

BrettYoung™
DISTINCT BY DESIGN

Forages

2025

TOPICS

- Rejuvenating old pasture
- Reseeding pasture
- Use your soil sample as a tool for selection
- Forage Species Adaptation

Rejuvenating old pasture

- Adding to existing stand, changing species composition.
- Watch fertility from soil test – Legume vs grass
- Consider adding some short lived perennials with quick growth
 - Perennial Ryegrass - increase stocking rate and nutrient quickly
 - Smaller seed/denser works better

Rejuvenating old pasture

- Soil contact is still key – how thick is sod layer
- Consider spraying herbicide
 - Option for lighter ground to keep cover
 - Reduce mixing weed seed bank
- Banding fertilizer – non-mobile nutrients

Reseeding

- Species Composition – removal of sod forming grasses
- Soil test fertility values – increase non-mobile nutrients
- Opportunity for controlling weeds – stronger chemistries
- Create a plan and stick to it – rotation and time out of pasture

Using Soil Test as Variety Selection Tool

- Why is your existing stand not living up to expectations?
- Soil conditions
 - pH and legume species
 - Salinity
 - Fertility
- Moisture tolerance, saturated soil,...
- Potentially increase production treating areas different

Productivity Levels:
 Poor Fair Moderate Good Excellent

Forage Species	Winter-hardiness	Longevity	Suitability for Hay	Tolerance to Grazing	Pasture Regrowth Rate	Bloat-Causing	W.CDN Productivity					
							May	June	July	August	September	
Alfalfa	Fair to Excellent	Fair to Good	Excellent	Fair to Good	Fair to Excellent	Yes						
Birdfoot Trefoil	Poor	Poor	Fair	Good	Good	No						
Cicer Milkvetch	Excellent	Good	Fair	Good	Fair	No						
Red Clover	Fair to Good	Poor	Good	Good	Excellent	Yes						
Sweet Clover	Excellent	Biennial	Good	Fair	Poor	Yes						
Sainfoin	Good	Fair	Good	Poor	Poor	No						
Meadow Bromegrass	Good	Good	Good	Excellent	Excellent	No						
Hybrid Bromegrass	Good	Good	Excellent	Good	Good	No						
Smooth Bromegrass	Excellent	Excellent	Excellent	Good	Poor	No						
Creeping Red Fescue	Excellent	Excellent	Poor	Good	Excellent	No						
Meadow Fescue	Fair	Fair	Good	Good	Good	No						
Tall Fescue	Fair	Fair	Good	Good	Excellent	No						
Kentucky Bluegrass	Excellent	Excellent	Poor	Excellent	Excellent	No						
Orchardgrass	Fair	Fair to Good	Good	Excellent	Excellent	No						
Timothy	Excellent	Good	Excellent	Fair	Poor	No						
Crested Wheatgrass	Excellent	Excellent	Fair to Good	Excellent	Poor	No						
Intermediate Wheatgrass	Good	Fair	Excellent	Fair	Fair	No						
Slender Wheatgrass	Excellent	Fair	Good	Fair	Fair	No						
Tall Wheatgrass	Good	Good	Good	Fair	Poor	No						
Russian Wildrye	Excellent	Excellent	Good	Good	Fair	No						

Species Selection & Adaptation

Intended Use & Management System

- Is the intended use hay or pasture?
- In hay stands, how many cuts do you expect each year?
- In pasture, how intensely will the crop be grazed?
- Are you rotational or continuous grazing?

Forage Timing

- When would you like your forage to be available?

Environmental Conditions

- How much annual precipitation do you receive?
- How harsh are your winters?

Soil Type

- What is your soil type? (sand, clay, loam)
- How well does your soil drain?
- Is there a problem with saline or alkaline soils?
- Is the organic matter content high or low?

Time of Seeding

- Early Spring
 - Best chance for adequate moisture and good establishment
- Mid Summer
 - Less weed competition, moisture risk
- Late Fall (Dormant)
 - Riskiest of the options. Risk of spring runoff or freeze and thaw seedling damage

SEEDING DEPTH

Err on **shallower** rather than deeper. Seed **¼ inch** – maximum **½ inch** – into a **firm seed bed** to ensure seed to soil contact.

SEEDING RATES

Use seeding rates based on a target number of plants per square foot.

Forage seedlings are relatively weak so target seeds per sq. foot that are four times your target population.

Don't over apply if trying to rejuvenate a stand – if it works it works!

MINIMUM RECOMMENDATION BY SOIL ZONE (PLS)

Brown soil zone

- 8-10 lb/acre
- 18 to 20 seeds/sq. foot

Dark Brown soil zone

- 10-12 lb/acre
- 20 to 25 seeds/sq. foot

Black/Grey wooded soil zone

- 10 – 14 lb/acre
- 25 to 30 seeds/sq. foot

Irrigation

- 14-16 lb/acre
- 30 to 40 seeds/sq. foot

Forage Fertility

- New stand
- Soil test
- Consider higher rates of PK & S at establishment
- 15 lb/acre max P₂O₅ when seed placed

		Stand Composition	Low – Medium Yield Potential Soils		Medium – High Yield Potential Soils				High Yield Potential Soils			
			Nitrogen	Phosphorus (P ₂ O ₅)	Nitrogen	Phosphorus (P ₂ O ₅)	Potassium (K ₂ O)	Sulphur	Nitrogen	Phosphorus (P ₂ O ₅)	Potassium (K ₂ O)	Sulphur
CROP	Grass	< 20% Legume	40 – 90	10 – 30	60 – 100	10 – 30	50 – 60	10 – 15	60 – 200	30 – 50	40 – 60	0 – 15
	Grass - Legume	20 – 40% Legume	30 – 65	20 – 30	40 – 90	20 – 40	50 – 70	15 – 30	60 – 80	40 – 60	60 – 80	15 – 20
		40 – 60% Legume	10 – 30	20 – 40	20 – 40	30 – 40	50 – 80	15 – 30	0 – 60	40 – 80	80 – 150	15 – 30
	Legume	> 60% Legume	0 – 30	30 – 50	0 – 30	40 – 70	60 – 150	15 – 30	0 – 50	60 – 100	80 – 200	20 – 30

Forage Species Adaptation

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Alfalfa Root Types Differentiate Use

Tap Root

Branched & Creeping Root

Sunken Crown

HAY PRODUCTION



Branched: High water table

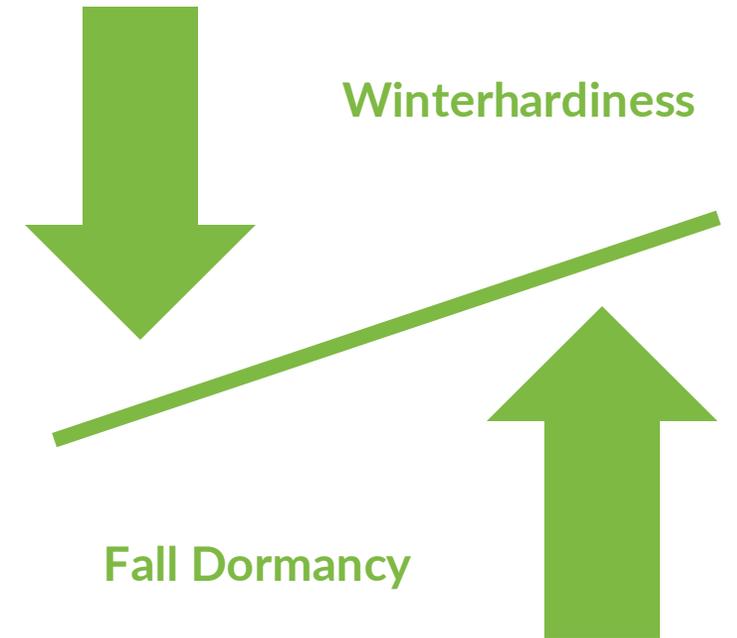
PASTURE PRODUCTION



Fall Dormancy & Winterhardiness

Separate, related ratings

- Fall dormancy (1 to 9) amount of regrowth in the fall
 - 1 = little regrowth (very dormant)
 - 4 = provides growth in the fall (still considered dormant)
 - 6 to 7 = semi-dominant (don't use in Canada)
 - 9 = non-dormant varieties
- Winterhardiness
 - A measure of the alfalfa plant's ability to survive the winter without injury
 - 1 to 6 rating (the lower the number, increased winterhardiness)
 - Linked to dormancy – very dormant varieties tend to be most winterhardy
 - Non-dormant – won't survive the winter in Canada
 - In 3 to 5 dormancy



Legumes for Pasture

- Those that cause bloat:
 - Alfalfa
 - Red Clover – Single Cut, Double Cut
 - Alsike Clover
 - Sweet Clover
- Those that don't cause bloat:
 - Cicer Milkvetch
 - Birdsfoot Trefoil
 - Sainfoin

* Cicer Milkvetch, Birdsfoot Trefoil and Sainfoin are not available inoculated

Red Clover

- Tolerant of acidic soils
- Short-lived
- Bloat
- Hay & pasture
- Easy establishment



Characteristics

Intended Use	Hay & pasture
Key Variety	Wildcat
Rooting Habit	Tap root with branches
Plant Type	Upright
Preferred Growing Conditions	Best suited to areas with good moisture and good drainage; tolerates lower pH soils
Variety Key Features	<ul style="list-style-type: none">• Top yielding red clover• Strong winterhardiness• High moisture tolerance
Species Limitations	<ul style="list-style-type: none">• Bloat hazard• Short-lived
Production Period	Spring
Winterhardiness	Good
Drought	Low
Flooding	Moderate
Optimum pH	5.5 - 7.5
Acidity	Moderate
Alkalinity	Moderate
Salinity	Low
Approximate seeds/lb	240,000

Alsike Clover

- Tolerates wet, low areas
- Acidic soils
- Toxicity potential in horses



Characteristics

Intended Use	Hay & pasture
Key Variety	Aurora
Rooting Habit	Branch root
Plant Type	Low-growing
Preferred Growing Conditions	Low-lying moist areas
Variety Key Features	<ul style="list-style-type: none">• Tolerant to poorly drained soils• Excellent winterhardiness• Flood tolerance 7 – 14 days• Fits short-term stands
Species Limitations	<ul style="list-style-type: none">• Bloat hazard• Risk for grazing horses
Production Period	Spring
Winterhardiness	Excellent
Drought	Poor to Moderate
Flooding	Moderate to High
Optimum pH	5.7 – 7.0
Acidity	Moderate
Alkalinity	Low to Moderate
Salinity	Low
Approximate seeds/lb	680,000

Sweet Clover

- Biennial crop
- Drought tolerant
- High nitrogen fixation
- Low coumarin type for hay production (Norgold)
- Hay & plow down
- Volunteers dormant seed



Characteristics

Intended Use	Hay & plowdown
Key Variety	Norgold – Low Coumarin Type
Rooting Habit	Tap root
Plant Type	Upright – Biennial
Preferred Growing Conditions	Widely adapted; very productive on well drained, fertile soil
Variety Key Features	<ul style="list-style-type: none">• Commonly used for hay or as a soil builder• Very Good winterhardiness
Species Limitations	<ul style="list-style-type: none">• Biennial• Bloat risk
Production Period	Spring of second year
Winterhardiness	Very Good
Drought	Moderate to high
Flooding	Low
Optimum pH	6.5 – 7.5
Acidity	Low
Alkalinity	Moderate
Salinity	Moderate
Approximate seeds/lb	775,000

Cicer Milkvetch

- Non-bloat/pasture mixes
- Slow to establish (2 to 3 years)
- Moderate to long persistence
- Moderate tolerance to drought, salinity, and alkalinity



Characteristics

Intended Use	Pasture
Species	Cicer Milkvetch
Key Variety	AC Oxley II
Rooting Habit	Creeping root
Plant Type	Upright
Preferred Growing Conditions	Widely adapted; creeps best in coarser, textured soils
Variety Key Features	<ul style="list-style-type: none"> • Moderately tolerant to salinity • Ideal pasture legume • Bloat-free legume
Species Limitations	Difficult to establish
Production Period	Late spring – fall
Winterhardiness	Very Good
Drought	Moderate to high
Flooding	Low
Optimum pH	6.0 – 7.8
Acidity	Low to moderate
Alkalinity	Moderate
Salinity	Low to moderate
Approximate seeds/lb	120,000

Birdsfoot Trefoil

- Non-bloat legume/pasture
- Poor seedling vigour
- Likes moisture
- Reseeds
- Branched tap root



Characteristics

Intended Use	Pasture
Key Variety	Leo
Rooting Habit	Tap root with branches
Plant Type	Low-growing
Preferred Growing Conditions	Adapted to areas with higher moisture
Variety Key Features	<ul style="list-style-type: none"> • Good winterhardiness • High flood tolerance • Bloat-free legume
Species Limitations	Difficult to establish
Production Period	Spring – fall
Winterhardiness	Moderate to good
Drought	Moderate
Flooding	High
Optimum pH	6.2 – 6.5
Acidity	Moderate to high
Alkalinity	Moderate
Salinity	Low to moderate
Approximate seeds/lb	370,000

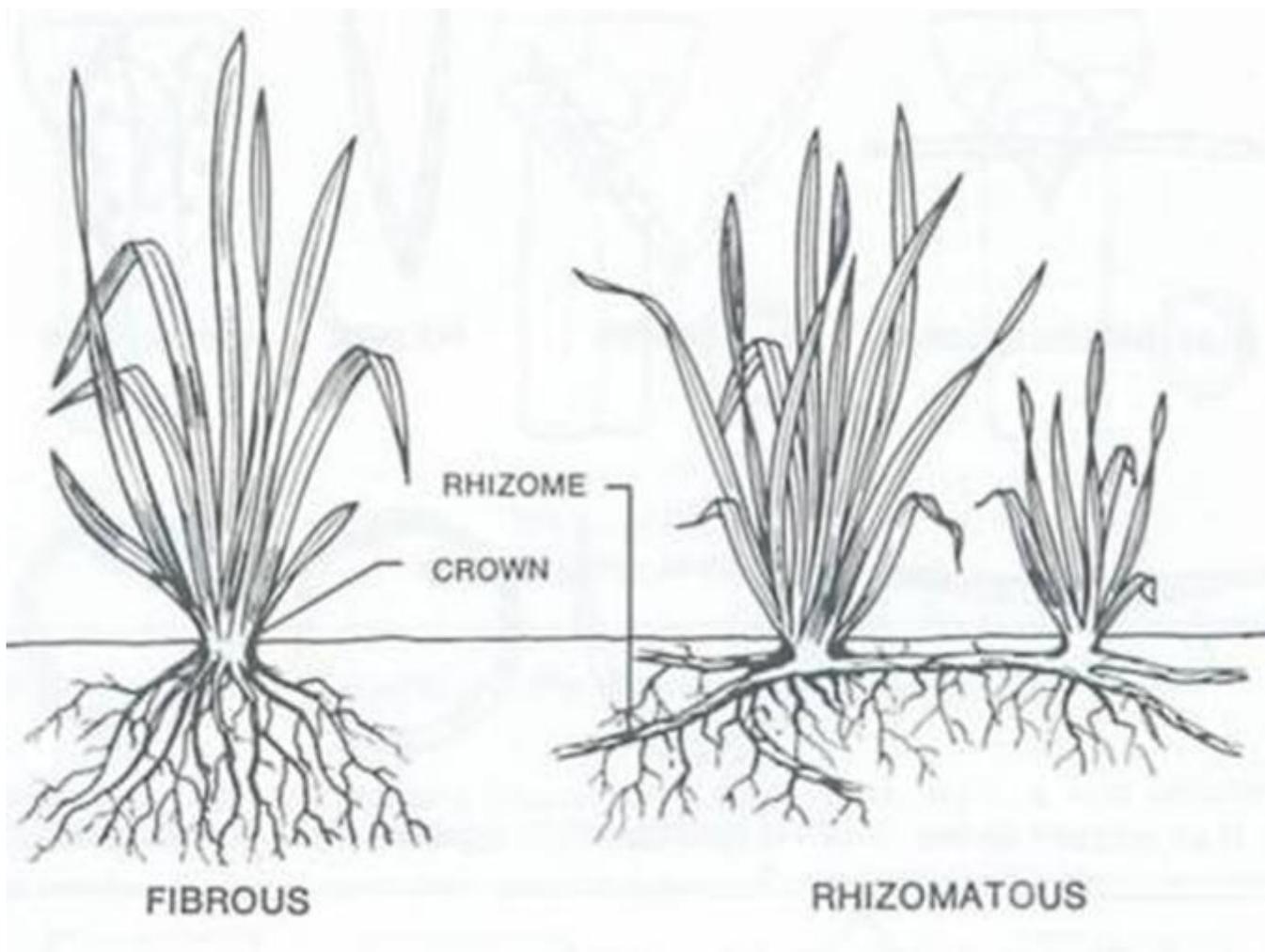
Sainfoin

- Non-bloat
- Limited regrowth
- Large seed
- High seeding rate



Characteristics

Intended Use	Hay & pasture
Rooting Habit	Tap root
Plant Type	Upright
Preferred Growing Conditions	Widely adapted to well-drained soils
Variety Key Features	<ul style="list-style-type: none">• Good drought tolerance• Good to excellent winterhardiness• Good tolerance to alkaline soils• Bloat-free legume
Species Limitations	Limited regrowth
Production Period	Spring – summer
Winterhardiness	Good
Drought	Moderate to high
Flooding	Low
Optimum pH	6.0 – 7.8
Acidity	Low
Alkalinity	Moderate
Salinity	Low
Approximate seeds/lb	25,000



Grasses

Basic Differences

- Bunch type
- Sod forming
- Short/basal
- Tall/elongating

The 3 Types of Bromegrass

SMOOTH

- Sod forming
- Elongating
- Slow regrowth
- Hay
- Very competitive long-term

MEADOW

- Bunch
- Leafy basal
- Fast regrowth
- Hay & pasture

HYBRID

- Cross of Smooth and Meadow Bromegrass
- Intermediate growth and plant type
- Hay & pasture



Smooth

Hybrid

Meadow

Tall Fescue

- Bunch grass
- Very leafy
- Vigorous seedlings
- Saline tolerance
- Drought tolerance
- Flood tolerance



Characteristics

Intended Use	Hay & pasture
Key Variety	SWAJ
Rooting Habit	Bunch grass
Plant Type	Basal
Preferred Growing Conditions	Widely adapted; best in moist, heavy soils
Variety Key Features	<ul style="list-style-type: none"> • Endophyte free • Excellent seedling vigour • Widely adapted
Species Limitations	Not always winterhardy
Production Period	Spring – fall
Winterhardiness	Good
Drought	Moderate
Flooding	Moderate to high
Optimum pH	5.5 – 6.5
Acidity	High
Alkalinity	Moderate
Salinity	Moderate to high
Approximate seeds/lb	205,000

Timothy

- Bunch grass
- Very palatable
- Wet soils
- Acidic soils
- Easy to overgraze
- Tolerates wet soils



Characteristics

Intended Use	Hay & pasture
Key Variety	Catapult
Rooting Habit	Bunch grass
Plant Type	Basal
Preferred Growing Conditions	Adapted to cool, moist areas, good tolerance to waterlogged soils
Variety Key Features	<ul style="list-style-type: none">• Excellent winterhardiness• Leafiness
Species Limitations	Not tolerant to salinity or continuous grazing
Production Period	Spring - summer
Winterhardiness	Excellent
Drought	Low
Flooding	High
Optimum pH	5.6 - 7.3
Acidity	High
Alkalinity	Low
Salinity	Low
Approximate seeds/lb	1,200,000

Orchardgrass

- Bunch grass
- Very palatable
- Fast regrowth
- Fair to good winter survivability
- Susceptible to drought
- Pasture & hay



Characteristics

Intended Use	Hay & pasture
Key Variety	<ul style="list-style-type: none"> • AC Killarney • Trailburst
Rooting Habit	Bunch grass
Plant Type	Basal
Preferred Growing Conditions	Prefers medium, textured, well-drained soils with good moisture
Variety Key Features	<ul style="list-style-type: none"> • Excellent yield and regrowth • High quality • Very leafy
Species Limitations	Not always winterhardy
Production Period	Spring - fall
Winterhardiness	Fair to good
Drought	Moderate
Flooding	Low to moderate
Optimum pH	6.0 - 7.5
Acidity	Moderate
Alkalinity	Low
Salinity	Low to moderate
Approximate seeds/lb	425,000

Crested Wheatgrass

- Bunch grass
- Very common
- Very long lived
- Drought tolerant
- Excellent early season growth
- Late in season — poor palatability

Varieties

- Diploid type: Fairway
- Tetraploid type: Kirk
- Improved tetraploid: AC Goliath



Tall Wheatgrass



- Saline tolerance
- Bunch grass
- Coarse

Slender Wheatgrass



- Short rhizomes
- Saline tolerant
- Shorter lived

*Both varieties are good with alfalfa in a hay blend

Creeping Red Fescue

- Turf grass/pasture
- Sod forming
- Acidic soils
- Tolerates close grazing
- Important seed crop



DISTINCT BY DESIGN

At BrettYoung we are proud of the strategic partnerships we have with world-class organizations through which we source leading technologies and genetics. This allows us to bring distinct market choices that deliver you performance and value. By design, our success will always be rooted within your success. Like you, we are independent, resolute, and Distinct By Design.

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Alfalfa Seed Quality

	Weed Seeds (Max No. in 25g)			Other Crop (Max No. in 25g)		
	Primary Noxious Weeds	Primary Plus Secondary	Total Weeds	Sweet Clover	Brassica	Other Non Brassica
Canada Certified No. 1	0	5	50	20	4	1%
Common No. 1	0	5	75	25	8	2%
BrettYoung Target	0	0	10			

Timothy Seed Quality

	Weed Seeds (Max No. in 25g)			Other Crop (Max No. in 25g)		
	Primary Noxious Weeds	Primary Plus Secondary	Total Weeds	Sweet Clover	Brassica	Other Non Brassica
Canada Certified No. 1	0	5	50	10	4	1%
Common No. 1	0	10	75	25	8	2%
BrettYoung Target	0	0	10			