

The new “JK Injection Tool” for control of knotweeds and other hollow-stem plants growing in sensitive wetland sites

Note: Many pictures were removed to reduce file size for posting on the web.

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Japanese Knotweed (*Polygonum cuspidatum* Sieb.& Succ.)

- v Aggressive invasive plant
- v Grows to heights of 15-20'
- v Forms large clumps
- v Found in Upland, Riparian, and wetland sites.
- v Has large rhizomatous root systems
- v Able to root from nodal buds



Japanese Knotweed growing in an upland site. This is a stage where broadcast or cut stem treatments would apply.

Foliar Applications

- ✓ Apply AquaMaster @ 5% v/v solution with 0.5% v/v nonionic surfactant.
- ✓ Spray-to-wet application ~ 100 GPA with backpack or pressurized sprayers.
- ✓ Treat plants that are at least 4' tall, and actively growing.
- ✓ Garlon 3A, and Habitat in tank mixtures with AquaMaster have been effective, but are not yet labeled.

Foliar Results

- v Garlon 3A and Garlon 4 have been used. Good burn-down, but follow-up treatments needed.
- v Applications of AquaMaster on young plants had inconsistent performance.
- v Combinations of AquaMaster and Habitat resulted in perfect control in upland tests.

Stem Injection Method

- ✓ Uses probe and syringe to inject individual stems.
- ✓ Probe is pushed through stem below lower nodes to allow water to escape.
- ✓ 5 cc's/mls of undiluted AquaMaster per stem injected on a downward angle.
- ✓ Time consuming, yet very effective method



Probe



Injection needle

Cut Stem or 'Well ' Treatment

- v Individual stem treatment made on lower nodes.
- v Using loppers, cut stem just below lower node.
- v **Apply 8-10 mls of 50% water and 50% AquaMaster directly into well or stem cavity.**

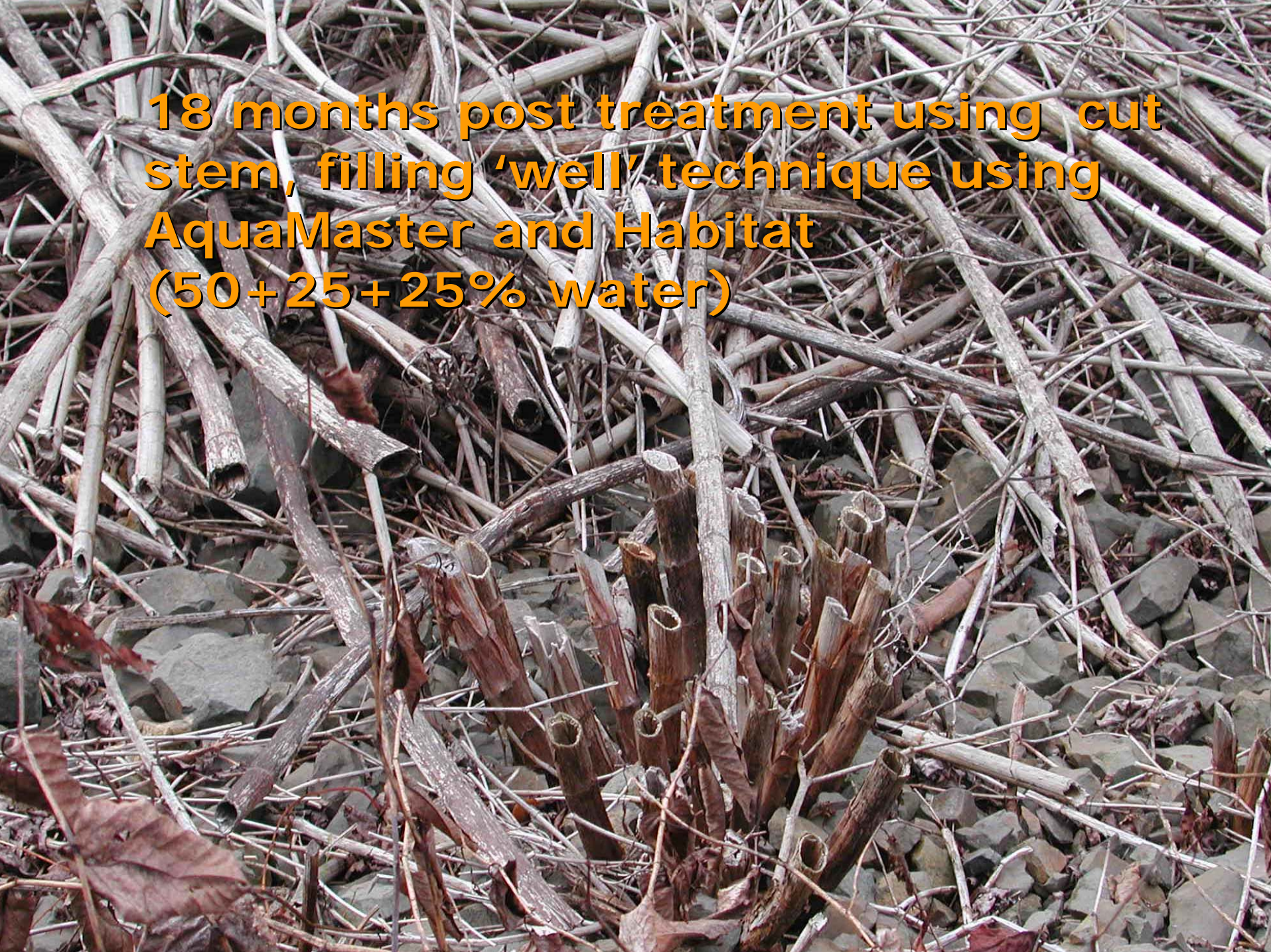
Equipment:

- Use a single nozzle wand or similar low pressure spray system.

Cut Stem Control Data

- v **>850 stems** treated using cut stem well technique, summer 2001 with 8-10mls of : **AquaMaster (50%) + Habitat (25%) + water (25%) in 8-10 mls per stem.**
- > 98% control in summer 2002, and 100% control; March, 2003.**

18 months post treatment using cut stem, filling 'well' technique using AquaMaster and Habitat (50+25+25% water)



JK Injection Tool

- v Easy calibration
- v Level probe insertion
- v Hole in needle pointed down
- v Inject in first or second internode

J.K. Injection unit



JK injection tool needle



How to use

- v Use J.K. Injection devise. Inject AquaMaster into one of lower two internodes. Use 5 mls/5cc of AquaMaster
- v Inject “level”/perpendicular to stem
- v One injection per stem
- v Monitor for any follow-up needed 3 to 4 weeks following original application

How to use (further)

- ✓ J.K. Injection device is easily calibrated. Check calibration periodically.
- ✓ Clean-up is simple, but important.
- ✓ Treat needles with respect. Sharp and easy to bend, if not used properly.
- ✓ Choose needle appropriate for target.

2004 Control efforts

- ✓ WA State Grant approved.
- ✓ Pilot project on Lewis River in SW WA State.
- ✓ Started on top of East Fork Watershed and worked towards Columbia River.
- ✓ Excellent results so far.

Other Susceptible Weed Targets

- v Giant Hogweed
- v *Arundo donax* (need to determine lowest rate needed)
- v Bamboo (may need to drill first)
- v Phragmites
- v Other hollow-stem species

Current label Status in CA

- v Supplemental label Approved in other states.
- v Conducting trials to get database to support labeling.
- v Developing data packages on other species.

Additional Information

Currently labeled under federal
supplemental for AquaMaster

<http://w3.jkinjectiontools.com>

Clark County Website: Check it out!

<http://w3.clark.wa.us/environ/weed.htm>