JAPANESE KNOTWEED: An Alternative Approach

Stuart Morris

JAPANESE KNOTWEED SOLUTIONS

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Japanese Knotweed

- Himalayan Balsam
- Giant Hogweed
- Montbretia
- Cotoneaster spp.
- Rhododendron ponticum
- Yellow Azalea
- Variegated Yellow Archangel
- Virginia Creeper
- False Virginia Creeper
- Three Cornered Garlic
- Giant Rhubarb
- Japanese Rose

…..And more!

Japanese knotweed

- Rhizomatous perennial;
- Grows to 2m tall, zig-zag stems with spade shape leaves;
- Rhizome can extend up to 7m from surface growth and to depths of 2-3m;
- Tiny fragments (0.7g!) of rhizome can produce new plants.

Fallopia japonica

Himalayan Balsam

- Annual species, spread by seed;
- Exploding seed heads which can expel seeds up to 7m from parent plant;
- Seeds can remain viable fro up to 3 years;
- Shallowly rooted, can easily be pulled by hand;
- Commonly found along waterways, ditches and canals.

Impatiens glandulifera

Giant Hogweed

- Perennial species, spread by seed;
- Large leaves and flower spike which can grow up to 3-5m in height;
- Can produce up to 50,000 seeds per plant;
- Seeds remain in soil for up to 14 years;
- Sap causes sever reaction to skin.

Herecleum mantegazzianum

Reliance on herbicides

- Our industry is heavily reliant on chemical herbicides to control invasive non-native plant species, particularly Japanese knotweed;
- Currently JKSL are contracted to chemically treat 642 sites across the UK;
- ~600 sites are being treated with Glyphosate based herbicides, and 42 with aminopyralid / triclopyr preparations;
- This reliance on herbicide has lead us to look for an alternative…

JAPANESE KNOTWEED SOLUTIONS


MeshTech

Mesh Tech Control Technique:

- Surface growth from previous seasons is cut and cleared
- Mesh is laid across the surface growth and rhizome area
- Japanese Knotweed stems emerge from buds on the underground rhizome crowns in April


MeshTech
Japanese knotweed stems emerge through the 13mm galvanised steel mesh


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The stems continue to expand in diameter as they grow through the mesh…


Stems continue to expand around the mesh cutting off water supply from the rhizomes
Friction at the point of contact with the mesh causes further damage to the stem
Surface growth begins to wilt as a result of the damage
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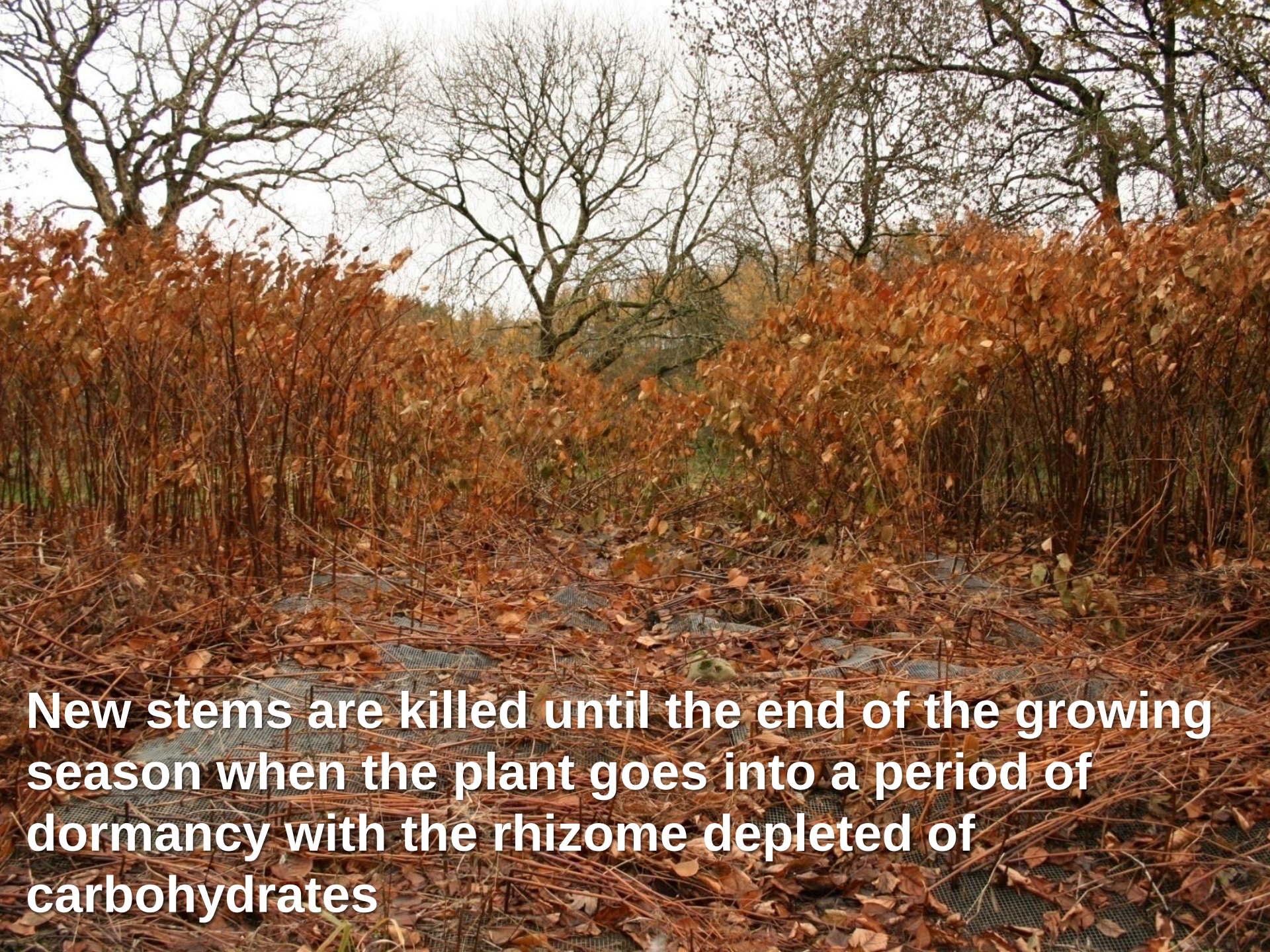
MeshTech
The stems break and fall over

When stems are killed through interaction with the mesh and apical dominance is broken, new stems emerge.

The continual killing of stems leads to depletion of rhizome carbohydrate stores, as these are required by the stems for growth.


New stems are killed until the end of the growing season when the plant goes into a period of dormancy with the rhizome depleted of carbohydrates

Mesh Tech may be a suitable alternative to control Japanese knotweed in the following areas:

- Parks and public open space
- Riverbanks & canal sides
- Railway embankments
- Road verges
- Ecologically sensitive areas

This is a long term management strategy. Reduction in plant growth and vigour will be evident from year one, however it will take 5+ years to control the plant.

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