

**Growing Industrial Hemp in Wisconsin**  
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**Support provided by:**  
**North Central Region**  
**Sustainable Agriculture**  
**and Research Education**  
**Partnership Grant**  
**"Exploration of Fiber**  
**Hemp Production and**

Industrial hemp has been approved for production and marketing in Wisconsin since approval of the 2017 Farm Bill. A license is required from the USDA Domestic Hemp Production Program. There is no cost for the license and requires passing of an FBI Criminal Background History. Other costs include fees for sampling and testing. All fields and varieties need to be sampled and tested and cannot exceed 0.03% THC.

Wisconsin's climate and soils provide many opportunities for industrial hemp production in Wisconsin.

- Grain, Fiber, Essential oil
- Pollinator friendly
- Forage potential
- Fast growing
  - Early soil cover
  - Early fiber harvest
  - Cover crop friendly

**Physiology**

- Short-day plant  
Flowers < 12hrs  
Most are dioecious  
Breeding for monoecious



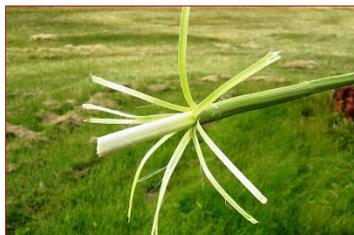
**Types of Industrial Hemp**

- Grain (oilseed)
- Fiber
- Hybrid (dual purpose)
- Essential Oils



**Hemp Seed Oil**

- 30% protein, 25% starch, 30% oil
- 90% polyunsaturated oils
- High in omega-3 fatty acids
- Food, fuel, cosmetics, etc.
- Cake – used for food and animal feed



Of course, some challenges to produce industrial hemp include:

- Developing markets for fiber, grain, and seed oil.
- The essential oil market was flooded in 2020.
- Hemp forage is not legal to feed to

**Soil Needs**

- Neutral pH
- K<sub>2</sub>O – 120 to 150ppm
- Well-drained

**Planting date**

- Soil temp > 50°F
- Generally late May, June

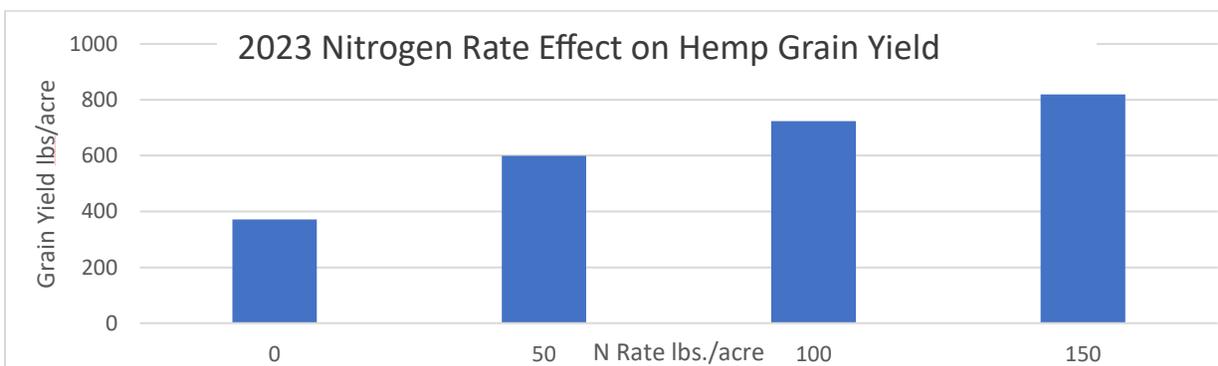
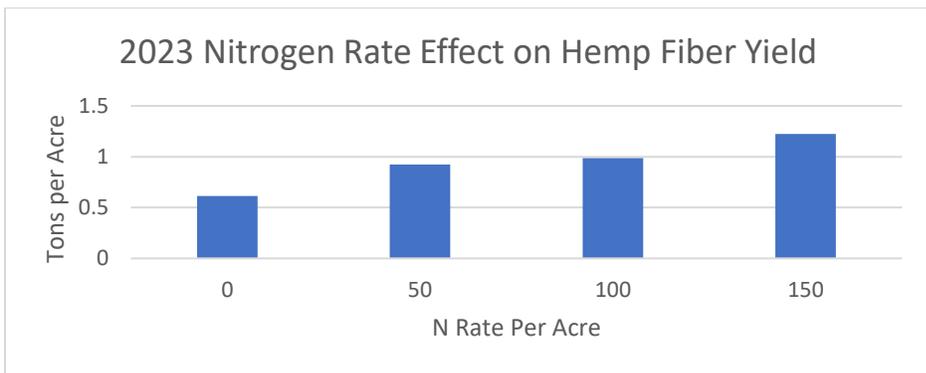
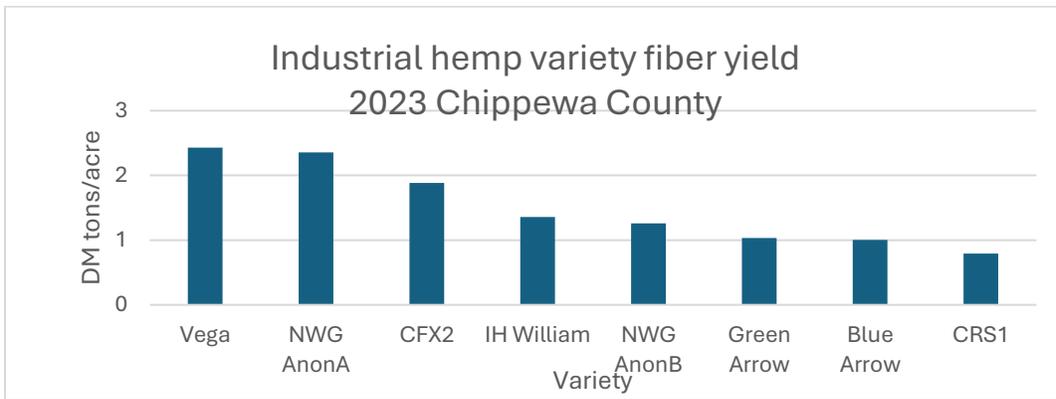
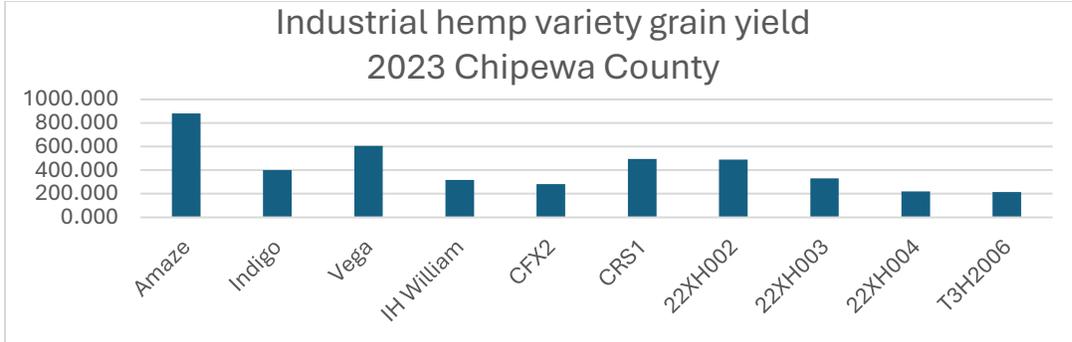
**Seeding rate**

- Grain (oil)  
25-40 lbs/acre  
Final stand 10-15 plants/ft<sup>2</sup>
- Fiber  
40-80 lbs/acre  
Final stand 30-35 plants/ft<sup>2</sup>

**Hemp Fiber Uses:**

- Bast (outer fiber)  
Textiles, clothing
- Hurd (inner fiber)  
Wood, construction materials

Research trials have been conducted in Chippewa, Buffalo, and Monroe counties to investigate variety performance, effect of nitrogen rate applications, and influence of planting date on yield.



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