"QUINOA SEEDS"

Commercial Cultivation

Superfood / Millet

CLICK-N-GROW
Agroventures Pvt Ltd
Farmer's e-Buddy

INTRODUCTION

Quinoa (Chenopodium quinoa) is a member of the Bathua species. Quinoa is mainly cultivated as a grain crop. Quinoa was first produced in South America. In rural areas of India, it is also known by names like Quinoa, Kinwa, and Kineva. Its seeds are very small in size and are used as food. Consuming quinoa helps prevent ailments like anemia, cancer, heart attack, and respiratory diseases.

Quinoa is cultivated mainly in South American countries including Australia, England, Canada, Bolivia, Peru, China, etc. Its plants are green, red, or purple in color. Its seeds are white, red, and pinkish green in color. It contains protein, carbohydrates, fat, fiber, vitamins, and minerals like calcium, magnesium, iron, zinc, manganese, etc. in abundance.

ADVANCED FARMING OF QUINOA

Quinoa is mainly cultivated as a cereal crop. The origin of quinoa is South America. It is also referred to as Quinoa, Kinwa, and Kineva in rural parts of India. It has tiny seeds which are used as food. The plants reach a height of 4 to 6 feet when completely developed. Consuming quinoa helps prevent ailments like anemia, cancer, heart attack, and respiratory diseases. Quinoa contains variety of nutrients that are highly beneficial for human health.

HEALTH BENEFITS OF QUINOA

·Quinoa is incredibly nutritious and healthy.
·Quinoa is a good source of protein.
·Quinoa is loaded with antioxidants.
·Quinoa has a low glycemic index (GI) and is excellent for people with diabetes.
·Quinoa has a very high fiber content compared to other cereals.
·Quinoa is a good source of minerals such as magnesium.
·Quinoa is good for metabolic health.
·Quinoa helps in weight management.

SOIL SUITABILITY

Quinoa does not require a certain type of soil to be grown. It can be grown in stony, plain, and barren land as well as in rich, fertile, black, and loamy soil. However, the soil should have adequate drainage and must not have problem of waterlogging. It can be grown in soils that are acidic or alkaline. However, good yield is obtained from soil having normal pH.

CLIMATE AND TEMPERATURE

The climate of India is suitable for the cultivation of Quinoa. In India, it is cultivated along with Rabi as well as Kharif crops. The winter season is suitable for its cultivation. It is frost and draught tolerant plant. Apart from winter, it can also be cultivated in summer and rainy seasons. It does not require much irrigation.
Quinoa require a temperature of around 20 degrees for germination, 0-35 degrees being optimal. Plants need high temperature during the day and low temperature at night for proper growth and development.

Manures and fertilizers

The following manures and fertilizers are required-

- Vermi compost - Adding this supplies nutrients.
- Trichoderma Powder – a fungicide that destroys harmful fungi present in the soil.
- Neem Cake- a pesticide which when applied to soil, destroys the insects and egg masses present in the soil.
- Gypsum – It is a soil conditioner that makes the soil friable and airy.

Spread these manure and fertilizers in the field and mix them well in the soil by ploughing the field two to three times with the help of a cultivator. After that immediately irrigate the field. When the upper surface of the soil appears slightly dried, then plough the field well to make the soil friable. Level the field as well. to avoid problems such as water accumulation in the field.

SEED RATE AND TREATMENT

The size of quinoa seeds is very small; therefore, 5-6 kg of seeds are sufficient for one acre. Before planting its seeds, they should be treated with cow urine and Trichoderma solution to ensure good germination. Apart from this, certified seeds can also be used by farmer for sowing.

SOWING TIME

Sowing of quinoa seeds is done through seed drill just like a mustard crop. Sowing is done with the help of seed drill in the rows. Distance of about one foot between rows and 15 cm between plants should be maintained. While sowing could also be done by broadcasting method but more seeds are required for sowing by the broadcasting method. Also, inter-cultivation is tedious in broadcasted quinoa field.
Planting of quinoa can be done at any time of year in India. But for obtaining good yield and production, it is preferably cultivated from October to February- March. Apart from this, it can be grown from June to August even in the rainy season.

IRRIGATION

Quinoa plants do not require much irrigation as it is tolerant to drought. Crop needs three to four irrigations during cultivation. The first irrigation of its plants should be done immediately after sowing the seeds. After that, the rest of the irrigation should be done at the time of plant growth and seed formation.

WEED CONTROL

In quinoa cultivation, weeding is an important operation. It should be done manually. About 20 days after sowing, light hoeing should be done. Two weedings are sufficient for weed control. The second weeding of its plants should be done about 15 to 20 days after the first weeding.

PLANT DISEASE AND CONTROL

Since quinoa leaves have a bitter taste, no insects or diseases of any type have been observed in quinoa plants so far. However, problems like wilting and root rot in the plants can be seen owing to water logging that can be prevented by proper drainage.

HARVESTING AND STORAGE

Quinoa plants are ready for harvesting about 100-110 days after sowing. Its harvesting is done like the mustard crop. During the harvesting, its seeded part is cut and separated. After drying it in the sun for a few days, seeds are extracted like mustard with a thresher. Once the seeds are removed, they are dried in the sun before being sold in the market or can be stored.

YIELD

Quinoa cultivation yields around 12-15 quintals per acre. Farmers have to bear very less expenses to grow it. The wholesale price of Quinoa seeds in the market is around Rs.35 to 40 per kg. According to this, farmers can easily earn more than 50 thousand from one acre at a time.

COST OF CULTIVATION - 3 Months

Particulars	Work	Expenses
Land Preparation	Ploughing, levelling, etc.	2000
Planting material/ seeds	5 kg @ Rs. 300/- per kg	1500
Organic fertilizers	Organic insecticides, growth boosters,etc.	3500
Other expenses	Harvesting, drying, threshing, storage,etc.	3000
Transportation	Transport of Seed/Fertilizer and Hervested Seeds	5000
Total Expenditure (3 Months)		**15,000/-**

OUTPUT PER ACRE

Production	Buy Back Price	Total income
1500 kg seeds	Rs. 40/- per kg	Rs. 60,000/-
Total Expenditure		Rs. 15,000/-
Net profit / income (3 months)		**Rs. 45,000/-**

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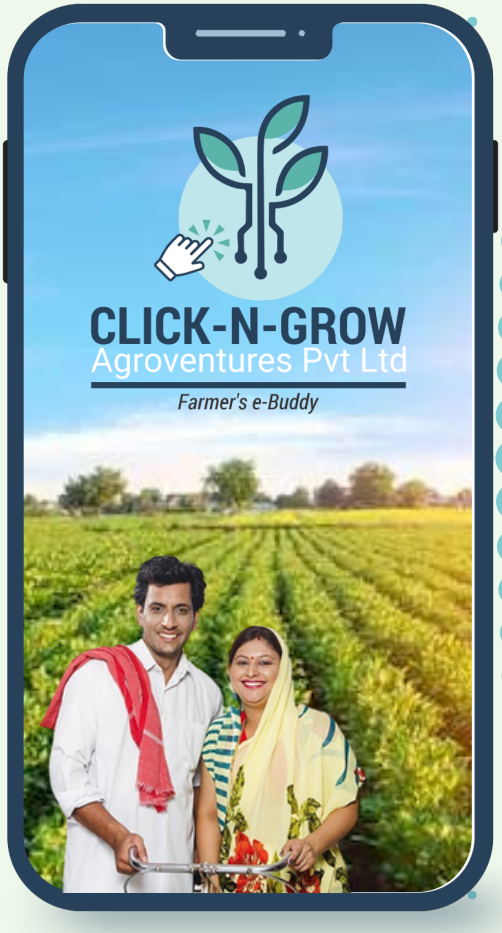
COMPANY PROFILE

Click-N-Grow Agroventures Pvt. Ltd.



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INTERLINKED FARM SOLUTIONS AT ONE PLACE

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