

Agronomic Crop Species and Variety Selection ¹

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A field or forage crop may include several species within a genus and several varieties within a species, or may consist of a single species with no recognized varieties.

In choosing the genus, species, or variety of crop to be grown, the following characteristics should be kept in mind: 1) growth cycle; 2) growing season; 3) adaptation to soils and climate; 4) uses of the crops; 5) yield and quality of the harvested product; 6) resistance to insects, diseases, and nematodes; and 7) market acceptability of the variety.

New or unfamiliar species and/or varieties should not be planted on large acreages until they have been evaluated and performed satisfactorily for a number of years on relatively small areas on a particular farm or those in close proximity. Even if a particular species or variety has performed well in experimental or other trials, a grower should be familiar with the characteristics and particular cultural requirements of the species or variety before large acreages are planted. However, many crops have been genetically transformed to include Bt or herbicide resistance or both and have had little evaluation. Parent lines may have been widely grown

and new gene insertions can result in different performance.

The potential for an introduced species or variety to become a noxious, invasive, or otherwise undesirable plant should be considered before the initial planting. Check to be sure that any plant selected is not on the invasive or noxious weed lists, which may prohibit planting or propagation. Some desirable plants may become difficult to control weeds in other crops. For example, crotalaria and hairy indigo were introduced into Florida as green-manure crops, but soon became major pests in other crops. Some grasses such as cogongrass may root so deeply that they are difficult to control or eradicate. Other plants may harbor diseases, nematodes, or insects that attack crops. Several of the species listed in Table 1 could be undesirable in many situations if proper precautions are not followed.

The field and forage crops that could be grown in Florida are described in Table 1, as to common name, scientific name, plant family, growth cycle, growing season, method of propagation, and area adaptations. Recommended varieties of the major field crops grown in Florida are listed in appropriate variety reports.

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Table 1. Growth characteristics and adaptations of field and forage crops grown in Florida.

| Common Name (Plant Family) ¹ Scientific Name | Growth Cycle ² | Season of Maximum Growth | Method of Propagation | Seed/lb (1000) | Section of State Where Adapted ³ | | | |
|---|------------------------------|--------------------------------|--------------------------|-------------------|--|----|---|---|
| | | | | | NW | NE | C | S |
| Aeschynomene (L) <i>Aeschynomene</i> spp. | A | Summer | Seed | 200-220 | * | * | * | * |
| Alfalfa (L) <i>Medicago sativa</i> | P ⁴ | Winter | Seed | 210 | * | * | * | * |
| Alyceclover (L) <i>Alysicarpus vaginalis</i> | A | Summer | Seed | 300 | * | * | * | * |
| Austrian winter pea (L) <i>Pisum arvense</i> | A | Winter | Seed | 5 | * | * | * | * |
| Bahiagrasses (G) <i>Paspalum notatum</i> | P | Summer | Seed | 120-240 | * | * | * | * |
| Barley (G) <i>Hordeum vulgare</i> | A | Winter | Seed | 13 | * | * | * | * |
| Beggarweed, Florida (L) <i>Desmodium purpureum</i> | A | Summer | Seed | 200 | * | * | * | * |
| Bermudagrasses (G) <i>Cynodon dactylon</i> | P | Summer | S&V | 1800 | * | * | * | * |
| Buffelgrass (G) <i>Pennisetum ciliare</i> | P | Summer | Seed | 3200 | * | * | * | * |
| Bur-clover, California (L) <i>Medicago hispida</i> | A | Winter | Seed | 150 | * | * | * | * |
| Bur-clover, spotted (L) <i>Medicago arabica</i> | A | Winter | Seed | 230 | * | * | * | - |
| Canola (B) <i>Brassica napus</i> | A | Winter | Seed | 120 | * | * | - | - |
| Caribgrass (G) <i>Eriochloa polystachya</i> | P | Summer | Veg. | --- | - | - | - | * |
| Carpetgrass (G) <i>Axonopus affinis</i> | P | Summer | Seed | 1250 | * | * | * | * |
| Cassava (Sp) <i>Manihot esculenta</i> | P ⁴ | Summer | Veg. | --- | * | * | * | * |
| Castorbean (Sp) <i>Ricinus communis</i> | P | Summer | Seed | 1 | * | * | * | * |
| Chufa (Se) <i>Cyperus esculentus</i> | P ⁴ | Summer | Veg. | --- | * | * | * | - |
| Clover, arrowleaf (L) <i>Trifolium vesiculosum</i> | A | Winter | Seed | 400 | * | - | - | - |

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| Clover, berseem (L) <i>Trifolium alexandrinum</i> | A | Winter | Seed | 200 | - | - | * | * |
| Clover, crimson (L) <i>Trifolium incarnatum</i> | A | Winter | Seed | 150 | * | - | - | - |
| Clover, hop (L) <i>Trifolium campestre</i> | A | Winter | Seed | 1000 | * | * | * | - |
| Clover, hop, large (L) <i>Trifolium aureum</i> | A | Winter | Seed | 2200 | * | * | * | - |
| Clover, hop, small (L) <i>Trifolium dubium</i> | A | Winter | Seed | 1000 | * | * | * | - |
| Clover, Persian (L) <i>Trifolium resupinatum</i> | A | Winter | Seed | 640 | * | * | * | * |
| Clover, rose (L) <i>Trifolium hirsutum</i> | A | Winter | Seed | 170 | * | | | |
| Clover, red (L) <i>Trifolium pratense</i> | P ⁴ | Winter | Seed | 275 | * | * | * | * |
| Clover, sub (L) <i>Trifolium subterraneum</i> | A | Winter | Seed | 60 | * | - | - | - |
| Clover, white (L) <i>Trifolium repens</i> | P ⁴ | Winter | Seed | 800 | * | * | * | * |
| Clover, white, Ladino (L) <i>Trifolium repens</i> | P ⁴ | Winter | Seed | 800 | * | * | * | * |
| Corn (G) <i>Zea mays</i> | A | Summer | Seed | 1.1-1.8 | * | * | * | * |
| Cotton, Sea Island (M) <i>Gossypium barbadense</i> | P ⁴ | Summer | Seed | 4 | * | * | * | - |
| Cotton, upland (M) <i>Gossypium hirsutum</i> | P ⁴ | Summer | Seed | 4 | * | * | * | - |
| Cowpea (L) <i>Vigna Uniquiculata</i> | A | Summer | Seed | 2-6 | * | * | * | * |
| Crotalaria, lance (L) <i>Crotalaria lanceolata</i> | A | Summer | Seed | 170 | * | * | * | * |
| Crotalaria, showy (L) <i>Crotalaria spectabilis</i> | A | Summer | Seed | 33 | * | * | * | * |

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| | | | | | NW | NE | C | S |
| Crotalaria, slenderleaf (L) <i>Crotalaria intermedia</i> | A | Summer | Seed | 97 | * | * | * | * |
| Crotalaria, striped (L) <i>Crotalaria mucronata</i> | A | Summer | Seed | 80 | * | * | * | * |
| Dallisgrass (G) <i>Paspalum dilatatum</i> | P | Summer | Seed | 230 | * | - | - | - |
| Digitgrasses (G) <i>Digitaria decumbens</i> | P | Summer | Veg. | --- | - | - | * | * |
| Fescue tall (G) <i>Festuca arundinacea</i> | P | Winter | Seed | 230 | * | * | * | * |
| Guineagrass (G) <i>Panicum maximum</i> | P | Summer | Seed | 1000 | - | - | * | * |
| Limpograss (G) <i>Hermarthria altissima</i> | P | Summer | Veg. | --- | * | * | * | * |
| Indigo, hairy (L) <i>Indigofera hirsuta</i> | A | Summer | Seed | 200 | * | * | * | * |
| Johnsongrass (G) <i>Sorghum halepense</i> | P | Summer | Seed | 130 | * | * | * | * |
| Kudzu (L) <i>Pueraria thumbergiana</i> | P | Summer | S&V | 40 | * | * | * | * |
| Hemp, Sunn <i>Crotalaria Junceae</i> | A | Summer | Seed | 15 | * | * | * | * |
| Lespedeza (L) <i>Lespedeza Striata</i> | A | Summer | Seed | 200-340 | * | * | * | * |
| Lovegrass, weeping (G) <i>Eragrostis curvula</i> | P | Summer | Seed | 1500 | * | * | * | * |
| Lupine, blue (L) <i>Lupinus angustifolius</i> | A | Winter | Seed | 2 | * | * | * | - |
| Lupine, yellow (L) <i>Lupinus luteus</i> | A | Winter | Seed | 3.6 | * | * | * | - |
| Medic, black (L) <i>Medicago lupulina</i> | A | Winter | Seed | 280 | * | * | * | - |
| Molassesgrass (G) <i>Melinis minutiflorum</i> | P | Summer | Seed | 6800 | - | - | * | * |

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| | | | | | NW | NE | C | S |
| Napiergrass (G) <i>Pennisetum purpureum</i> | P | Summer | Veg. | --- | * | * | * | * |
| Oats (G) <i>Avena sativa</i> | A | Winter | Seed | 13 | * | * | * | * |
| Pangolagrass (G) <i>Digitaria decumbens</i> | P | Summer | Veg. | --- | - | - | * | * |
| Paragrass (G) <i>Panicum purpurascens</i> | P | Summer | Veg. | --- | - | - | - | * |
| Pea, field (L) <i>Pisum sativum</i> | A | Winter | Seed | 4 | * | * | * | * |
| Peanut (L) <i>Arachis hypogea</i> | A | Summer | Seed | 0.5-1.0 | * | * | * | - |
| Peanut, perennial (L) <i>Arachis glabrata</i> | P | Summer | Veg. | --- | * | * | * | * |
| Pearlmillet (G) <i>Pennisetum glaucum</i> | A | Summer | Seed | 88 | * | * | * | * |
| Pigeon Pea (L) <i>Cajanus cajan</i> | A | Summer | Seed | 5.5-6.0 | * | * | * | * |
| Ramie (N) <i>Boehmeria nivea</i> | P | Summer | Veg. | --- | - | - | - | * |
| Rape (B) <i>Brassica napus</i> | B | Winter | Seed | 104 | * | * | * | * |
| Rescuegrass (G) <i>Bromus catharticus</i> | A | Winter | Seed | 62 | * | * | - | - |
| Rhodesgrass (G) <i>Chloris gayana</i> | P | Summer | Seed | 2000 | - | - | * | * |
| Rice (G) <i>Oryza sativa</i> | A | Summer | Seed | 15-25 | * | * | * | * |
| Roughpea (L) <i>Lathyrus hirsutus</i> | A | Winter | Seed | 15 | * | - | - | - |
| Rye (G) <i>Secale cereale</i> | A | Winter | Seed | 18 | * | * | * | * |
| Ryegrass, Italian (G) <i>Lolium multiflorum</i> | A | Winter | Seed | 227 | * | * | * | * |

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| | | | | | NW | NE | C | S |
| S. humilis (L) <i>Stylosanthes guianensis</i> | A | Summer | Seed | 180-220 | - | - | * | * |
| St. Augustinegrass (G) <i>Stenotaphrum secundatum</i> | P | Summer | Veg. | --- | - | - | * | * |
| Sericea (L) <i>Lespedeza cuneata</i> | P | Summer | Seed | 360 | * | - | - | - |
| Sesbania (L) <i>Sesbania exaltata</i> | A | Summer | Seed | 44 | * | * | * | * |
| Sorghum (G) <i>Sorghum bicolor</i> | A | Summer | Seed | 28 | * | * | * | * |
| Sourclover (L) <i>Melilotus indica</i> | A | Winter | Seed | 300 | * | * | * | * |
| Soybean (L) <i>Glycine max</i> | A | Summer | Seed | 2.8-8 | * | * | * | * |
| Stargrass, (G) <i>Cynodon aethiopicus</i> | P | Summer | Veg. | --- | - | - | * | * |
| Sudangrass (G) <i>Sorghum vulgare sudanese</i> | A | Summer | Seed | 55 | * | * | * | * |
| Sugarcane (G) <i>Saccharum sp.</i> ⁵ | P | Summer | Veg. | --- | * | * | * | * |
| Sweetclover (L) <i>Melilotus alba</i> | A | Winter | Seed | 250 | * | * | * | * |
| Sunflower (Thistle) <i>Helianthus annuus</i> | A | Summer | Seed | 3-9 | * | * | * | * |
| Tobacco (Nightshade) <i>Nicotiana tabacum</i> | A | Summer | Seed | 5000 | * | * | * | - |
| Torpedograss (G) <i>Panicum repens</i> | P | Summer | Veg. | 500 | - | - | * | * |
| Trefoil, big (L) <i>Lotus uliginosis</i> | P | Winter | Seed | 1200 | * | * | * | * |
| Trefoil, birdsfoot (L) <i>Lotus corniculatus</i> | P | Winter | Seed | 400 | * | * | * | * |
| Triticale (G) <i>Triticosecale</i> | A | Winter | Seed | --- | * | * | - | - |
| Vaseygrass (G) <i>Paspalum urvillei</i> | P | Summer | Seed | 440 | * | * | * | * |

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| | | | | | NW | NE | C | S |
| Velvetbean (L) <i>Mucna pruriens</i> | A | Summer | Seed | 0.8-1.2 | * | * | * | * |
| Vetch, common (L) <i>Vicia sativa</i> | A | Winter | Seed | 8 | * | - | - | - |
| Vetch, hairy (L) <i>Vicia villosa</i> | A | Winter | Seed | 18 | * | - | - | - |
| Vetch, monantha (L) <i>Vicia arthculata</i> | A | Winter | Seed | 12 | * | - | - | - |
| Vetch, woollypod (L) <i>Vicia dasycarpa</i> | A | Winter | Seed | 10 | * | - | - | - |
| Wheat (G) <i>Triticum aestium</i> | A | Winter | Seed | 12-20 | * | * | * | * |

¹ A = annual; P = perennial; B = biennial
² L = Legume; G = Grass; M = Mallow; B = Brassica; Sp = Spurge; Se = Sedge; N = Nettle
³ NW = northwest; NE = northeast; C = central; S = south
⁴ Grown as an annual under Florida conditions
⁵ All sugarcane varieties currently grown commercially are hybrids produced from crosses of *Saccharum* species, the most important of which are *S. officinarum* and *S. spontaneum*.