

Common barberry, *Berberis vulgaris*
 Japanese barberry, *Berberis thunbergii*

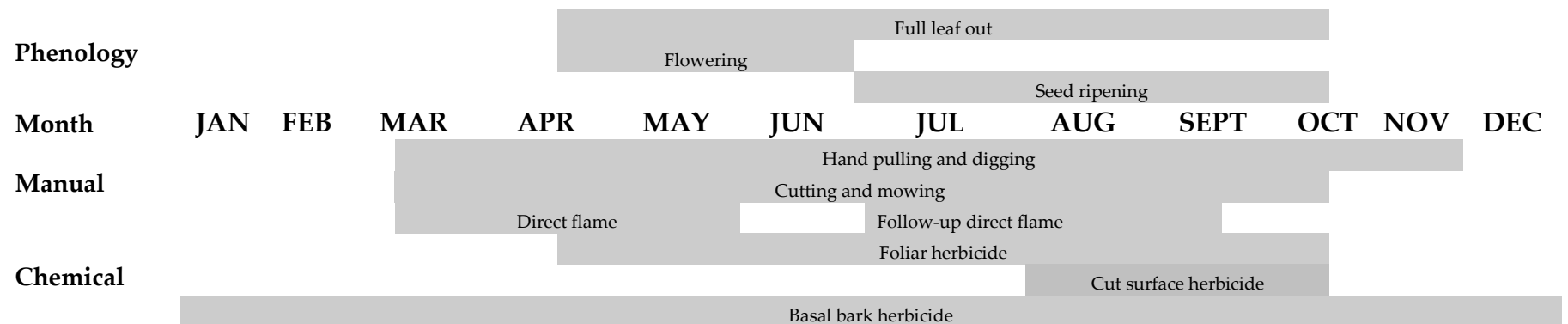
Summary of Treatment Methods:

Habitat: Japanese and Common barberry can aggressively invade in diverse habitats, from wetlands to fields and pastures to upland forests, in both moist and dry soils. As birds carry barberry seeds, it is common to find plants concentrated along tree-lined roadsides and field edges where birds roost. They thrive in sunlight and are tolerant of shade, however common barberry seems to be less shade tolerant than Japanese barberry and is less likely to be found in an interior, closed-canopy forest. Plants growing in dense shade may flower and fruit less heavily than those in more open sites.

Reproductive Strategy: Reproduction is mainly by seed but it can root sprout and layer. Barberry produces a large number of seeds with high germination rates, estimated at up to 90%. Fruits mature from July to October and persist well into the winter. Fruit production varies with light level, but even under very low light levels (4% full sun) some seeds are produced.

Dispersal: Barberry has a very steep seed dispersal curve—most seedlings are found under or adjacent to adults, but a small number may be found tens of meters from the nearest adult. Seeds are disseminated by birds, grouse, turkey and small mammals.

Species Phenology and Treatment Options:



Treatment Methods:

Category	Method	Method Description	Considerations
MANUAL		<ul style="list-style-type: none"> Manual treatment can be highly effective for Japanese and common barberry Japanese and common barberry leaf out very early compared to most native vegetation, thus making them easy to detect It is beneficial to manually remove these plants before they begin fruiting later in the growing season 	
	Hand Pulling	<ul style="list-style-type: none"> Pull entire plant by the base of the stem Be sure to remove entire root system If feasible and fruit is present, bag and dispose of fruits to prevent seed dispersal Dry or burn all vegetation (most importantly roots) by hanging upside down on surrounding vegetation or piling into a brush pile and burning. 	<ul style="list-style-type: none"> Effective on small-medium sized plants and small infestations Most effective if done when soil is wet Remaining portions of roots system not removed can resprout The inner bark and roots of Japanese barberry yellow colored so are easy to identify Use thick gloves when pulling to avoid injury from spines Avoid dragging or piling pulled plants into an area that is currently uninfested
	Weed Wrenching	<ul style="list-style-type: none"> Remove plant by the base of the stem Be sure to remove entire root system If feasible and fruit is present, bag and dispose of fruits to prevent seed dispersal Dry or burn all vegetation (most importantly roots) by hanging upside down on surrounding vegetation or piling into a brush pile and burning. 	<ul style="list-style-type: none"> Can be more helpful than pulling larger plants
	Mowing/ Cutting	<ul style="list-style-type: none"> Use lopper, pruning shears, weed whacker/brush saw or mower to cut the stem as close to the ground as possible Cut at least 1 times during growing season (mid April-mid October) Repeat for 3-5 years 	<ul style="list-style-type: none"> Cutting/mowing can help slow the spread of barberry but will not eradicate it Most effective if followed up with foliar herbicide application or direct flame weeding
	Grazing	<ul style="list-style-type: none"> Might be a viable treatment option for Japanese and common barberry. More research is needed 	
Flame Weeding	<ul style="list-style-type: none"> Use a flame weeder to singe the leaves and the cells of the stem of the plant Hold the flame about 1 foot away from the stem of the plant. Apply the flame for 3-6 seconds or until the internal cells of the stem glow. Apply from two or three directions depending on the size of the plant 	<ul style="list-style-type: none"> Flame weeding is a very successful method for treating Japanese and common barberry Only use this application method during the spring months when the soil and surrounding vegetation is moist to avoid starting a forest fire 	

CHEMICAL	<ul style="list-style-type: none"> Active ingredients commonly used in herbicides: glyphosate and triclopyr 		
	Foliar Application	<p><i>If foliar spraying only:</i></p> <ul style="list-style-type: none"> Foliar spray when plant is fully leafed out (May-October) Spray leaf surfaces with low volume backpack sprayer, or high volume mist blower <p><i>If cutting and foliar spraying:</i></p> <ul style="list-style-type: none"> Use lopper, pruning shears, weed whacker/brush saw or mower to cut the stem as close to the ground as possible Cut during early growing season (April and May) Spray sprouts with a low volume backpack sprayer during late growing season (September and October) 	<p><i>Low Volume Backpack Sprayer</i></p> <ul style="list-style-type: none"> Herbicides (active ingredient): glyphosate or triclopyr with surfactant Used to target barberry plants and minimize drift to desirable species
			<p><i>High Volume Mist Blower</i></p> <ul style="list-style-type: none"> Herbicides (active ingredient): glyphosate or triclopyr with surfactant Used for very larger and dense infestations that have little desirable, native vegetation that will be damaged by drift
	Cut Stump	<ul style="list-style-type: none"> Cut stems 2-4" above the ground in late summer to early fall Apply herbicide immediately after cutting the exposed surface using a sponge, brush, hand-held squirt bottle or directly pouring Apply herbicide to at least the outer 20% of the surface Monitor and do follow up treatment as the following year and as necessary 	<ul style="list-style-type: none"> Herbicides (active ingredient): glyphosate or triclopyr used with surfactant Multiple stems of Japanese barberry can make this application method very labor intensive but is recommended for larger plants
Basal Bark	<ul style="list-style-type: none"> Use a low pressure, low volume backpack sprayer Apply herbicide around the entire circumference of the lower 8-18" of individual stems of the plant and include the root collar Larger stems require a larger (18") treatment area Do not spray to the point of runoff 	<ul style="list-style-type: none"> Herbicides (active ingredient): triclopyr in an oil or oil-water mixture Used to target barberry plants and minimize drift to desirable species Multiple stems of Japanese barberry can make this application method more labor intensive and less efficient than foliar application 	