

Common invasive weeds, the likelihood of detecting them using remote sensing, traits that *may* make them distinguishable in imagery, the best time for data collection, and suggested readings. (NOTE: Missing information in this table will be updated as it becomes available.)

Common Name	Scientific Name	Distinguishing Traits	Window for Data Collection	Likelihood of Success	Comments	Suggested Readings
Anchored waterhyacinth	<i>Eichhornia azurea</i>					
Broom snakeweed	<i>Gutierrezia sarothrae</i>	Bright yellow blooms mid-season when other yellow flowered-species within its typical habitat are not in bloom.	Mid-season	Good	Based on a moderate to high density patch at least 1/100th of an acre in size.	Reflectance and Image Characteristics of Selected Noxious Rangeland Species. ( <i>Journal of Range Management</i> 54(2):A106-A120)
Chinese privet	<i>Ligustrum sinense</i>					
Cogongrass	<i>Imperata cylindrica</i>					
Common crupina	<i>Crupina vulgaris</i>					
Dyer's woad	<i>Isatis tinctoria</i>	Distinct, bright yellow flower color; very likely to be a good remote sensing target.	Mid-May to mid-June, depending on elevation.	Excellent	Based on a moderate to high density patch at least 1/100th of an acre in size.	
Eurasian water-milfoil	<i>Myriophyllum spicatum</i>					
Garlic mustard	<i>Alliaria petiolata</i>					
Giant hogweed	<i>Heracleum mantegazzianum</i>					
Giant reed	<i>Arundo donax</i>			Good	Color infrared imagery will likely produce the best results.	Canopy Spectra of Giant Reed and Associated Vegetation ( <i>Journal of Range Management</i> 57: 561-569)
Giant salvinia	<i>Salvinia molesta</i>			Good		Remote Sensing of Giant Salvinia in Texas Waterways ( <i>Journal of Aquatic Plant Management</i> 40: 11-16)
Hoary cress	<i>Cardaria draba</i>	Dense canopy, white flowers. It blooms earlier in the season than other white-flowered, dense-growing weeds such as poison hemlock or perennial pepperweed.		Good		
Huisache	<i>Acacia farnesiana</i>	Abundant small orange-yellow flowers	Spring, during peak bloom	Good for flowering plants	Small, immature plants may not flower and would be hard to detect.	Reflectance and Image Characteristics of Selected Noxious Rangeland Species. ( <i>Journal of Range Management</i> 54(2):A106-A120)
Hydrilla	<i>Hydrilla verticillata</i>			Good		Using Remote Sensing and Spatial Information Technologies to Detect and Map Two Aquatic Macrophytes ( <i>Journal of Aquatic Plant Management</i> 37: 71-80)
Japanese honeysuckle	<i>Lonicera japonica</i>					

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Knapweed, Russian	<i>Acroptilon repens</i>	Dense patches, distinct grayish-bluish green foliage color; distinct flower color; uniform patch canopy architecture.		Good	Based on a moderate to high density patch at least 1/100th of an acre in size.	
Knapweed, spotted	<i>Centaurea biebersteinii</i>	Least dense of the knapweeds in Utah. Not a strong candidate for remote sensing unless infestations are heavy.		Poor to Good	Based on a moderate to high density patch at least 1/100th of an acre in size.	
Knapweed, squarrose	<i>Centaurea triumfettii</i>	Most distinctive feature is dense, grayish-tan canopy made up of dead growth and possibly grayish-green new foliage. Blooms not a good indicator.	Early spring or late fall.	Good	Based on a moderate to high density patch at least 1/100th of an acre in size.	
Kudzu	<i>Pueraria lobata</i>					
Leafy spurge	<i>Euphorbia esula</i>	Bright yellow bracts and flowers; rusty-reddish fall coloration	Early summer; mid-fall	Excellent	Based on a moderate to high density patch at least 1/100th of an acre in size.	Detection of Leafy Spurge Using Multidate High-Resolution Satellite Imagery ( <i>Weed Technology 19: 462-467</i> ) Spectral Characteristics of Leafy Spurge ( <i>Euphorbia esula</i> ) Leaves and Flower Bracts ( <i>Weed Science 52: 492-497</i> )
Medusahead	<i>Taeniatherum caput-medusae</i>	Most visible in early summer after foliage first turns tan. Dense stands of distinctive bright straw-colored foliage stands out from essentially all other vegetation at that stage.	Early summer.	Excellent	Based on a moderate to high density patch at least 1/100th of an acre in size.	
Mile-a-minute	<i>Polygonum perfoliatum</i>					
Perennial pepperweed	<i>Lepidium latifolium</i>	Dense canopy, white flowers, waxy green leaves. Blossoms later than hoary cress.			Based on a moderate to high density patch at least 1/100th of an acre in size.	
Purple loosestrife	<i>Lythrum salicaria</i>	Bright purple flowers.			Based on a moderate to high density patch at least 1/100th of an acre in size.	
Rush skeletonweed	<i>Chondrilla juncea</i>			Poor	Erect stems and small, sparse leaves make this weed a difficult target for remote sensing.	
Russian olive	<i>Elaeagnus angustifolia</i>	Distinctive silvery-green tree/shrub. However, it resembles buffaloberry.		Excellent	Based on a moderate to high density patch at least 1/100th of an acre in size.	
Saltcedar	<i>Tamarix spp.</i>	Orange coloration in the fall. Also, feathery texture and light green vegetation color during growing season.	Fall; possibly at other times during the growing season	Good	Based on a moderate to high density patch at least 1/100th of an acre in size.	Tamarisk Remote Sensing Inventory and Assessment ( <i>USDA Forest Service, Remote Sensing Applications Center, RSAC-0046-RPT1</i> )

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Scotch thistle	<i>Onopordum acanthium</i>	Many native thistles are the same color. Silvery-gray foliage combination with canopy architecture may be distinctive enough.		Good	Based on a moderate to high density patch at least 1/100th of an acre in size.	
Toadflax, Dalmatian	<i>Linaria dalmatica</i>	Distinctive yellow-orange blossoms, dense patch canopy.		Good	Based on a moderate to high density patch at least 1/100th of an acre in size.	
Toadflax, yellow	<i>Linaria vulgaris</i>					
Tropical soda apple	<i>Solanum viarum</i>					
Water hyacinth	<i>Eichhornia crassipes</i>					Using Remote Sensing and Spatial Information Technologies to Detect and Map Two Aquatic Macrophytes ( <i>Journal of Aquatic Plant Management 37: 71-80</i> )
Waterlettuce	<i>Pistia stratiotes</i>					Light Reflectance Characteristics and Remote Sensing of Waterlettuce ( <i>Journal of Aquatic Plant Management 41: 39-44</i> )
Yellow starthistle	<i>Centaurea solstitialis</i>	Patches of previous years' standing dead growth can be distinctive.		Poor to moderate	Based on a moderate to high density patch at least 1/100th of an acre in size.	Assessing Agreement in Multispectral Images of Yellow Starthistle ( <i>Centaurea solstitialis</i> ) with Ground Truth Data Using a Bayesian Methodology ( <i>Weed Technology 14: 539-544</i> )