TSHÜTEINUO KECIE DO : Puosi re pevilieketuo

Asia mu Africa nu tshüteinuo ha liecie donu kewe puo mu kecüca kemeyiethopuo. Themia huo hau lei pie pera ca morei u kiri ca chüya. Tshüteinuo ha India, China, Japan nu lhou keriechü derei thelhitheü la tsie seyie China, India, Indonesia, mu Korea nu hau cie pekra se bate. Mu India nu ro Andhra Pradesh, Madya Pradesh, Tamil Nadu, Karnataka ,Telangana, Maharashtra, Rajasthan Utter Pradesh mu peso niathu tsatie ko rei hau ciekecüchü bate.

Tshüteinuo ha puotei kedzüpuo nu lhou ya kezha rübei mu kijü keso nu lhouya. India nu ro kijü 0.9 lakh hectre nu 0.66 lakh mese puo ngulie baya mu hectre puo nu kg 762 ngulie ba. (2015-16).

USHÜRHO LA PUO KEVI :

Shünyi(diabetes) kechü la kevithopuo.

- Hau cü seicü u digestive chükemesa balie ya.
- Hau cü seicu u melou bu puotou nu balie ya.
- Hau kecü ca kevi puo.
- Umo chükemedza shü ya.
- Hau u va gastric la rei vi ya.

PUO TEI MU RÜNYO :

Tshüteinuo ha puotei kele mu lewikecü nu mu teirü petsa kecü nu lhoulieya. Mu hau teikeso nu rei lhou lie ya. Tshüteinuo ha teirü altitude 2000 metres nu vo 500-700 mm ketso lhou pevi lieya. mu rünyo kemene nu puotou ya.

Lei kecü ki puocha chü di lei ro tsia kg 8-10 ketso se morosuo. derei puotsia pie lienu keza tuoüro kg 15 mese puo ta morosuo. Teirü teiki Cadi mu Tsiarie (July and August) teiki leiya, mu teisei teiki Doshü khrü leiya. Derei India nu ro puoteila meho di leiya. Puo donu 25 cm x 10 cm mu puo kerüle 2 cm nu 3 cm chüya.

KERI DI LEILIE KEVI :

Rünyo kevi thechüra tshüteinuo ha dziecie kekrei sa di leilie vi.

Keri di leilie keviko :

- Maize (Shüko) I Pigeon pea I Black gram I Dolichos Castor I Sorghum I Brassicas (Ghakrie)

MESA MOROKESUO :

- Nha mesa morokesuo: Lienu nha kra taro u dziecie la vimo, süla zha 15-20 donu va kenie chü kemesa morosuo.puo rhipuo medzi di leilie ro chu kemesa rüükuo.

- Thechü keli di mhali kecü: Thechü keli di mhali liro u dziecie ngu pekra kuo lie ya.derei Tshüteinuo li kewa shie thechü hanu Shüdza (Soybean) ,black gram, horse gram , green gram , motor (Pea) moro badam (Ground nut) hako li kecü viya. Thechü puonu tshüteinuo va kenie li kecü vimo.

TSHÜTEINUO KECHÜ :

1. Blast : Blast kechü hau liro puonyü nu par ya kechü hau keyie vo di puo nyü pete Rüwi vo puo bo rei siataya. Süla kechü hau perhie lie ketuo la tsia li kewa shie zha 25 ki daru Pseudomonas Fluorescence (organic) 4 gram/ 1 litre water valie ro viya.

2. Grain Smut : Grain smut kechü hau liro puo kre (grain) gei parya. Mu hau ro udzie se puo khu hau bie lie di se mi (fire) nu the wa morosuo.

3. Downy Mildew/Green Ear : Kechükhu hau ri puo kre (grain) nu shier ya. Mu hau shierta tse puokre (grain) pete-u ciethe wa morosuo.

TSHÜTEINUO KHU :

Puo khu liro hako Armyworm, cutworm and leaf scrapping beetle.

1. Army Worm : Army worm perhie lie ketuo la Tshüteinuo medzü baluo cüki (30 days) chümeri (garlic) 85 gram, Refined oil 50 ml, sabu (liquid soap) 10 ml kesa biechie (crushed) lie di kesa pie va lie ro perhie lietuo.

2. Cut Worm : Cut worm perhielie ketuo liro daru Bacillus thuringensis 5 gram pie dzü 1 litre rielie di se valie.

3. Leaf Scrapping Beetle : Leaf scrapping beetle perhie lie ketuo la ro khushie si (neem oil) 5 ml /1 litre water biechie lie di dzü riepie valie ro vituo

TSHÜTEINUO RE KECÜTEI :

Tshüteinuo ha thekhrü se (3 months) shie re lie vi taya mu puokre meho di puokre-u so rüwi taro relie vitaya. Teiso teiki liro phi rüyo mu thenyie (September or October) ki relie ya. Siro metsü teiki li liro phi kezei mu kera (February or March) ki relie ya.

TSHÜTEINUO CA (YIELD) LIEKETUO RHI :

Tshüteinuo cie shü ro 1 hectare area nu 1000 kg ngu kelie mese.

भाकृअनुप
ICAR

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PACKAGE AND PRACTICE OF FOXTAIL MILLET :

A climate smart crop for increased yield

Foxtail millet is one of the very old crops grown for staple food especially in Asian countries and Africa. However, some farmers cultivate this crop for bird food, forage (green fodder for livestock) and hay. Foxtail millet crop was originated in India, China and Japan. Currently this millet crop is commercially being grown on commercial scale in China, India, Indonesia, Japan and the Korean peninsula. In India, Foxtail Millet Farming is carried out in Andhra Pradesh, Tamil Nadu, Karnataka, Telangana, Madhya Pradesh, Maharashtra, Rajasthan, Uttar Pradesh, and to a small extent in the north-east states.

Foxtail millet is well recognized as a short duration and drought tolerant crop. In India it is cultivated over an area of 0.87 lakh ha with total production of about 0.66 lakh tones and with productivity of 762 kg/ha (2015-16).

HEALTH BENEFITS OF FOXTAIL MILLET :

- Foxtail millet is excellent food which can control blood sugar levels.
- Consuming regularly can keep your digestive tract clean.
- Frequent consumption of this millet can reduce heart problems.
- These grains are rich source of antioxidants.
- Excellent food for weight loss.
- These small grainy food can reduce gastric problems.

CLIMATE & SOIL REQUIREMENT FOR FOXTAIL MILLET FARMING :

Foxtail millet is a warm season crop grown can be grown in both tropical and temperate climates, with low and moderate rainfall regions of the country. Foxtail millet crop thrives well in drought conditions as well. Foxtail millet can be grown at an altitude of 2000 metres and 500-700 mm of yearly rainfall. It needs moderately fertile and well-drained soil.

SEED RATE,SEASON, SOWING & SPACING IN FOXTAIL MILLET FARMING :

The seed rate depends on the type of farming method and variety. On an average 8 to 10 kg /ha seed rate is required in case of line sowing where as 15 kg/ha seed rate is required in case of broad casting method. The ideal time of sowing foxtail millet is June to August for rain-fed crop and for summer irrigated crop, the best time is January. However, every state in India has its own ideal conditions for sowing the crop. One can practice a suitable spacing of 25 cm x 10 cm and sowing depth differs from 2 cm to 3 cm.

INTER CROPS IN FOXTAIL MILLET FARMING :

Foxtail millet can be grown along with this for additional income & to increase the soil fertility.

- Foxtail millet with Pigeon pea, Foxtail millet with Black gram, Foxtail millet with Dolichos, Foxtail millet with Castor, Foxtail millet with Maize, Foxtail millet with Sorghum, Foxtail millet with Finger millet, Foxtail millet with Little millet, Foxtail millet with Brassicas, Foxtail millet with Mustard.

INTERCULTURAL OPERATIONS IN FOXTAIL MILLET FARMING :

- **Weed Control :** Weed free environment is important for any successful crop farming. Weeding may be done twice 15 to 20 days after emergence and about 15 days later after first weeding. Weeds are the major problem in millet cultivation. Two inter cultivations and one hand weeding is line sown crop is recommended.
- **Crop Rotation :** Crop rotation ensures soil fertility and good yield. Crop rotation with legume crops like green gram, soybean, horse gram black gram, field gram, or peanut should be followed to ensure good soil fertility status. Avoid growing foxtail millet in the same field for consecutive years.

DISEASES IN FOXTAIL MILLET FARMING :

1. Blast : It is caused by a fungus known as Pyricularia setariae. Typical spindle-shaped spots on the leaf lamina. Under highly congenial conditions such spots enlarge, coalesce and leaf blades especially from the tip towards the base give a blasted appearance. At 20-25 days after sowing, blast diseases can be prevented with foliar spray with Pseudomonas fluorescence an organic fungicide @ 4gm in 1 litre water.

2. Grain Smut : It is caused by Ustilago crameri. Spikelets bigger in size, velvety gall-like structure. Hand picking of the infected plant parts is recommended.

3. Downy Mildew/ Green Ear : It is caused by Sclerospora graminicola. Shredding of infected leaves, conversion of spikelets into the leafy structure. It can be controlled by roughing out the affected plants.

PESTS IN FOXTAIL MILLET FARMING :

Armyworm, cutworm, and leaf scraping beetle can be serious causes of damage to the crop. Although shoot fly is not a common pest, it can be found in some regions. Shoot fly damages the crop in the seedling stage to a six-week-old crop. As a result of feeding, the central shoot starts drying and shows the typical appearance of a dead heart in the early stage and profuse tillering in the later stage. Damage tillers may produce ear heads, but no grains. It can be managed by early sowing within 7-10 days of the onset of monsoon. For control of army worm, Mix 85g of crushed garlic with 50ml of vegetable oil and add 10ml of liquid soap. Mix 50ml of the garlic and vegetable oil emulsion with 1l of water, shake thoroughly before spraying. Use of Bacillus thuringensis and neem seed kernel extract will help in managing the insect pest organically

HARVESTING OF FOXTAIL MILLET :

Generally, foxtail millet is ready to harvest in 80-90 days after sowing. The crop is harvested when the ear heads are dry. It can be done by using a sickle by cutting the whole plant or only the earheads. In the Kharif season, the crop is harvested in the month of September to October, while in Rabi in the month of February to March.

YIELD IN FOXTAIL MILLET FARMING :

Yield of the foxtail millet depends on variety, soil type, climate and other agricultural / horticultural management practices. One can obtain 900 to 1000 kg/ha of grain under ideal conditions.