IDENTIFICATION OF PROBLEMATIC WEEDS IN TARGET CROPS

- Identification is important for successful control important for successful control
- Identify by Local name, common name and scientific name
- If in doubt collect intact samples and take to a herbarium for identification
- Include all plant parts (roots, shoots, flowers and fruits/dispersal unit
- Herbarium based at National museum and UON, Botany Lab, Chiromo

COMMON WEEDS IN CEREALS AND LEGUMES

- Describe root system, growth habit, branching, flower colour and shape, location of spines, hooks, hair, smell, shape of leaves
- Weed infestation differs in number and species depending on the crop grown, why?
- Crop growth habit creates a micro climate conducive to the weed, hence association
- These include shading, humidity, temperature, soil moisture, nutrients and allelochemical, germination stimulants

Common name	Scientific name	Description	Dissemination	Economic importance
Oxalis, wood sorrel	*Oxalis latifolia*	Broad leaf, tap roots bulb, perennial	Ploughing, eaten as salad	Alternate host *Puccinia sorghi,* ornamental
Double thorn	*Oxygonum sinuatum*	Tap root, net veined leaf, stem herbacious, annual, has thorns	Attachment to Animals, man	Fodder, mulch, thorn injury
Wandering jew	*Commelina benghalensis*	Tap root, succulent stem, parallel veins, trailing, perennial	Stem cuttings at ploughing	Fodder, vegetable
Thorn apple	*Datura stramonium*	Errect, grows to 1m, tap root, broad leaf,, oval fruit with hooks	Shattering, water, animals	poisonous
Black jack	*Bidens pilosa*	Tap root, dicot, hooks,	Animals, man, equipments	Crop/wool contaminant
Lion's ear	*Leonotis nepetifolia*	Errect, annual, dicot, tap root, woody stem, spikes	Animals, man, water	Source of necta,

Common name	Scientific name	Description	Dissemination	Economic importance
Mexican marigold	*Tagetes minuta*	Erect, grows to 2m, yellowish flowers, seeds in capsule, pungent smell, tap root, dicot	Shattering, water, wind	Controls nematodes
Sowthisle	*Sonchus oleracious*	Dicot, has latex, annual, erect, stem hollow, tap root, serrated leaves, tuft of hair on fruit	Wind, water	Vegetable, fodder, medicinal
Black night shade	*Solanum nigrum*	Erect, dicot, tap root, branched stem, annual	water	vegetable
Ground cherry	*Physalis peruviana*	Erect, dicot, branching, fruit encased in membrane, tap root, soft wooded stem	Water, wind, man	Ripe fruits eaten, jam. Sauce. Unripe poisonous
Pig weed	*Amaranthus hybridus, spinosus, retroflexus*	Errect, spines (*spinosus)*, dicot, tap root, sacculent stem	Animal, man, animals, water, medicine	Vegetable, fodder, green manure

Common name	*Scientific name*	Description	Dissemination	Economic importance
Galant soldier	*Galinsoga parviflora*	Dicot, tap root, erect, branches, soft stem, annual	Wind, cultivation	Fodder, medicinal
Devil's thorn	*Emex australis*	Prostate stem, dicot, tap root, has spines, seed propagation, leaves oval	Animals, man, water, implements	Fodder, green manure
Chinese lantern	*Nicandra physalodes*	Dicot, tap root, fruit encased in membrane	Water, wind	Green manure Aesthetic (Chinese)
Nogoora bur	*Xanthium pungens*	Tap root, dicots, rough green blotched purple leaves covered with stiff hair, fruits have burrs (thorns)	Animals, water, man	Contaminants in wool, poisonous to livestock
Fleabane	*Conyza sumatrensis, bonariensis*	Dicots, biennial, greenish stems with hair, erect, serrated leaves	Wind, water	Fodder, green manure
Kikuyu grass	*Pennisetum clandestinum*	Underground rhizomes, seeds, leaf blades, grass, perennial, roots at the node, roots, fibrous	Cultivation, man as lawn	Lawn grass, fodder

Common name	Scientific name	Description	Dissemination	Economic importance
Couch grass	*Digitaria scalarum*	Perennial, grass fibrous roots, creeping grass, underground rhizomes, seeds	cultivation	Fodder, lawn
Love grass	*Setaria verticilata*	Annual, grass, linear leaf blades, has bristles	Animals, man, water, wind	Fodder, irritant
Purple/ Yellow nut sedge	*Cyperus rotundus/ esculentus*	Sedge, perennial, stem with triangular cross section, produce seeds and tubers	Cultivation, water	Agar batties (sweet scented sticks)
Wild oat	*Avena fatua*	Grass, parallel veins, fibrous roots, mimicry oat, errect	Crop contamination	fodder
Wild finger millet	*Eleusine indica*	Grass, annual, stems & leaves hairy, fibrous roots, erect, mimicy millet	Crop contamination	fodder
Purple & Red Witch weed	*Striga hermonthica asiatica*	Parasitic on maize, sorghum, sugarcane, upland rice, tap root	Wind, Crop contamination, water, livestock	Green manure

WEED CHARACTERISTICS

- High/some out put of seeds in good/bad environment
- Crop mimicry (vegetative, seed, biochemical)
- Seed dormancy (Striga up to 20 years)
- Thorns, hairy, hooks, allergenicity, poisonous
- High competitive ability (luxurious consumers)
- Self compatibility
- Power to regenerate
- Wide tolerance to environmental condition

WEED CONTROL OPTIONS

- Preventive (quarantine/law, education, research)
- Mechanical/Physical (roguing, hoeing, mowing, flooding, mulching, burning/flaming, tillage)
- Cultural (crop competition, allelopathy, spacing, intercropping, fertilizer placement, irrigation and drainage, early planting, liming, crop rotation)
- Biological control: insects, pathogen, allelopathy
- Chemical weed control (herbicides)
- Integrated weed control (most recommended)