



Advantages of Vaccinating (Injecting) Trees vs. Spraying

Here at Saving Oaks, we prefer to vaccinate (inject) trees rather than spraying for many reasons:

- **Targeted Delivery**

Administering vaccinations with injection enables us to deliver approved chemicals directly into the tree's vascular system (xylem), ensuring the active ingredient reaches the affected tissues efficiently, unlike spraying that may not penetrate deeply enough to combat internal pathogens.

- **Reduced Environmental Impact**

Vaccinations minimize chemical release into the environment, reducing contamination of soil, water, or non-target plants. The treatment is contained within the tree. On the other hand, spraying can result in drift, where chemicals are carried by wind to unintended areas, potentially harming pollinators, wildlife, or nearby crops.

- **Lower Risk to Non-Target Organisms**

Injecting preventative treatments into the tree poses minimal risk to beneficial insects (e.g., bees, butterflies), birds, or mammals, as the chemical is not exposed on the tree's surface. Spraying may harm pollinators or other organisms that come into contact with treated foliage or residues, especially if applied during blooming periods.

- **Longer-Lasting Protection**

Injections provide systemic, season-long (or multi-year) protection, as the chemical is distributed throughout the tree's vascular system. For oak wilt, a single injection of Tebuject can protect trees for up to 2-3 years. In contrast, spraying often requires multiple applications per season due to wash-off from rain or degradation from sunlight, leading to shorter-term efficacy.

- **Reduced Chemical Volume**

Vaccination methods use smaller quantities of chemicals because the treatment is concentrated and delivered directly to the tree's system. This lowers costs and environmental load over time. On the other hand, spraying requires larger volumes of diluted chemical to cover the tree's canopy or trunk, increasing material costs and environmental exposure.

- **Improved Efficacy for Vascular Diseases**

Vaccinations directly targets the vascular system where oak wilt spreads, ensuring the fungicide inhibits fungal growth effectively. Studies show fungicide is the most effective preventative available, reducing infection up to 90%. Spraying may take care of surface level pathogens, but do not effectively absorb into the vascular tissues.

- **Safer for Applicators and Public**

Vaccination injections minimize human exposure to chemicals, as applicators handle smaller quantities and the treatment is enclosed within the tree. Spraying increases the risk of inhalation or skin contact for applicators and may expose nearby residents or pets to airborne chemicals.

Tree injection is particularly advantageous for oak wilt because the disease spreads through root grafts and vascular tissues, requiring systemic treatment. Fungicide injections are a proven preventative measure, especially for high-value trees.

HEALTHY OAKS, HAPPY FOLKS!