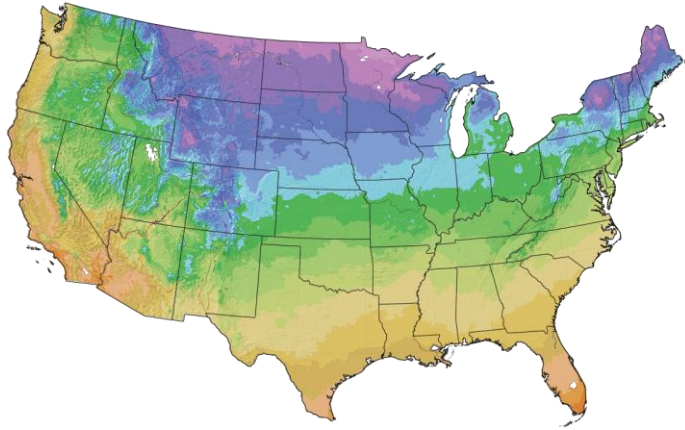




White Pine Tree

- **Soil:** acidic and well drained

- **Hardiness zone:** 3-8



- **Sunlight:** full to partial shade

- **Common Pests:** White pine weevil



- **Common Diseases:** Blister rust



| Temp (F) | Zone | Temp (C) |
|------------|------|----------------|
| -60 to -55 | 1a | -51.1 to -48.3 |
| -55 to -50 | 1b | -48.3 to -45.6 |
| -50 to -45 | 2a | -45.6 to -42.8 |
| -45 to -40 | 2b | -42.8 to -40 |
| -40 to -35 | 3a | -40 to -37.2 |
| -35 to -30 | 3b | -37.2 to -34.4 |
| -30 to -25 | 4a | -34.4 to -31.7 |
| -25 to -20 | 4b | -31.7 to -28.9 |
| -20 to -15 | 5a | -28.9 to -26.1 |
| -15 to -10 | 5b | -26.1 to -23.3 |
| -10 to -5 | 6a | -23.3 to -20.6 |
| -5 to 0 | 6b | -20.6 to -17.8 |
| 0 to 5 | 7a | -17.8 to -15 |
| 5 to 10 | 7b | -15 to -12.2 |
| 10 to 15 | 8a | -12.2 to -9.4 |
| 15 to 20 | 8b | -9.4 to -6.7 |
| 20 to 25 | 9a | -6.7 to -3.9 |
| 25 to 30 | 9b | -3.9 to -1.1 |
| 30 to 35 | 10a | -1.1 to 1.7 |
| 35 to 40 | 10b | 1.7 to 4.4 |
| 40 to 45 | 11a | 4.4 to 7.2 |
| 45 to 50 | 11b | 7.2 to 10 |
| 50 to 55 | 12a | 10 to 12.8 |
| 55 to 60 | 12b | 12.8 to 15.6 |
| 60 to 65 | 13a | 15.6 to 18.3 |
| 65 to 70 | 13b | 18.3 to 21.1 |

- **Characteristics:**

- Fast growing at 24 inches a year
- It can reach a height of 50-80 feet
- Soft needles
- Is a top seller on many Christmas tree farms



- **Other Information:**

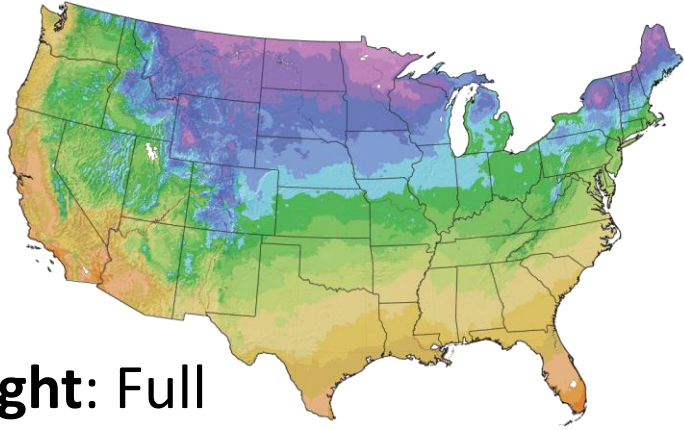
- This tree is not tolerant of pollution
- The bark of this tree is often eaten by animals
- They provide habitat for black bears, rabbits, birds, and squirrels



Douglas Fir
Tree

- **Soil:** acidic or neutral and well drained

- **Hardiness Zone:** 4-6



| Average Annual Extreme Minimum Temperature 1976 - 2005 | | |
|---|------|----------------|
| Temp (F) | Zone | Temp (C) |
| -60 to -55 | 1a | -51.1 to -48.3 |
| -55 to -50 | 1b | -48.3 to -45.6 |
| -50 to -45 | 2a | -45.6 to -42.8 |
| -45 to -40 | 2b | -42.8 to -40 |
| -40 to -35 | 3a | -40 to -37.2 |
| -35 to -30 | 3b | -37.2 to -34.4 |
| -30 to -25 | 4a | -34.4 to -31.7 |
| -25 to -20 | 4b | -31.7 to -28.9 |
| -20 to -15 | 5a | -28.9 to -26.1 |
| -15 to -10 | 5b | -26.1 to -23.3 |
| -10 to -5 | 6a | -23.3 to -20.6 |
| -5 to 0 | 6b | -20.6 to -17.8 |
| 0 to 5 | 7a | -17.8 to -15 |
| 5 to 10 | 7b | -15 to -12.2 |
| 10 to 15 | 8a | -12.2 to -9.4 |
| 15 to 20 | 8b | -9.4 to -6.7 |
| 20 to 25 | 9a | -6.7 to -3.9 |
| 25 to 30 | 9b | -3.9 to -1.1 |
| 30 to 35 | 10a | -1.1 to 1.7 |
| 35 to 40 | 10b | 1.7 to 4.4 |
| 40 to 45 | 11a | 4.4 to 7.2 |
| 45 to 50 | 11b | 7.2 to 10 |
| 50 to 55 | 12a | 10 to 12.8 |
| 55 to 60 | 12b | 12.8 to 15.6 |
| 60 to 65 | 13a | 15.6 to 18.3 |
| 65 to 70 | 13b | 18.3 to 21.1 |

- **Sunlight:** Full

- **Common Pests:**



Douglas Fir Beetle



Douglas Fir Mistletoe

- **Common Diseases:** needle caste disease



- **Characteristics:**

- Grows quickly gaining 24 inches each year
- They can reach a max height of 40-60 feet



- **Other Information:**

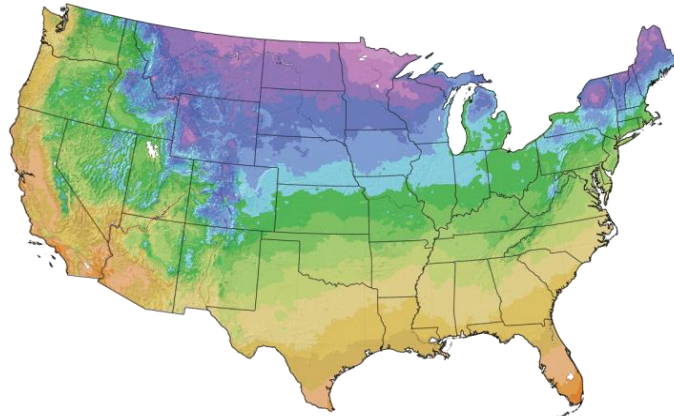
- Often grown as a holiday tree such as a Christmas tree
- Grown on lumber tree farms
- Provides habitat for deer, rabbits, spotted owl, and the red tree vole



Canaan Fir
Tree

- **Soil:** neutral to basic soil, can handle moisture

- **Hardiness Zone: 4**



| Average Annual Extreme Minimum Temperature 1976 - 2005 | | |
|---|------|----------------|
| Temp (F) | Zone | Temp (C) |
| -60 to -55 | 1a | -51.1 to -48.3 |
| -55 to -50 | 1b | -48.3 to -45.6 |
| -50 to -45 | 2a | -45.6 to -42.8 |
| -45 to -40 | 2b | -42.8 to -40 |
| -40 to -35 | 3a | -40 to -37.2 |
| -35 to -30 | 3b | -37.2 to -34.4 |
| -30 to -25 | 4a | -34.4 to -31.7 |
| -25 to -20 | 4b | -31.7 to -28.9 |
| -20 to -15 | 5a | -28.9 to -26.1 |
| -15 to -10 | 5b | -26.1 to -23.3 |
| -10 to -5 | 6a | -23.3 to -20.6 |
| -5 to 0 | 6b | -20.6 to -17.8 |
| 0 to 5 | 7a | -17.8 to -15 |
| 5 to 10 | 7b | -15 to -12.2 |
| 10 to 15 | 8a | -12.2 to -9.4 |
| 15 to 20 | 8b | -9.4 to -6.7 |
| 20 to 25 | 9a | -6.7 to -3.9 |
| 25 to 30 | 9b | -3.9 to -1.1 |
| 30 to 35 | 10a | -1.1 to 1.7 |
| 35 to 40 | 10b | 1.7 to 4.4 |
| 40 to 45 | 11a | 4.4 to 7.2 |
| 45 to 50 | 11b | 7.2 to 10 |
| 50 to 55 | 12a | 10 to 12.8 |
| 55 to 60 | 12b | 12.8 to 15.6 |
| 60 to 65 | 13a | 15.6 to 18.3 |
| 65 to 70 | 13b | 18.3 to 21.1 |

- **Sunlight:** Full to partial shade

- **Common Pests:**



balsam twig aphid



Spider mites



White tailed deer

- **Common Diseases:** root rot



- **Characteristics:**

- Grows 12-24 inches a year
- Mature height of 40-55 feet
- It is like the Balsam Fir but requires minimal trimming



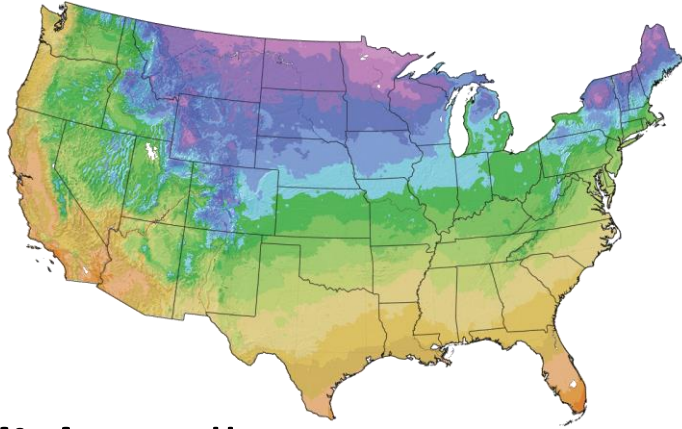
- **Other Information:**

- It can resist most disease when grown in the Midwest
- These are often planted as windbreaks to slow the wind
- Most of these trees are grown from seed



Fraser Fir Tree

- **Soil:** sandy soil that is acidic
- **Hardiness Zone:** 4-7



| Average Annual Extreme Minimum Temperature 1976 - 2005 | | |
|--|------|----------------|
| Temp (F) | Zone | Temp (C) |
| -60 to -55 | 1a | -51.1 to -48.3 |
| -55 to -50 | 1b | -48.3 to -45.6 |
| -50 to -45 | 2a | -45.6 to -42.8 |
| -45 to -40 | 2b | -42.8 to -40 |
| -40 to -35 | 3a | -40 to -37.2 |
| -35 to -30 | 3b | -37.2 to -34.4 |
| -30 to -25 | 4a | -34.4 to -31.7 |
| -25 to -20 | 4b | -31.7 to -28.9 |
| -20 to -15 | 5a | -28.9 to -26.1 |
| -15 to -10 | 5b | -26.1 to -23.3 |
| -10 to -5 | 6a | -23.3 to -20.6 |
| -5 to 0 | 6b | -20.6 to -17.8 |
| 0 to 5 | 7a | -17.8 to -15 |
| 5 to 10 | 7b | -15 to -12.2 |
| 10 to 15 | 8a | -12.2 to -9.4 |
| 15 to 20 | 8b | -9.4 to -6.7 |
| 20 to 25 | 9a | -6.7 to -3.9 |
| 25 to 30 | 9b | -3.9 to -1.1 |
| 30 to 35 | 10a | -1.1 to 1.7 |
| 35 to 40 | 10b | 1.7 to 4.4 |
| 40 to 45 | 11a | 4.4 to 7.2 |
| 45 to 50 | 11b | 7.2 to 10 |
| 50 to 55 | 12a | 10 to 12.8 |
| 55 to 60 | 12b | 12.8 to 15.6 |
| 60 to 65 | 13a | 15.6 to 18.3 |
| 65 to 70 | 13b | 18.3 to 21.1 |

- **Sunlight:** Full
- **Common Pests:** Bag worms



- **Common Diseases:** Root Rot



- **Characteristics:**

- Keep their soft needles for a long time even after harvested
- On average they reach heights of 40-65 feet.



- **Other Information:**

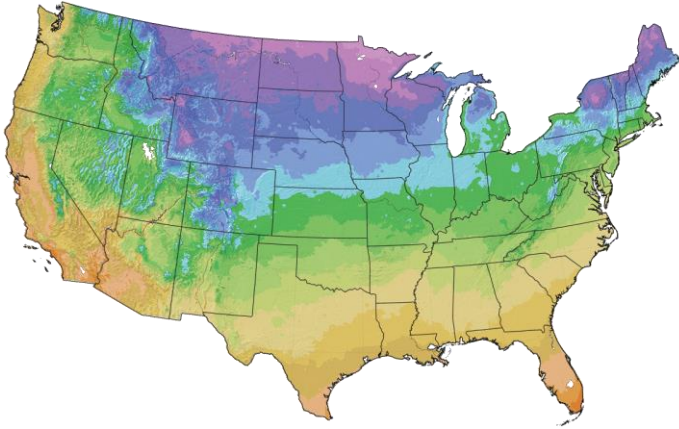
- Susceptible to pollution such as acid rain
- The needles can be used to create essential oils
- Native to the Appalachian Mountain range
- Rare species depend on this tree for habitat and food such as the northern flying squirrel.



Blue Spruce
Tree

- **Soil:** acidic and well drained

- **Hardiness Zone:** 2-7



| Temp (F) | Zone | Temp (C) |
|------------|------|----------------|
| -60 to -55 | 1a | -51.1 to -48.3 |
| -55 to -50 | 1b | -48.3 to -45.6 |
| -50 to -45 | 2a | -45.6 to -42.8 |
| -45 to -40 | 2b | -42.8 to -40 |
| -40 to -35 | 3a | -40 to -37.2 |
| -35 to -30 | 3b | -37.2 to -34.4 |
| -30 to -25 | 4a | -34.4 to -31.7 |
| -25 to -20 | 4b | -31.7 to -28.9 |
| -20 to -15 | 5a | -28.9 to -26.1 |
| -15 to -10 | 5b | -26.1 to -23.3 |
| -10 to -5 | 6a | -23.3 to -20.6 |
| -5 to 0 | 6b | -20.6 to -17.8 |
| 0 to 5 | 7a | -17.8 to -15 |
| 5 to 10 | 7b | -15 to -12.2 |
| 10 to 15 | 8a | -12.2 to -9.4 |
| 15 to 20 | 8b | -9.4 to -6.7 |
| 20 to 25 | 9a | -6.7 to -3.9 |
| 25 to 30 | 9b | -3.9 to -1.1 |
| 30 to 35 | 10a | -1.1 to 1.7 |
| 35 to 40 | 10b | 1.7 to 4.4 |
| 40 to 45 | 11a | 4.4 to 7.2 |
| 45 to 50 | 11b | 7.2 to 10 |
| 50 to 55 | 12a | 10 to 12.8 |
| 55 to 60 | 12b | 12.8 to 15.6 |
| 60 to 65 | 13a | 15.6 to 18.3 |
| 65 to 70 | 13b | 18.3 to 21.1 |

- **Sunlight:** Full sun

- **Common Pests:** Cooley spruce gall adelgid



- **Common Diseases:** cytospora canker fungus



- **Characteristics:**

- It can grow 12-24 inches a year
- The needles have a blue color to them
- They can get 50-75 feet tall



- **Other Information:**

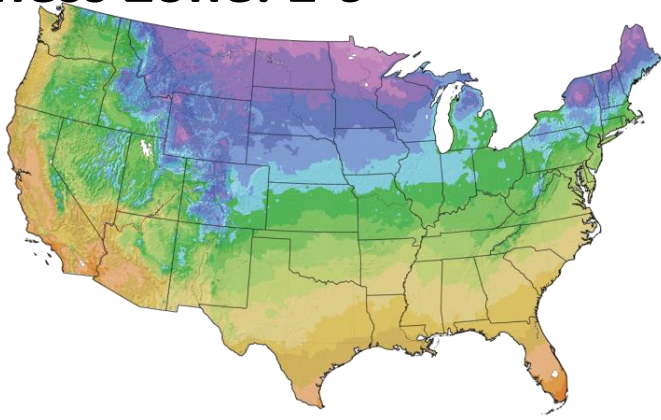
- These trees are native to the Rocky Mountains
- Their needles are tough and prickly to the touch



Scotch Pine
Tree

- **Soil:** Sandy, rocky, and acidic

- **Hardiness Zone: 2-9**



| Temp (F) | Zone | Temp (C) |
|------------|------|----------------|
| -60 to -55 | 1a | -51.1 to -48.3 |
| -55 to -50 | 1b | -48.3 to -45.6 |
| -50 to -45 | 2a | -45.6 to -42.8 |
| -45 to -40 | 2b | -42.8 to -40 |
| -40 to -35 | 3a | -40 to -37.2 |
| -35 to -30 | 3b | -37.2 to -34.4 |
| -30 to -25 | 4a | -34.4 to -31.7 |
| -25 to -20 | 4b | -31.7 to -28.9 |
| -20 to -15 | 5a | -28.9 to -26.1 |
| -15 to -10 | 5b | -26.1 to -23.3 |
| -10 to -5 | 6a | -23.3 to -20.6 |
| -5 to 0 | 6b | -20.6 to -17.8 |
| 0 to 5 | 7a | -17.8 to -15 |
| 5 to 10 | 7b | -15 to -12.2 |
| 10 to 15 | 8a | -12.2 to -9.4 |
| 15 to 20 | 8b | -9.4 to -6.7 |
| 20 to 25 | 9a | -6.7 to -3.9 |
| 25 to 30 | 9b | -3.9 to -1.1 |
| 30 to 35 | 10a | -1.1 to 1.7 |
| 35 to 40 | 10b | 1.7 to 4.4 |
| 40 to 45 | 11a | 4.4 to 7.2 |
| 45 to 50 | 11b | 7.2 to 10 |
| 50 to 55 | 12a | 10 to 12.8 |
| 55 to 60 | 12b | 12.8 to 15.6 |
| 60 to 65 | 13a | 15.6 to 18.3 |
| 65 to 70 | 13b | 18.3 to 21.1 |

- **Sunlight:** Full sunlight

- **Common Pests**



Pine Spittle Bug



Pine Sawfly



Pine Root Collar Weevil

- **Common Diseases:** Gall rust



- **Characteristics:**

- Grow 12-24 inches a year and is mature at 40 feet but can reach a height of 125 feet.



- **Other Information:**

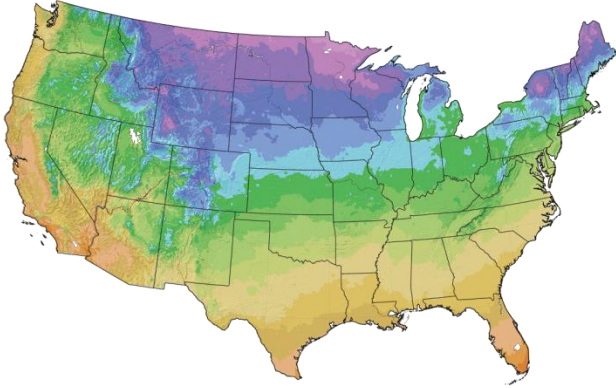
- They are used for landscapes, windbreaks, and Christmas trees
- This tree was introduced to the United States of America



Concolor Fir
Tree

- **Soil:** well drained that is neutral to slightly acidic

- **Hardiness Zone: 3-7**



- **Sunlight:** Full to partial shade

- **Common Pests:**



Aphids



Spider mites

- **Common Diseases:** Needle cast



Average Annual Extreme Minimum Temperature 1976 - 2005

| Temp (F) | Zone | Temp (C) |
|------------|------|----------------|
| -60 to -55 | 1a | -51.1 to -48.3 |
| -55 to -50 | 1b | -48.3 to -45.6 |
| -50 to -45 | 2a | -45.6 to -42.8 |
| -45 to -40 | 2b | -42.8 to -40 |
| -40 to -35 | 3a | -40 to -37.2 |
| -35 to -30 | 3b | -37.2 to -34.4 |
| -30 to -25 | 4a | -34.4 to -31.7 |
| -25 to -20 | 4b | -31.7 to -28.9 |
| -20 to -15 | 5a | -28.9 to -26.1 |
| -15 to -10 | 5b | -26.1 to -23.3 |
| -10 to -5 | 6a | -23.3 to -20.6 |
| -5 to 0 | 6b | -20.6 to -17.8 |
| 0 to 5 | 7a | -17.8 to -15 |
| 5 to 10 | 7b | -15 to -12.2 |
| 10 to 15 | 8a | -12.2 to -9.4 |
| 15 to 20 | 8b | -9.4 to -6.7 |
| 20 to 25 | 9a | -6.7 to -3.9 |
| 25 to 30 | 9b | -3.9 to -1.1 |
| 30 to 35 | 10a | -1.1 to 1.7 |
| 35 to 40 | 10b | 1.7 to 4.4 |
| 40 to 45 | 11a | 4.4 to 7.2 |
| 45 to 50 | 11b | 7.2 to 10 |
| 50 to 55 | 12a | 10 to 12.8 |
| 55 to 60 | 12b | 12.8 to 15.6 |
| 60 to 65 | 13a | 15.6 to 18.3 |
| 65 to 70 | 13b | 18.3 to 21.1 |

- **Characteristics:**

- Can reach a height between 130-150 feet
- Grows 12-24 inches a year
- Has dense branches and grows in a cone shape



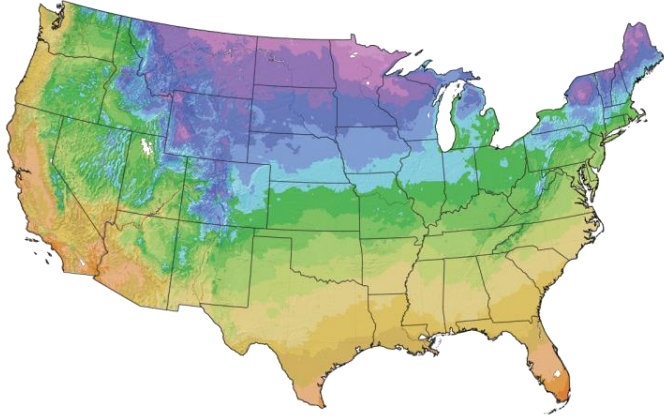
- **Other Information:**

- Does not require pruning or shaping of the tree
- Does not tolerate pollution well and will often die if grown in cities
- When crushed the needles smell like citrus and can be used to make tea



Balsam Fir
Tree

- **Soil:** well drained and acidic
- **Hardiness Zone:** 3-5



| Average Annual Extreme Minimum Temperature 1976 - 2005 | | |
|--|------|----------------|
| Temp (F) | Zone | Temp (C) |
| -60 to -55 | 1a | -51.1 to -48.3 |
| -55 to -50 | 1b | -48.3 to -45.6 |
| -50 to -45 | 2a | -45.6 to -42.8 |
| -45 to -40 | 2b | -42.8 to -40 |
| -40 to -35 | 3a | -40 to -37.2 |
| -35 to -30 | 3b | -37.2 to -34.4 |
| -30 to -25 | 4a | -34.4 to -31.7 |
| -25 to -20 | 4b | -31.7 to -28.9 |
| -20 to -15 | 5a | -28.9 to -26.1 |
| -15 to -10 | 5b | -26.1 to -23.3 |
| -10 to -5 | 6a | -23.3 to -20.6 |
| -5 to 0 | 6b | -20.6 to -17.8 |
| 0 to 5 | 7a | -17.8 to -15 |
| 5 to 10 | 7b | -15 to -12.2 |
| 10 to 15 | 8a | -12.2 to -9.4 |
| 15 to 20 | 8b | -9.4 to -6.7 |
| 20 to 25 | 9a | -6.7 to -3.9 |
| 25 to 30 | 9b | -3.9 to -1.1 |
| 30 to 35 | 10a | -1.1 to 1.7 |
| 35 to 40 | 10b | 1.7 to 4.4 |
| 40 to 45 | 11a | 4.4 to 7.2 |
| 45 to 50 | 11b | 7.2 to 10 |
| 50 to 55 | 12a | 10 to 12.8 |
| 55 to 60 | 12b | 12.8 to 15.6 |
| 60 to 65 | 13a | 15.6 to 18.3 |
| 65 to 70 | 13b | 18.3 to 21.1 |

- **Sunlight:** Full to partial shade
- **Common Pests:** Spider Mites



- **Common Diseases:** Blight



• Characteristics:

- Grows less than 12 inches a year
- It can be 40-75 feet tall when fully grown
- Has a symmetrical spiral shape with dark green needles



• Other Information:

- Native to the U.S. and is normally grown in NE Iowa
- Popular as a Christmas tree
- Used by many animals such as birds, squirrels, mice, voles, moose, and white-tail deer for food and shelter