	-	2g
Tomato	-	10

Procedure:-

- Chop the amaranth leaves finely and place in a pressure cooker along with moong dal and turmeric add enough water to cover by about an inch bring to a boil cover, and cook until tender adding more water if needed .
- Add the dal along with the amaranth leaves bring to a boil and lower heat to a simmer add water if the dal is too thick let the dal simmer for about 5 minutes.
- Heat the oil when it shimmers add cumin seed, stir for few seconds then add the garlic.
- Sauté for 30 seconds, then add tomato. Let the tomatoes cook down until they are pulpy.
- Add cumin and coriander powder red chilli powder.
- Add the dal along with the amaranth leaves bring to a boil and lower heat to a simmer add water if the dal is too thick let the dal simmer for about 5 minutes.

4. Mustard Green Dal

Ingredients

Quantities

Mustard leaves	-	50g
Spinach	-	25g
Dal	-	25g
Salt	-	to taste
Garlic cloves	-	15g
Cumin seeds	-	5g
Tamarind seed	-	5g
Red chilli powder	-	3g
Green chilli	-	5g



Procedure:-

- First wash mustard greens, spinach and dal thoroughly with fresh water and pressure cook them for at least 4 to 5 long whistles.
- Then for seasoning, heat 2 tbsp of oil in a pan and add green chilies cumin seeds, garlic cloves. Fry them till the garlic changes its colour to light brown.
- Now add the cooked dal along with mustard greens and spinach in to the pan. Mix it well.
- Then add salt, red chilli powder and tamarind paste to it.



4. Fenugreek Salad

Ingredients

Quantities

Fenugreek leaves	-	20g
Green chilli	-	5g
Groundnut oil	-	5g
Salt	-	to taste
Red chilli powder	-	2.5g
Beetroot	-	25g
Paneer	-	50g
Walnuts	-	10g
Carrot	-	15g

Procedure:-

- To prepare this wash fenugreek leaves and chop them.
- Now chop carrot, beetroot, walnuts and green chillies.
- Take a bowl and mix all the ingredients properly and toss a few times.

