

MU Small Grain Crops Garden

“Small grains” is a not a scientific term, but is used to describe a specific set of crop species. Species referred to as small grain crops are cereal crops, which means that they are members of the grass family with an edible seed. The “small” in small grain crops refers primarily to plant size. Their plants are smaller than either corn or grain sorghum plants. Common small grain crops are wheat, oat, rye, and barley. Although rice would fit the definition, it is usually not included in the small grain crops category.

Wheat is by far the most important and widely grown small grain crop. Wheat market classes have specific characteristics and often differ for primary use. Growth habit refers to the requirement for exposure to cool temperatures so that they can flower. Wheat types that require vernalization are called winter types. Spring wheats do not require vernalization. Red color occurs in the pericarp not the endosperm. Wheat types are usually classified as either red or white. Kernel hardness is classified as hard or soft. The market class of wheat grown in Missouri is soft red winter.

Primary use for hard red winter and hard red spring wheats is bread. Soft red winter and soft white wheats are used to make cookies and pastries. Primary use of durum wheat is semolina flour and pasta

The primary use of barley in the USA is livestock feed. Barley is also used to make malt for the brewing industry. Malt is the source for amylase, the enzyme that digests starch into glucose so that yeast can ferment and produce alcohol. A few human food uses exist including pearled barley in soups.

Food uses of rye are more common in Europe than in the USA. Rye breads, including pumpernickel, are usually heavier than bread made from high quality wheat flour. A small amount of rye is used to make alcoholic beverages. A common use of rye in the USA is as a cover crop during fall, winter, and early spring to protect soil from erosion.

The primary use of oat in the USA is livestock feed. Human foods made from oat include oatmeal and rolled oats. Triticale is a human-made cross between wheat and rye.

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Bradford Research Center

573-884-7945

I-70 to Highway 63
South on 63 for 1 mile to the
"Broadway & WW" overpass exit
Turn left (east) on Broadway/WW
for 6.5 miles
Turn right on Rangeline Road
(watch for the sign) for 2 miles.
Headquarters are on the right.



MU Small Grain Crops Garden

NW

10 Cover Crop	9 Cover Crop	8 Cover Crop	7 Cover Crop	6 Cover Crop	5 Pulse crop	4 Pulse	3 Pulse crop	2 Pulse crop	1 Pulse crop	<i>Row</i> 4
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10 Cover Crop	9 Cover Crop	8 Cover Crop	7 Cover Crop	6 Cover Crop	5 Pulse crop	4 Pulse	3 Pulse crop	2 Pulse crop	1 Pulse crop	<i>Row</i> 3
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10 SG Soft red winter wheat	9 SG Rye	8 SG Triticale	7 SG Oat	6 SG 6-row barley	5 SG 2-row barley	4 Pulse	3 Pulse crop	2 Pulse crop	1 Pulse crop	<i>Row</i> 2
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10 SG Einkorn	9 SG Emmer	8 SG Hard red winter wheat	7 SG Hard red spring wheat	6 SG Soft white winter wheat	5 Pulse crop	4 Pulse	3 Pulse crop	2 Pulse crop	1 Pulse crop	<i>Row</i> 1
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SW

Small grain crops

Wheat	Barley	SG also used as cover crops
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Rows of boxes are number from south to north, columns of boxes are numbered from east to west
See other handouts for maps of MU Pulse Crops Garden and MU Cover Crops Garden