

## COLD HARDY WINE GRAPES



# Marquette

Marquette was introduced in 2006 by the University of Minnesota. It is known as a disease resistant red grape variety that produces medium-bodied, dry, red wine and is suitable for extended maturation in oak barrels. Over time, it has become one of the most popular grapes adapted to cold climates.

College of Food, Agricultural  
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### **FRUIT CHARACTERISTICS**

The clusters are medium-sized (average 0.25 lb/cluster) and moderately loose, with dark red berries. The wine has complex notes of cherry, berry, black pepper, and spice on both the nose and palate. Some wines have been described as having “earthy” aromas in addition to the fruit flavors.

### **HARDINESS**

Marquette was bred to be hardy in the face of Minnesota winters. It can be grown reliably in USDA hardiness zone 4 but may experience significant dieback in Zone 3 (northern Minnesota) and on very wet sites. Marquette can survive winter cold events up to -20 to -30 °F, but may exhibit bud death and/or cordon dieback following these extreme cold events. It grows best on well-drained soils and should not be planted in areas with high water tables; like many varieties, it is not tolerant of “wet feet.”

### **VIGOR**

Marquette is considered to have moderate to high vigor depending on the site. Nutrient rich soils will contribute to vigor – use canopy management strategies to control excessive vegetative growth.

### **BUD BREAK AND HARVEST TIMING**

Bud break for Marquette is relatively early which puts it at risk for late spring frosts. Harvest occurs in late September in Minnesota, typically before Frontenac.

### **HARVEST PARAMETERS**

The soluble solids (sugar) level at harvest is between 22-26 °Brix. A target pH 2.9 to 3.3 at harvest is ideal. Aim for a titratable acidity of 11-12 g/L.

### **TRAINING SYSTEMS**

Marquette has an open, semi-upright growth habit and can be grown successfully on both Single High Wire (SHW) and Vertical Shoot Positioning (VSP). Therefore, the training system depends on the personal preference of the vineyard manager. Marquette can be planted at 6-7 foot in-row spacing; use denser spacing for sandier soil and wider spacing on very heavy soil.

### **BUDS AND CLUSTERS PER VINE**

Marquette vines produce an average of one node every 3-5 inches along the cane or cordon. Winter damage can produce areas of “blind wood” that can be repaired by laying down parallel cordons. Target yields of 3-4 tons per acre (44-58 clusters per vine or 11-14.5 lbs per plant) can be expected. Cluster thinning should not be necessary if proper dormant pruning and shoot thinning were performed.

### **PRUNING AND CANOPY MANAGEMENT**

When spur pruning, maintain 3-4 spurs per linear foot, and a maximum of 60 buds per vine. Leave 2-4 buds per spur during dormant pruning, depending on winter bud injury estimates, and then shoot thin to 2 shoots per spur. Fruit zone leaf removal and shoot thinning can both promote balanced vegetative and reproductive growth and expose fruit to sun to enhance ripening.

### **PEST SUSCEPTIBILITY**

Marquette is known for its moderate resistance to black rot, botrytis bunch rot, downy mildew and powdery mildew. It does have moderate susceptibility to foliar phylloxera.

### **FOR MORE INFORMATION:**

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