Eradicating Japanese Knotweed

Japanese Knotweed is a notoriously tough and aggressive invasive plant. Controlling it requires a specific strategy–and patience– as its underground rhizome system allows it to easily regenerate. It can also regenerate from even small pieces of portions of the plant.

This guide covers two effective eradication techniques: first, the chemical-free Grid Method, which Wild Cohasset prefers due to the impact that herbicides have on wildlife. Second, the highly targeted Herbicide Leaf-Painting Method.

PLEASE NOTE: DO NOT SPRAY HERBICIDES ON JAPANESE KNOTWEED: THIS CAN CAUSE EXTREME HARM AND DEATH TO SONGBIRDS, HUMMINGBIRDS, BUTTERFLIES AND BEES.

DO NOT CUT THE STALKS AND PAINT HERBICIDE ON THE STUMP: THIS WILL CAUSE THE PLANT TO SPREAD **MORE** AGGRESSIVELY, WORSENING THE PROBLEM.

Note: when cutting Japanese knotweed, do not compost any part of the plant. It must be thrown away in sealed black contractor bags. If you want to burn the plants after trimming, you must first dry it until it is bone dry. Place the cut pieces on a driveway or on top of a plastic tarp (NEVER on soil or grass). Leave it in the sun for 4-6 weeks. Once the plants are completely devoid of color and every part of them snaps like a twig, they may be burned in a container. (Drying is critical: if there is moisture retained in any of the parts, that part could start a new infestation).

Method 1: The Grid Method (MeshTech)

Originating from successful trials in Great Britain, the Grid Method—also referred to as MeshTech—is a relatively low-cost, low-effort, and zero-chemical approach. It uses the plant's own aggressive growth pattern against it to exhaust its root system over time.

Materials Needed

- Heavy-duty steel wire mesh (specifically ½" x ½" openings). Get at Home Depot or Lowes
- Landscape staples or ground stakes (these also can be purchased from Home Depot or on line).
- Tools for clearing dead surface growth (shears or loppers).

1. **Clear the Area:** In late winter or early spring, before new shoots emerge, cut down and clear away all the dead surface stems from previous growing seasons.
2. **Lay the Mesh:** Place the ½ inch steel mesh completely flat over the cleared knotweed patch.
3. **Secure the Mesh:** Tightly fasten the mesh to the ground using sturdy ground stakes or staples. It is vital that the mesh remains firmly in place and cannot be lifted by the emerging shoots.
4. **Wait and Observe:** As spring progresses, the knotweed will send up new stems that will grow through the ½ inch openings.
5. **Leave It Alone:** Don't cut the new growth. As the stems grow and expand in diameter, the rigid mesh will girdle (choke) them or force them to split, causing the surface growth to die.

How It Kills: Because stems are severed by wire as they grow, the plant can't photosynthesize. Meanwhile, the roots keep using carbs to grow new stems, which are then killed. Over multiple seasons (5 years or more) this exhausts the rhizome's energy reserves.



Method 2: Leaf-Painting with Herbicide (70% Coverage)

For chemical control, treating leaves is effective because the plant draws the chemical deep into its root system. "Painting" the leaves provides a controlled, targeted application that minimizes damage to nearby plants or wildlife. The goal is to cover 70% of the leaf surface area with enough herbicide so it's absorbed without dripping, eg: you want to paint 70% of leaves on each plant.

Timing

Date: The "Window" for this method in MA is brief: **August 1st to August 15th**. This is when the plant is actively translocating starches down into its rhizome for winter storage, carrying the herbicide down with it, but because it has not flowered yet, the plant is less attractive to butterflies, bees, and other pollinators. DO NOT PERFORM THIS METHOD OUTSIDE OF THIS WINDOW.

Time of day: Do this between the hours of **9am - 1pm**. This PROTECTS BIRDS

Products needed and how to mix:

- **Herbicide:** A Glyphosate-based herbicide diluted. You must dilute the herbicide or you'll burn leaves too quickly & chemical won't reach the roots. Dilute as per recipe below. **DO NOT BUY PRODUCTS OTHER THAN THOSE RECOMMENDED BELOW AS THEY WILL OFTEN HAVE INGREDIENTS THAT RENDER THEM INEFFECTIVE ON JAPANESE KNOTWEED OR THEY HAVE INGREDIENTS THAT ARE DEADLY TO BIRDS.**

- Herbicides such as (all available on Amazon):
  Airmax Shoreline Defense Aquatic Herbicide
  Roundup Custom Aquatic Herbicide
  Alligare Glysophate 5.4 Aquatic Herbicide

- **Applicator:** Use a small handheld foam paintbrush.



- **Indicator Dye:** such as Monterey Mark It Blue
- **PPE:** Chemical-resistant gloves, long sleeves, and eye protection.
- **Non-ionic Surfactant:** such as Airmax Treatment Booster Plus
- **Container:** 2.5 quart container for mixing such as Leaktite Clear Multi-Mix Container

Step-by-Step Execution

First: Prepare the Solution: Mix your glyphosate solution in a secure container as follows:

Water: Start by measuring out your tap water: 32 oz

Herbicide Concentrate: Add 4 level teaspoons of herbicide

Surfactant: Add 1 teaspoon

Indicator Dye: Add ½ teaspoon

Stir: Gently mix the solution thoroughly with a disposable stick until the blue color is uniform.

1. **Load the Applicator:** Dip your foam brush into the herbicide mixture. Rub against side of the container to ensure it is not dripping.
2. **Paint the Leaves:** Gently paint the top surface leaf. You want to cover the whole top but don't want the solution to drip.
3. **Achieve 70% Coverage:** Methodically paint the leaves on the plant, ensuring that at least 70% of the total leaf surface area on each plant is treated. The leaves should be visibly wet but NOT dripping.
4. **Do Not Disturb:** Once painted, leave the plant completely alone. NEVER pull on the plant; this could cause dormant roots to sprout new stalks.
5. **Winter Cleanup:** Do not cut the stalks down until January or February of the following year. This ensures maximum chemical transfer to the deep root system.

Method Comparison

Feature	The Grid Method	Leaf-Painting (Herbicide)
Primary Mechanism	Mechanical exhaustion (girdling)	Chemical root destruction
Best Time to Start	Late Winter / Early Spring	Late Summer / Early Fall
Environmental Impact	Zero chemicals; very eco-friendly	Low drift risk, but uses glyphosate
Timeline for Success	5+ Years	2-4 Years (multiple treatments often needed)