Weed Management in Celery

Calvin Odero

Everglades Research & Education Center

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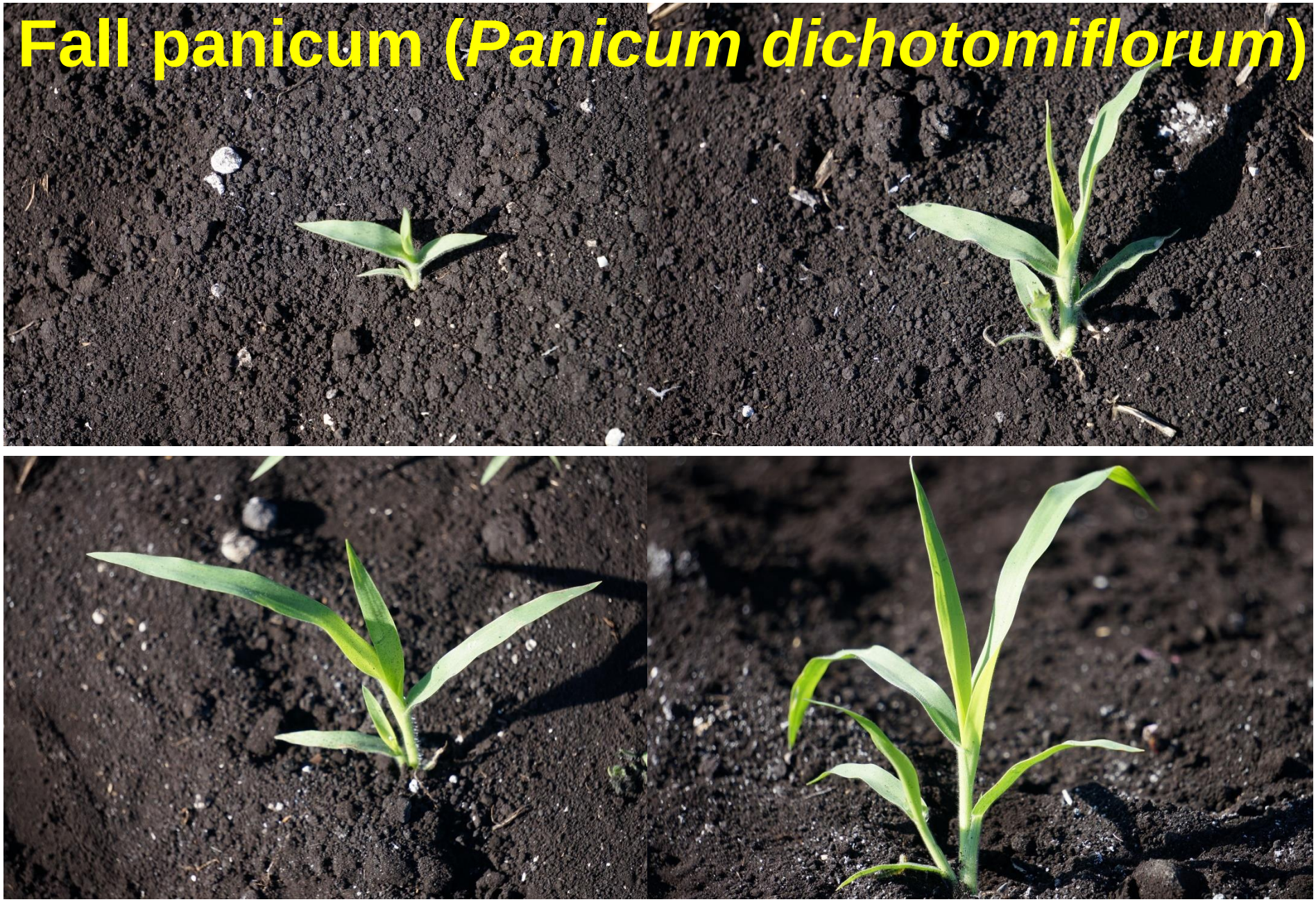
Outline

- Common weeds associated with celery
- Current herbicides for celery
- New herbicide for celery
- Herbicide trial

Fall panicum (*Panicum dichotomiflorum*)



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Goosegrass (*Eleusine indica*)

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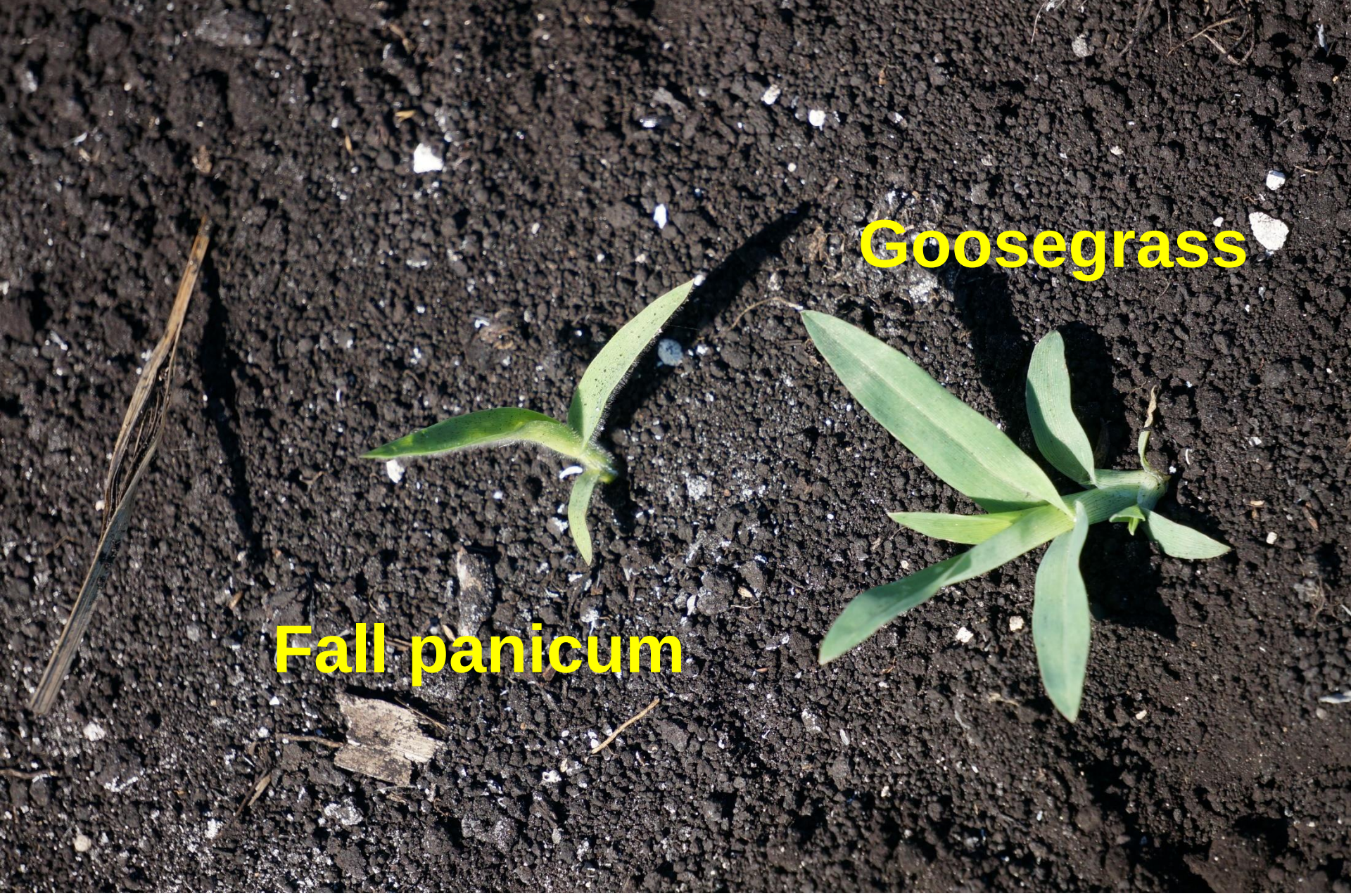
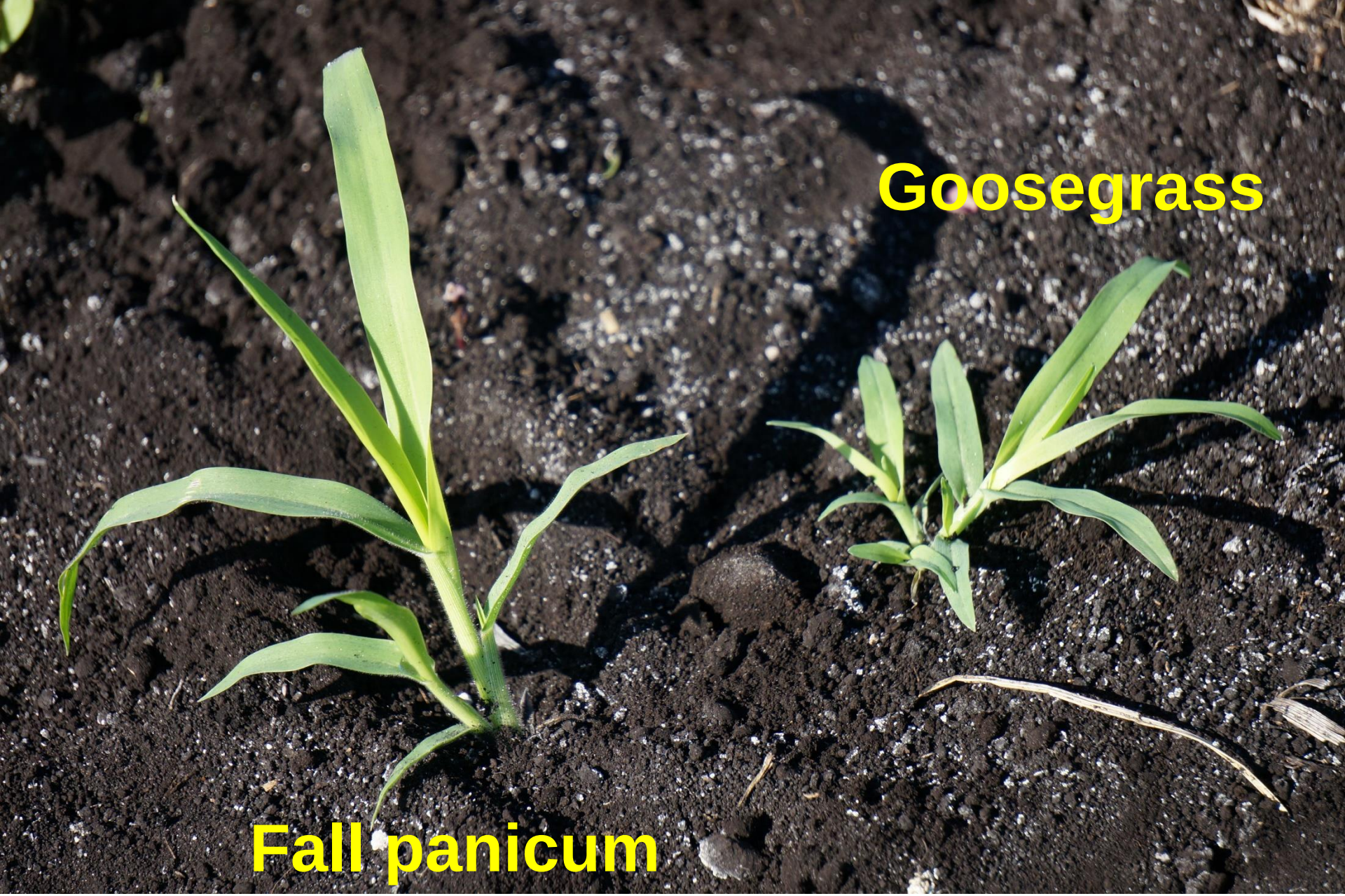
Goosegrass
Fall panicum


Goosegrass
Fall panicum


Goosegrass
Fall panicum

Crowfootgrass (*Dactyloctenium aegyptium*)

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Southern crabgrass (*Digitaria ciliaris*)

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Crowfootgrass
Goosegrass

Yellow nutsedge (*Cyperus esculentus*)

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Purple nutsedge (*Cyperus rotundus*)

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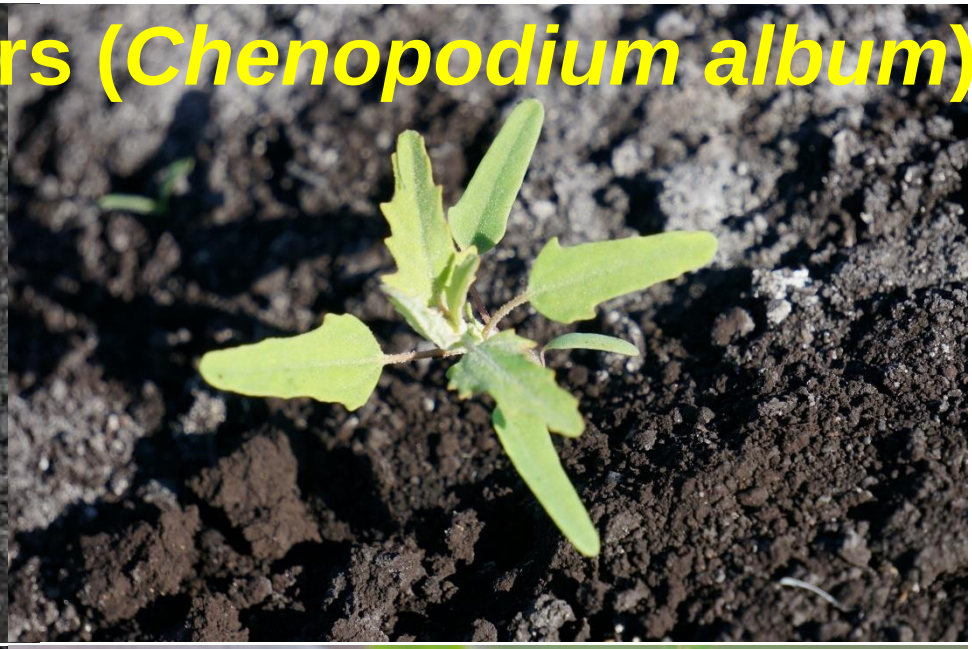
Common lambsquarters (*Chenopodium album*)



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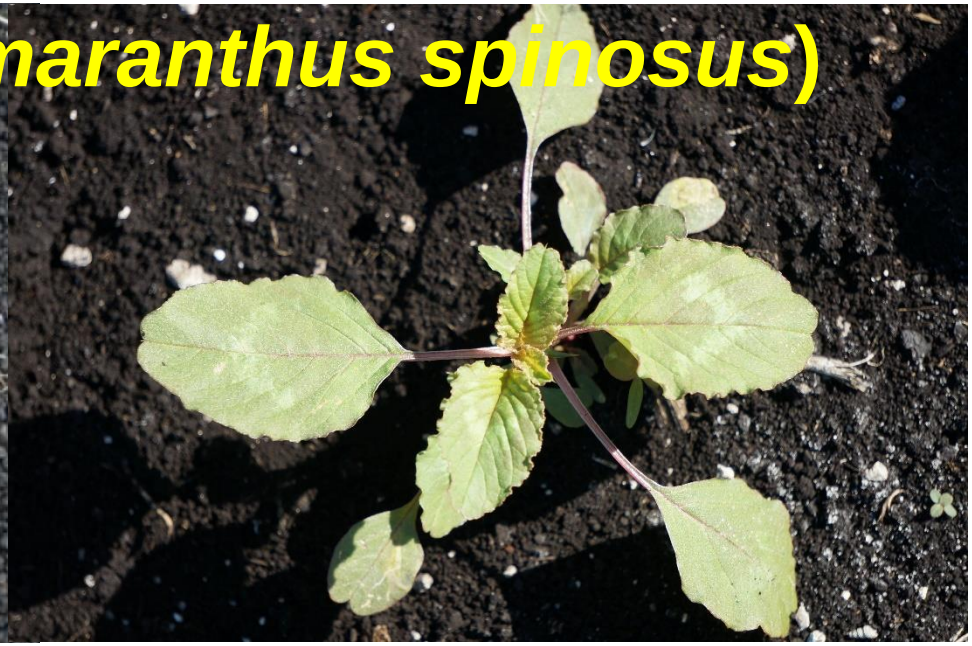
Spiny amaranth (*Amaranthus spinosus*)



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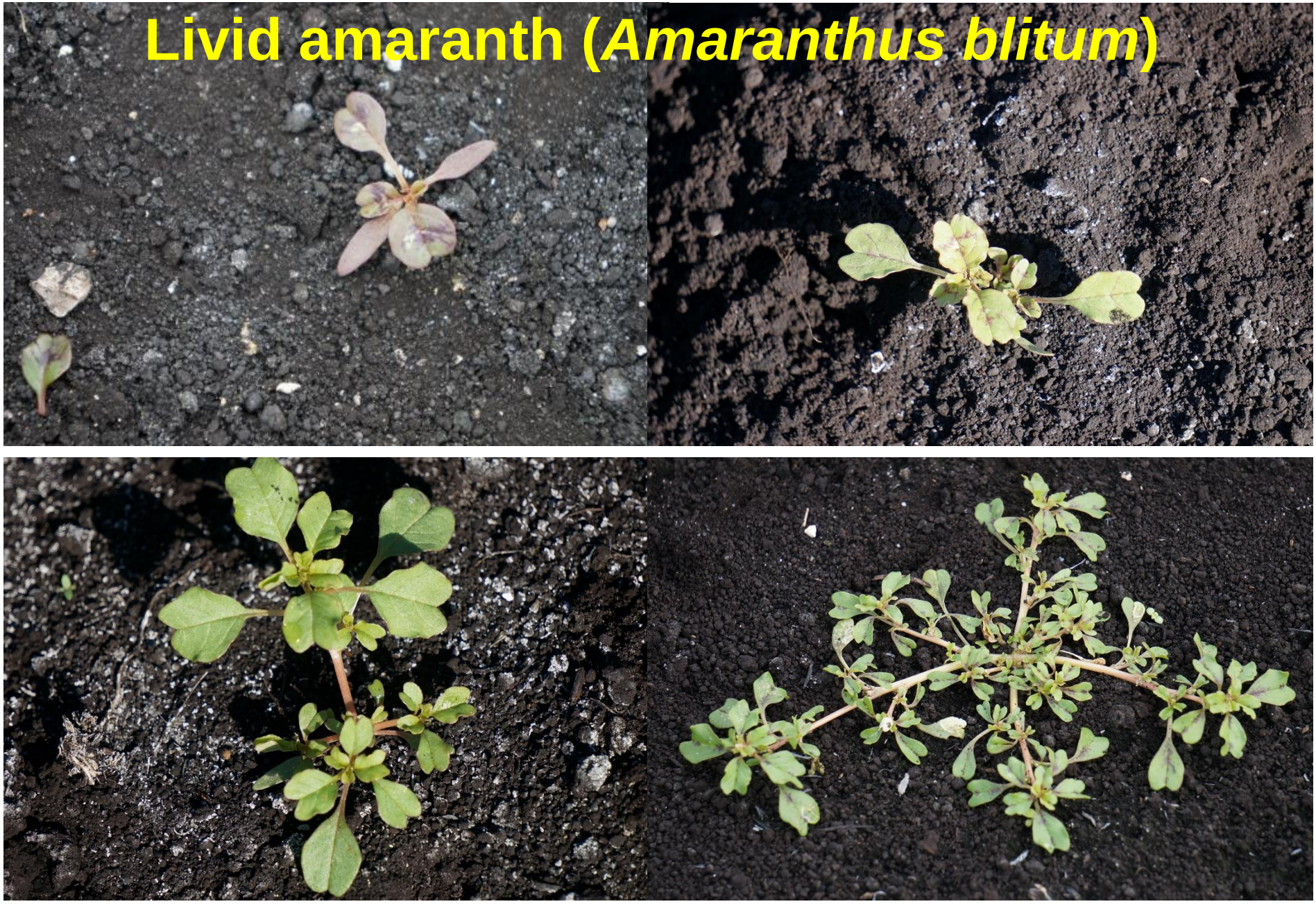
Livid amaranth (*Amaranthus blitum*)



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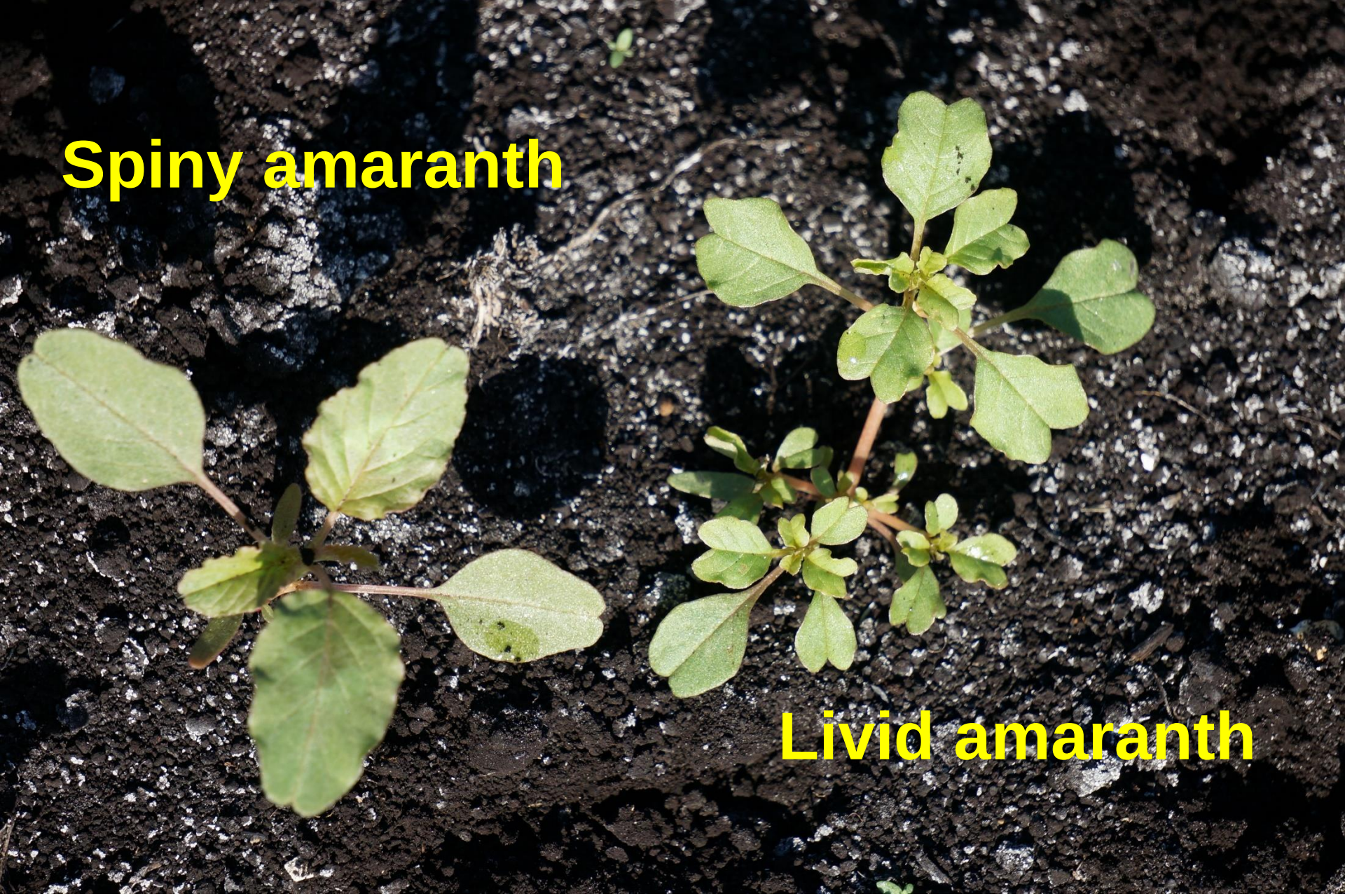
Spiny amaranth
Livid amaranth

Common purslane (*Portulaca oleracea*)

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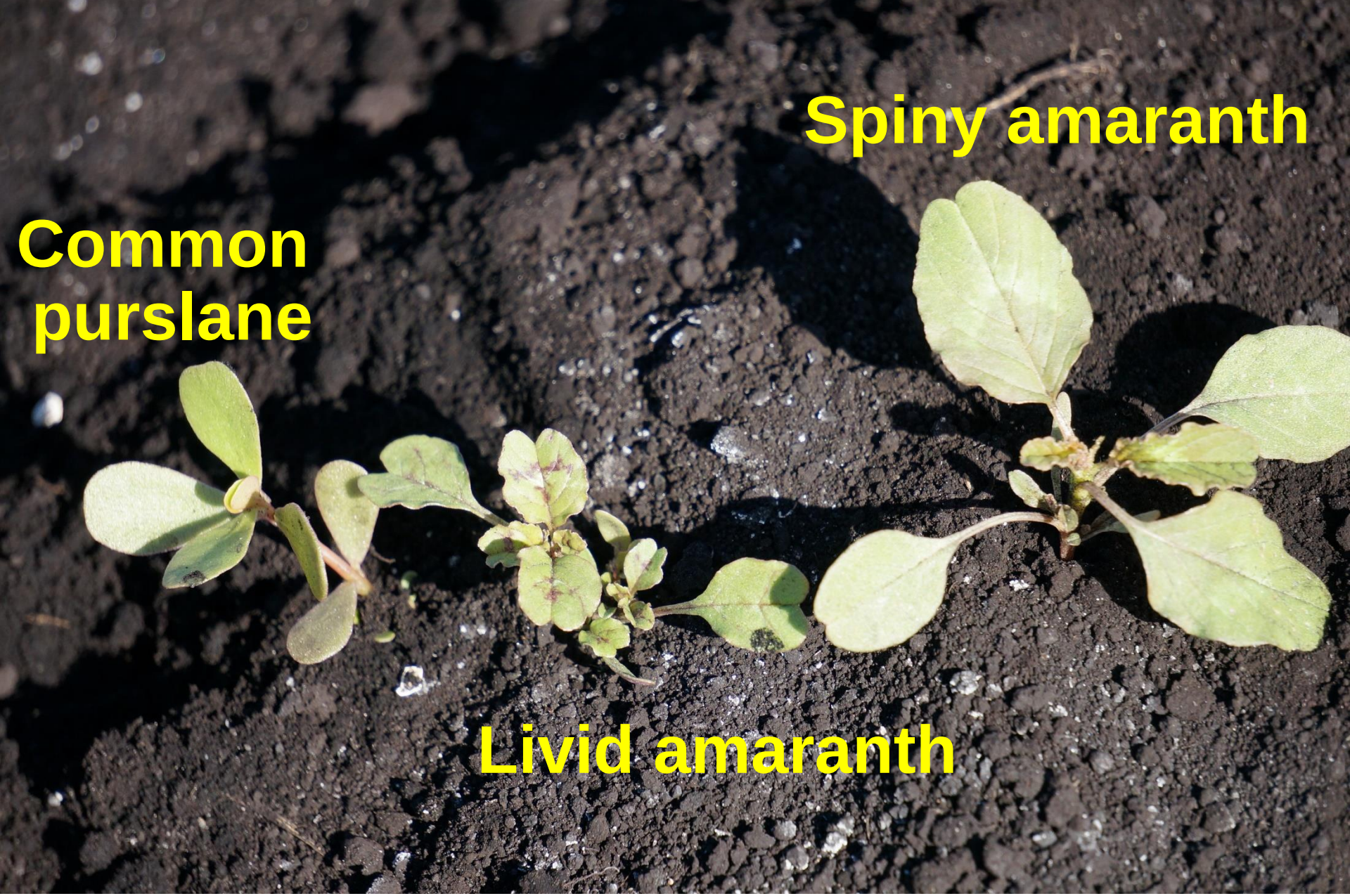

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American black nightshade (*Solanum americanum*)

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Ragweed parthenium (*Parthenium hysterophorus*)

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Common ragweed (*Ambrosia artemiisifolia*)

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Common ragweed
Ragweed parthenium

Current herbicides: Dual Magnum 7.62 EC

- Common name: *S*-metolachlor
- Third-party registration (TPR, Inc., Orlando)
- Rate: 1 – 1.33 pints/acre
- Weeds: grasses, sedges
- MOA: VLCFA synthesis inhibitor, 15 (K3)

Current herbicides: Caparol 4L

- Common name: prometryn
- Rate: 1.6 – 3.2 pints/acre
- Weeds: broadleaf and some grass weeds
  - Weeds <2 inches
- MOA: Photosystem II inhibitor, 5 (C1)

Current herbicides: Lorox 50 DF

- Common name: linuron
- Rate: 1 –2 pounds/acre
- Weeds: broadleaf and certain grass weeds
- MOA: Photosystem II inhibitor, 7 (C2)

Current herbicides: Poast 1.5 EC

- Common name: sethoxydim
- Rate: 1.5 pints/acre
- Weeds: Grass weeds
- MOA: ACCase inhibitor, 1 (A)

New herbicide: Zidua 4.17 SC

- MOA: VLCFA synthesis inhibitor, 15 (K3)
  - Isoxazoline chemical family
- Root-and-shoot growth inhibitor
  - Controls susceptible germinating seedlings before or soon after they emerge from the soil
- Low-use-rate herbicide
  - Provides residual weed control
  - 3.25 fl oz/acre (0.106 lb ai/acre)
- Acceptable weed control on high OM soils

Group 15 Herbicide

Zidua® SC Herbicide

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Celery herbicide trial

Treatment	Rate		Timing
	fl oz/A	lb ai/A	
Zidua	3.25	0.106	4 days after transplanting
Zidua + Caparol	3.25 + 16	0.106 + 0.5	4 days after transplanting
Dual Magnum + Caparol	16 + 16	0.95 + 0.5	4 days after transplanting
Handweeded check			
Untreated check			

- Bedding: December 9, 2021
- Planting: December 10, 2021
- Spraying: December 14, 2021
- Experimental design
  - RCBD
  - Plot size - 6 ft (2 beds) by 25 ft long

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Untreated control – 7 DAT


Handweeded control – 7 DAT


Zidua (3.25 fl oz/A) – 7 DAT


Zidua (3.25 fl oz/A) + Caparol
(16 fl oz/A) – 7 DAT


Dual Magnum (16 fl oz/A) +
Caparol (16 fl oz/A) – 7 DAT


Untreated control – 56 DAT


Handweeded control – 56 DAT


Zidua (3.25 fl oz/A) – 56 DAT


Zidua (3.25 fl oz/A) + Caparol
(16 fl oz/A) – 56 DAT


Dual Magnum (16 fl oz/A) +
Caparol (16 fl oz/A) – 56 DAT

Calvin Odero
dcodero@ufl.edu; 561-993-1509

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