



# Small grains

*Let small grains be part of your life style than taking them as a prescription from the doctor*

## Why small grains

Cereal small grain crops such as sorghum, finger and pearl millet, are hardy plants which are well adapted to growing areas characterized by drought, low soil fertility, and high temperature. They perform well in soils with high salinity or low pH. Because of their tolerance to difficult growing conditions, they can be grown in areas where other cereal crops, such as maize or wheat, would not survive. They are good crops for food and nutrition insecurity in Zimbabwe.

### Nutritional Benefits

Good for celiac patients

Millet is gluten-free, so Celiac sufferers can turn to it as their source of grains, instead of wheat. Millet provides the most energy, as well as the most fat and B-vitamins.

### Protects Heart Health

Millet is a rich source of magnesium, which is an important mineral for reducing blood pressure and the risk of heart attack or stroke.

### Controls Cholesterol Levels

Small grains contain dietary fiber especially millet which helps to eliminate bad cholesterol from the system while

promoting the effects of good cholesterol.

### Keeps blood pressure low

Small grains are also a great source of potassium, which further keeps blood pressure low by acting as a vasodilator.

### Help to Prevent Diabetes

Small grains contain a significant level of magnesium found in it, this helps reduce the chance of type 2 diabetes.

### Detoxify the body

Small grains contain many antioxidants that help clean up toxins from the body, promoting proper

Sorghum, Pearl millet and Finger millet



## Value addition

### Processing for other food purposes

Owing to their nutritive value traditional value added products can be prepared from small grains. Flat bread, mostly unleavened and prepared from fermented or unfermented dough. These include diabetic foods with high fiber content. Thin or thick fermented or unfermented porridge, boiled products similar to those prepared from maize grits or and millet stir fry all are products of small grains.

Bakery products like bun, bread, cakes, cookies, muffins and biscuits can be produced. Gluten free leavened breads from sorghum and millets. These can be prepared using composite flour.

### Aids digestion

Consumption of small grains helps to eliminate problems like constipation, excess gas, bloating, and cramping. By regulating the digestive processes, it can also improve nutrient retention and reduce more serious chances of gastrointestinal conditions like gastric ulcers. Regular digestion and elimination of waste also help optimize the kidney, liver, and immune system health, as those organ systems are closely related to the body's metabolic activities.

### Small grain utilisation and products

#### Food and Fodder

Small grains be used as dual purpose crops for grain and fodder. Research proved out that feeding chickens with pearl millet grain increased egg production and reduced chick mortality. Grain is rich in protein content can also be used as livestock feed in place of maize.

### Malt

Malted Sorghum and finger millet grain is used for brewing beer and other sweetened beverages (maheu).

### Bioenergy source

Sweet sorghum is an excellent source of bio fuel production. The stalks are rich in sugar can be used for ethanol production.



## A list of improved sorghum and millets varieties available which farmers can grow



### SV2

A early sorghum variety with the following attributes

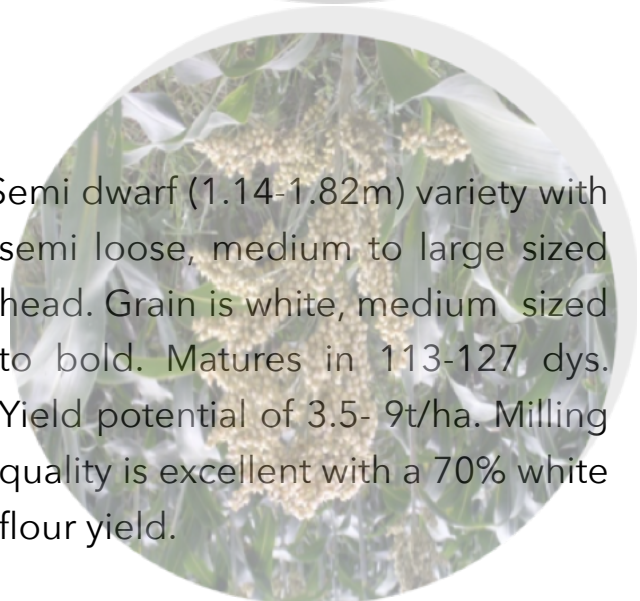
- Height: Semi dwarf (1.4-1.6m) with thin stems.
- Grain colour: Creamy white.
- Tannin content: absent
- Maturity: 110-115 dys
- Yield potential: 2.5- 4.5t/ha
- Milling quality: excellent, 70% flour yield, white flour



### SV4



A Semi dwarf (1.14-1.82m) variety with semi loose, medium to large sized head. Grain is white, medium sized to bold. Matures in 113-127 dys. Yield potential of 3.5- 9t/ha. Milling quality is excellent with a 70% white flour yield.



# Pearl millet varieties



PMV3

A pearl millet variety with the following attributes:

- Grain colour: creamy white
- Tillering: 4-6 effective tillers
- Head shape: semi-compact tapering towards the tip.

Height: Medium, 1.6 to 2m

-Yield potential: 1.47- 3.22t/ha

-Maturity time: 80-90 days



OKASHANA1



A pearl millet variety plant height ranges from 1.3-1.9m.

-Produce 2-4 effective tillers.

-Grain colour is light grey

-Seed is exposed.

-It is highly resistant to downy mildew, smut and ergot.

-Head compactness is semi-compact.





## Finger Millet varieties



### FMV1

A finger millet variety which matures in 130 -135 days.

-Yield potential of 0.9 to 1.3tha

-Plant height - 0.84 to 2;

-Grain colour - Light brown

-Can be grown in natural region II, III and IV.



### FMV2



A finger millet variety with the following attributed:

-Days to maturity -135-145

-Yield potential of 1 to 1.5tha

-Plant height - 0.82 to 2;

-Grain colour - Brown

-Can be grown in natural region II, III and IV.

