





Introduction:

- Thomas Ag Services, LLC. is a wholesale seed company
- Production areas:
 - ✓ Willamette Valley Oregon
 - Cool Season Grasses
 - Small Grains
 - ✓ High deserts of Utah
 - Rangeland Grasses
 - Alfalfa
 - Small Grains
 - Other Feed Commodities Products
- Two Production areas give greater flexibility against competing crops and world markets
- Our Utah seed production is under pivot irrigation
- Excellent Grower relationships in Utah and Oregon





Cattle Prime Pasture Mixture

Cattle Prime Pasture Mixture:

Formulated with grasses and clovers to achieve the optimal nutrition goals for beef cattle. Cattle Prime Pasture Mixture is soft leaved, endophyte free, improves rumen efficiency and palatability. All of this is to achieve faster weight gains and healthy animals.

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Benefits:

- ✓ Rumen Efficiency
- ✓ Increase Drymatter intake
- ✓ Healthy Cattle
- ✓ Fast Establishing
- ✓ Good persistence
- ✓ Winterhardiness
- ✓ Medium-Late Maturing



Mixture Components:

- Cache Meadow Brome
- Meadow Fescue
- Forage Tall Fescue
- Icon Orchardgrass
- Tet. Annual Ryegrass
- Grazing Alfalfa



Planting Rates:

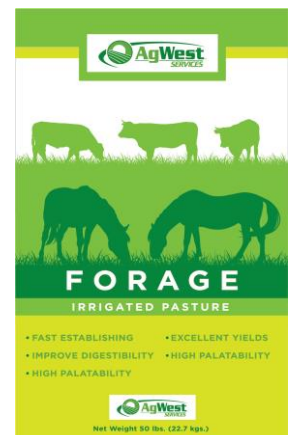
- Drilling / 30-35 lbs per acre
- Broad cast /40-45 per acre

Planting Zones:



Planting Times:

Spring and Fall





Dairy Prime Pasture Mixture

Dairy Prime Pasture Mixture:

Formulated with grasses and clovers to achieve the optimal nutrition goals for all ranges of lactating dairy cattle. Dairy Prime Mixture is soft leaved, endophyte free, excellent palatability and improves rumen efficiency with good fiber ingestion and digestibility. All of this is to achieve healthy milk cows.

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Benefits:

- ✓ High Rumen Efficiency
- ✓ Good Ingestion and Digestibility
- ✓ Healthy Cattle
- ✓ Increases energy and protein
- ✓ Fast Establishing
- ✓ Good persistence
- ✓ Good Winterhardiness
- ✓ Grazing or multi-cut options
- ✓ Medium-Late Maturing



Mixture Components:

- Icon Orchardgrass
- AWS Meadow Fescue
- Tet. Perennial Ryegrass
- Cache Meadow Brome
- Birdsfoot Trefoil
- Ladino White Clover



Planting Rates:

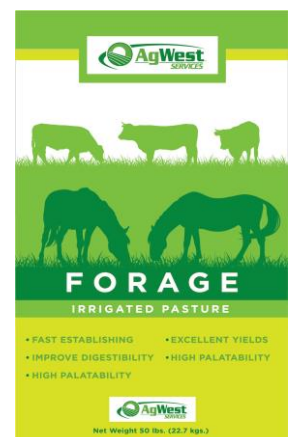
- Drilling / 30-35 lbs per acre
- Broad cast /40-45 per acre

Planting Zones:



Planting Times:

Spring and Fall



SERVICE

QUALITY FORAGE

INNOVATION



Horse Prime Pasture Mixture

Horse Prime Pasture Mixture:

Formulated with grasses to achieve the optimal source of digestible fiber for horses. Horse Prime Mixture is soft leaved, endophyte free, with excellent palatability. All of this is to achieve healthy animals.

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Benefits:

- ✓ Optimal fiber digestibility
- ✓ Healthy horses
- ✓ Fast Establishing
- ✓ Good persistence & tillering
- ✓ Excellent grazing and traffic tolerance
- ✓ Medium-Late Maturing (Maintains Quality)
- ✓ 5-7 ton drymatter
- ✓ Rotational grazing with rest periods for plant recovery



Mixture Components:

- KY Early Timothy
- Icon Orchardgrass
- Cache Meadow Brome
- AWS Meadow Fescue
- Tet. Perennial Ryegrass

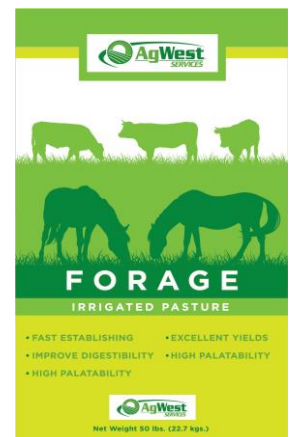
Planting Rates:

- Drilling / 30-35 lbs per acre
- Broad cast /40-45 per acre

Planting Times:

Spring and Fall

Planting Zones:





Rangeland Prime Mixture

Rangeland Prime Pasture Mixture:

Formulated with rangeland grasses & legumes to achieve good forage grazing, site-stabilization and site-restoration requirements..

Soil & Moisture:

In many areas of the intermountain region soils are traditionally alkaline with extreme high pH and very little moisture. Often the main source of precipitation comes from snowmelt. Snowmelt is stored in the soil for plants to utilize through the dry season. Rainfall is a critical part of rangeland productivity however rain can be sporadic and difficult to predict a consistent amount of rainfall each season.

Benefits:

- ✓ Site Restoration
- ✓ Handles Minimal Precipitation
- ✓ Good Forage Grazing
- ✓ Palatable
- ✓ Winter Hardy
- ✓ Traffic Tolerant
- ✓ Mixtures are based on precipitation available
- ✓ Site Stabilization



Mixture Components:

- Valvolov Siberian Wheatgrass
- Highcrest Crested Wheatgrass
- Dryland Alfalfa
- Rush Intermediate Wheatgrass
- Highcrest Crested Wheatgrass
- *Ask about other species

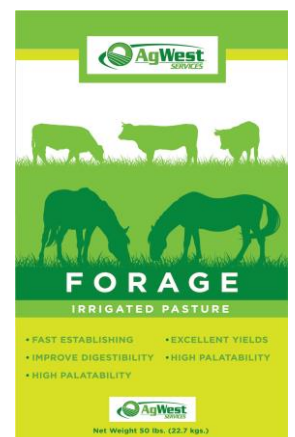
Planting Rates:

- Drilling / 30-35 lbs per acre
- Broad cast /40-45 per acre

Planting Times:

Spring and Fall

Planting Zones:



SERVICE

QUALITY FORAGE

INNOVATION



Icon Orchardgrass

Icon Orchardgrass:

This variety is a high-quality, cool-season perennial forage bunch grass. It is known to be a high-yielder, have high forage quality, have excellent longevity, and be more tolerant of heat and drought than most cool-season grasses.

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Benefits:

- ✓ Drought Tolerance / Medium-High
- ✓ Persistence / Medium-High
- ✓ Winter Hardiness / High
- ✓ Yield Potential / High
- ✓ Grazing Tolerance / High
- ✓ Favorable choice for beef, dairy and horse operations



Planting Rates:

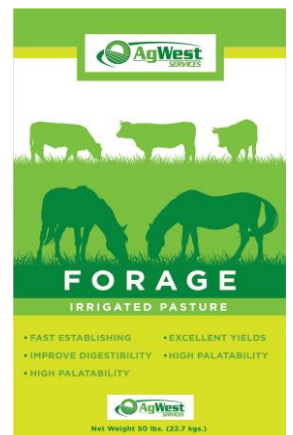
- Drilling / 30-35 lbs per acre
- Broad cast /40-45 per acre

Planting Times:

Spring and Fall

Performance Information

- ☐ University of Kentucky: In a three-year orchardgrass trial ending in 2008, Icon tied as the statistical winner in yield. It should be noted that 2007 and 2008 were severe drought years in the trial geographies, and Icon performed well.
- ☐ Other Trials: Icon has also performed very well in tests with the University of Wisconsin (Arlington); the University of Illinois (Urbana); and the University of Wyoming (Powell).





KY Early Timothy

Icon Orchardgrass:

This variety is a high-quality, cool-season perennial forage bunch grass. It is known to be a high-yielder, have high forage quality, have excellent longevity, and be more tolerant of heat and drought than most cool-season grasses.

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Benefits:

- ✓ Out yields numerous other varieties of timothy, meaning more bales of hay.
- ✓ Excellent regrowth, meaning a greater chance of a high-yielding second cutting.
- ✓ Good longevity, meaning less replanting



Planting Rates:

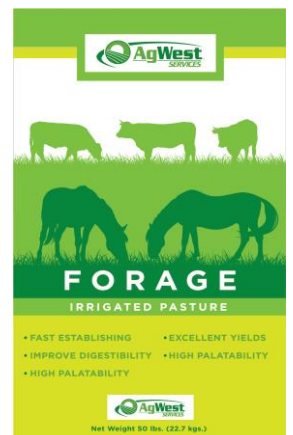
- Drilling / 5-10 lbs per acre
- Broad cast /15-20 lbs per acre

Planting Times:

Spring and Fall

Performance Information

- KY-Early Timothy produces abundant quantities of forage. Trial results indicate 20-30% yield increases over Clair, Climax and many other timothy varieties. KY-Early provide more timothy per acre than the competition.
- KY-Early is hardy. It has shown an ability to survive wet years as well as dry/hot years, assuring farmers of longer-lasting stands and fewer replants.





AWS Forage Fescue

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.



Meadow Fescue:

- ✓ Excellent early season growth
- ✓ Superior NDF, compared to tall fescue
- ✓ Excellent palatability
- ✓ Good hay or grazing

Tall Fescue:

- ✓ More yield per acre
- ✓ Good tolerance in high pH soils
- ✓ Handles livestock traffic well
- ✓ Good drought resistance
- ✓ Responds well under irrigation
- ✓ Good for hay or grazing



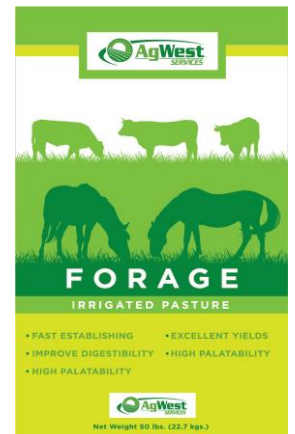
Planting Rates:

- Drilling / 25-30 lbs per acre
- Broad cast /35-40 lbs per acre

Planting Zones:



Planting Times: Spring and Fall



SERVICE

QUALITY FORAGE

INNOVATION



Ration Annual Ryegrass

Ration Annual Ryegrass:

This premium diploid annual ryegrass can be used for many agricultural purposes. Ration has excellent forage quality and excels in grazing, hay and silage. Ration is well suited for cover crop programs due to its vigorous root system that break soil compaction, rapid establishment. Excellent cold tolerance.

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Ration Annual Ryegrass

- ✓ Fast establishing
- ✓ Excellent digestibility for rumen efficiency
- ✓ High Energy
- ✓ Excellent Quality
- ✓ High drymatter feed production
- ✓ Multi-cutting
- ✓ Responds well to lagoon water
- ✓ Disease resistant
- ✓ Silage or grazing
- ✓ Often used in a dairy's nutrient management plan



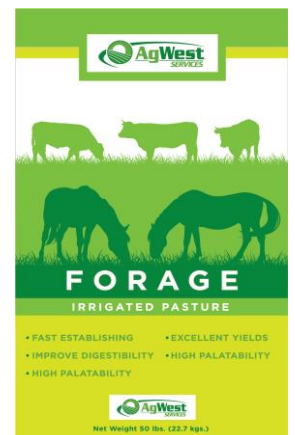
Planting Rates:

- Drilling / 20-25 lbs per acre
- Broad cast / 35-40 lbs per acre

Planting Times:

Spring and Fall

Planting Zones:



SERVICE

QUALITY FORAGE

INNOVATION



Competitor Italian Ryegrass

Competitor Italian Ryegrass – Brand:

This Italian ryegrass is a diploid and performs well in cold regions. Italian ryegrass has excellent forage quality. For best results, we recommend spring planting and utilize forage through the summer.

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Benefits:

- ✓ Does not come to head the first year when spring planted.
- ✓ High energy compared to other Italian ryegrasses
- ✓ Deep roots and often used in a dairy's nutrient management plan
- ✓ Excellent Quality Feed
- ✓ Excellent palatability
- ✓ Responds well to lagoon water
- ✓ Disease resistant
- ✓ Silage or grazing
- ✓ Boot stage cutting is recommended for best quality



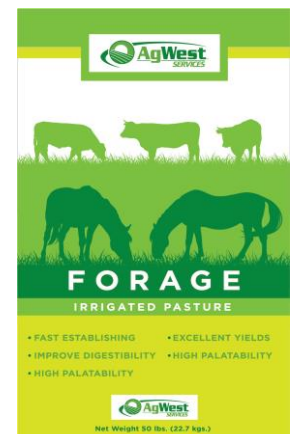
Planting Rates:

- Drilling / 20-25 lbs per acre
- Broad cast /35-40 lbs per acre

Planting Zones:



Planting Times: Spring and Fall



SERVICE

QUALITY FORAGE

INNOVATION



Thor Triticale

Thor Triticale:

Thor is an excellent forage facultative triticale that can be planted for the spring or winter. It doesn't require vernalization. Spring/Winter triticale adapted widely throughout the Pacific Northwest, Central Plains and Northern US. Thor has been winter hardy tested in Montana with good results.

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Benefits:

- ✓ Facultative: Fall and Spring Planting
- ✓ Good Winter Hardiness
- ✓ Excellent Dairy Silage
- ✓ Excellent Tonnage
- ✓ Awnletted – short awns
- ✓ Disease resistant
- ✓ Performs well with lagoon water



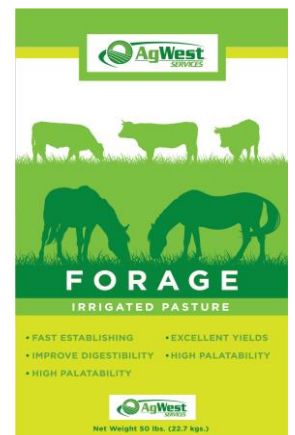
Planting Rates:

- Drilling / 125 lbs per acre
- Broad cast / 140 lbs per acre

Planting Times:

Spring and Fall

<u>Imperial, NE</u> <u>2020</u>	<u>Winter Forage</u> <u>Trial</u>	
<u>Variety</u>	<u>Species</u>	<u>t/ac @ 35%</u> <u>DM</u>
Trical Thor	Triticale	8.9
SY TF 131	Triticale	7.8
Slick Trit II	Triticale	7.7
Willow Creek	Wheat	5.5
SY MONUMENT	Wheat	5.2





Gunner Triticale

Gunner Triticale:

Gunner is an awnless forage facultative triticale. Excellent option for grazing or silage systems. Very good regrowth for grazing system as well as good against disease and drought stress. And has vigorous fall growth and very good hay. Performs well in a wide range of regions and soil types.

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Benefits:

- ✓ Facultative: Fall and Spring Planting
- ✓ Excellent Tonnage
- ✓ Disease Resistant
- ✓ Good Straw Strength
- ✓ Vigorous Growth
- ✓ Excellent Hay Quality
- ✓ Good Winter
- ✓ Awnless
- ✓ Performs well with Lagoon Water



Planting Rates:

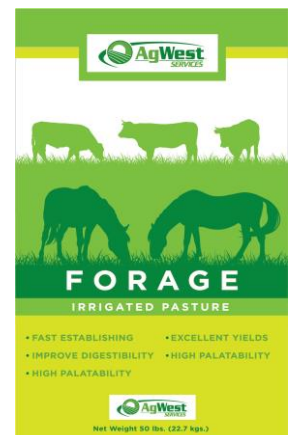
- Drilling / 125 lbs per acre
- Broad cast / 140 lbs per acre

Planting Times:

Spring and Fall

Othello, WA 3 Year Dry Matter Yield

Variety	Dry Matter Yield (tons/acre)			
	2018	2019	2020	Average
Gunner	6.33	5.44	4.29	5.35
TriCal 141	4.62	5.73	x	5.18
Flex 719	4.72	5.45	5.20	5.12
TriCal 131	4.11	5.68	4.65	4.81
FX1001	4.50	4.50	x	4.50
HyOctane	4.12	x	x	4.12
Forerunner	4.03	x	x	4.03





Merlin Max Triticale

Merlin Max Triticale:

Merlin Max triticale is awnless, high performing facultative triticale. This product can be spring planted across the northern US or fall planted in regions with snow cover.

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Benefits:

- ✓ Facultative: Fall and Spring Planting
- ✓ Excellent Hay Quality
- ✓ 5-8 ton Day Matter
- ✓ Mild Winter Hardiness (Snow cover)
- ✓ Awnless
- ✓ No lodging
- ✓ Disease resistant



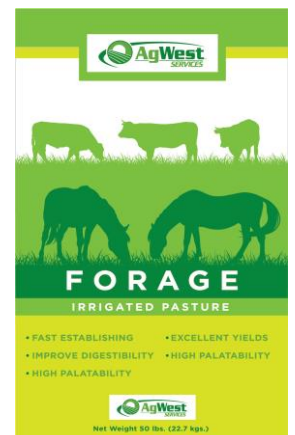
Planting Rates:

- Drilling / 125 lbs per acre
- Broad cast / 140 lbs per acre

Planting Times:

Spring and Fall

<u>Vernon TX 2020 / Variety</u>	<u>Species</u>	<u>t/ac @ 35%DM</u>
TriCal Merlin Max	Triticale	9.65
TriCal Surge	Triticale	9.37
Slick Trit II	Triticale	7.79
Fridge	Triticale	7.68





TriCal 131 Triticale

TriCal 131 Triticale:

This is a good forage awnless facultative triticale. Excellent option in grazing or silage systems. Very good regrowth in grazing system as well as good against disease and drought stress. Vigorous fall growth. Good hay option as well

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Benefits:

- ✓ Facultative: Fall and Spring
- ✓ Awnless (beardless)
- ✓ Rust tolerant
- ✓ Tolerant of wheat streak mosaic virus
- ✓ Good straw strength
- ✓ Medium maturity
- ✓ Upright fall growth habit
- ✓ Vigorous fall growth
- ✓ Adapted to Texas off the Caprock and to Southern Great Plains



Planting Rates:

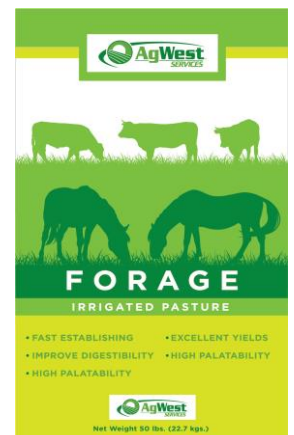
- Drilling / 125 lbs per acre
- Broad cast / 140 lbs per acre

Planting Times:

Spring and Fall

Winter forage trial / 2020 Vernon, TX

Variety	Species	t/ac @ 35%DM
SY TF 131	Triticale	9.38
TriCal Surge	Triticale	9.37
TAM 114	Wheat	8.72
TriCal 718	Triticale	8.66
Slick Trit II	Triticale	7.79
Fridge	Triticale	7.68





Stormbreaker Wheat – (MTF1435)

Stormbreaker Wheat:

This is a great dual purpose awnless hard red winter wheat. Excellent option for grazing, silage or grain. Very good regrowth in grazing system as well as good against disease and drought stress. Performs well in a wide range of regions and soil types.

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Benefits:

- ✓ Winter Wheat (Fall Planting)
- ✓ Awnless
- ✓ Excellent for Hay or Silage
- ✓ Good Forage Tonnage
- ✓ Disease Resistant
- ✓ Good Straw Strength
- ✓ Adapted for various climate
- ✓ Hard Red Wheat
- ✓ Mills well for flour
- ✓ Protein 11- 12.90% protein with Utah growers



Planting Rates:

- Drilling / 125 lbs per acre
- Broad cast / 140 lbs per acre

Planting Times:

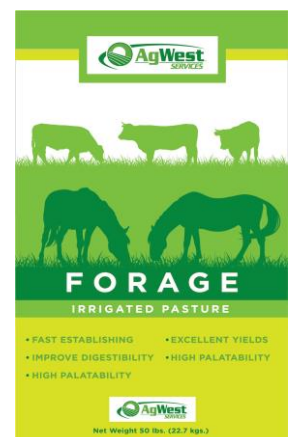
Spring and Fall

Forage Yield – Utah 2020 Harvest

- ✓ Irrigated
 - 15.90 ton
 - Soft dough cutting

Grain Yield – Utah 2020 Harvest

- ✓ Dryland
 - 38-70 bushel per acre
- ✓ Irrigated
 - 100 – 140 bushel per acre





Falcon Oat

Falcon Oats:

This quality forage oat is a high value variety matched with great tonnage. It has the unique growth habit of the to the Everleaf varieties as they are closely related. Delayed heading and dark broad leaves put them into a class of their own.

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Benefits:

- ✓ Delayed heading for more biomass and quality
- ✓ Resistance to rust and stem disease
- ✓ Adaptable to many soils
- ✓ Consistent Top Performing Oat
- ✓ Excellent leaf to stem ratio
- ✓ Blends extremely well with peas



Planting Rates:

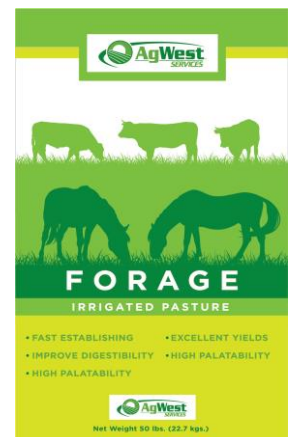
- Drilling / 110 lbs per acre
- Broad cast / 125 lbs per acre

Planting Times:

Spring and Fall

Quality Data – Othello WA

Variety	2020 in (%)	2019 in (%)	2018 in (%)	2017 in (%)	2016 in (%)	2015 in (%)	2014 in (%)	2012 in (%)	8 Year Mea n	4 Year Mean (Wher e all Presen t)
Falcon		13.99		10.49	10.88	12.64	12.44	10.39	11.81	12.37
Monida	15.00	10.44	10.98	8.89	10.80	12.56	8.19	8.67	10.69	9.97





Proleaf 234 Oat

Proleaf 234 Oat:

This forage oat has developed as a very good traditional oat for milk/soft dough harvest in the Pacific Northwest, Intermountain, California and Northeast region of the U.S. Proleaf 234 wide leaf and denser growth are what have placed it in the top of trials for production.

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Benefits:

- ✓ Spring Planting for most areas
- ✓ Enhanced Forage (Larger Leaf)
- ✓ Excellent Hay Quality
- ✓ 5-8 ton Day Matter
- ✓ Crown Rust Resistant
- ✓ Handles lagoon water
- ✓ Stands well



Planting Rates:

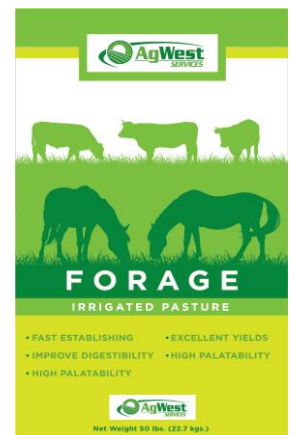
- Drilling / 110 lbs per acre
- Broad cast / 125 lbs per acre

Planting Times:

Spring and Fall

Quality Data – Othello WA

Variety	2020 Yield Dry tons/ a	2019 Yield Dry tons/ a	2018 Yield Dry tons/ a	2017 Yield Dry tons/ a	2016 Yield Dry tons/ a	2015 Yield Dry tons/ a	2014 Yield Dry tons/ a	2012 Yield Dry tons/ a	8 Year Mean tons/ a	4 Year Mean (Where all Present)
Monida	7.71	5.97	5.67	7.12	8.49	6.13	6.51	11.18	7.35	7.45
ProLeaf 234	6.79	8.01	6.10	8.01	7.43	6.84	6.96	10.13	7.53	7.99





Jupiter Oat

Jupiter Oat:

This spring forage product that has good forage yield potential and high-test weight, and good straw strength. Jupiter Oat handles lagoon water well compared to other oat varieties. Performs well when planted in the spring or fall planted in mild winter climates. Jupiter Oat has shown excellent resistance disease.

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Benefits:

- ✓ Early Maturing – like Montezuma Oat
- ✓ Excellent straw strength – stands well
- ✓ Thin Stem for Excellent Quality Hay
- ✓ Excellent for California Fall Planting
- ✓ Good Dry Matter Yield
- ✓ Resistance to strip rust and stem disease
- ✓ Adaptable to many soils
- ✓ Consistent Top Performing Oat
- ✓ Blends well with other forage products
- ✓ Excellent digestibility



Planting Rates:

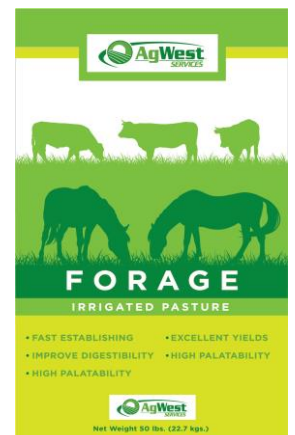
- Drilling / 110 lbs per acre
- Broad cast / 125 lbs per acre

Planting Times:

Spring and Fall

Quality Data – Modesto CA

Variety	2020	2019	2018	2017	2016	2015	2014	2012	4 Year Mean (Where all 8 Year Present)	
	Yield Dry tons/a	Yield Dry tons/a	Yield Dry tons/a	Yield Dry tons/a	Yield Dry tons/a	Yield Dry tons/a	Yield Dry tons/a	Yield Dry tons/a		
Jupiter	7.95	8.10	5.67	7.12	8.49	6.13	6.51	11.18	7.35	8.12.
ProLeaf 234	6.79	8.01	6.10	8.01	7.43	6.84	6.96	10.13	7.53	7.99





AWS Forage Grain Mixtures

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Premium Forage Mixtures Available:

- AWS Premium 3 Way Forage Mixture
- AWS Dairy Forage Mixture
- AWS Dark Premium Forage Mixture
- AWS 3 Grain Forage w/ARG
- AWS 3 Grain Forage w/Peas
- Custom Mixtures are available upon request**

Benefits:

- ✓ Fall or Spring planting
- ✓ Awnless
- ✓ Excellent for Hay or Silage
- ✓ Excellent Tonnage
- ✓ Increased NDFd
- ✓ Highly palatable
- ✓ Rust tolerant
- ✓ Good straw strength
- ✓ Adapted for various climates/
increase harvest window



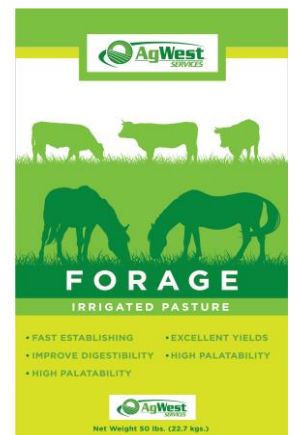
Planting Rates:

- Drilling / 125 lbs per acre
- Broad cast / 140 lbs per acre

Planting Times:

Spring and Fall

For improved digestibility add AWS Forage Peas or AWS Annual Ryegrass to your small grain forage mixture



SERVICE

QUALITY FORAGE

INNOVATION



Cover Crop

Cover Crop:

- ✓ Large Bio-Mass
- ✓ Deep & Large Roots
- ✓ Reduce Compaction
- ✓ Nitrogen Fixation
- ✓ Increase Organic Matter
- ✓ Increase Water Penetration
- ✓ Erosion Control

Benefits:

- ✓ Improve soil health.
- ✓ Increases the following crop productivity

Suited well for...

- ✓ Vineyards
- ✓ Orchards
- ✓ Dairy's - who need additional help with their overall nutrient management plan.



Planting Rates:

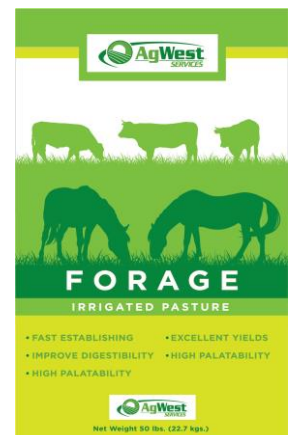
- Drilling / 60-100 lbs per acre
- Broad cast / 80-120 lbs per acre

Planting Times:

Spring and Fall

Mixtures available:

- AWS Plowdown Mix
- AWS Soil Builder Mix
- AWS Soil Builder w/Radish
- AWS Soil Builder w/Brassica
- AWS Low Growing CC





AWS 455 Salt Alfalfa

AWS 455 Salt Alfalfa is a salt tolerant conventional alfalfa. It is productive in both saline and highly productive soils. It also has outstanding drought tolerance. AWS 455 Salt is protected by a broad base of disease resistance.

Soil & Moisture: Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Benefits:

- ✓ Salt tolerance
- ✓ Good forage yields in both saline and highly productive soils
- ✓ Solid disease resistance package

Agronomic Characteristics:

- | | |
|----------------------------|-------------------------|
| ✓ Bacterial Wilt HR | ✓ DRI 30/30 |
| ✓ Fusarium Wilt HR | ✓ Fall Dormancy 4.0 |
| ✓ Verticillium Wilt HR | ✓ Winter Survival 1.5 |
| ✓ Anthracnose HR | ✓ Saline Soils Tolerant |
| ✓ Phytophthora Root Rot HR | ✓ Recovery good |
| ✓ Aphanomyces Root Rot 1HR | ✓ Crown placement good |
| | ✓ Root type Tap |



**Grower
Approved from
Snowville
Utah!**

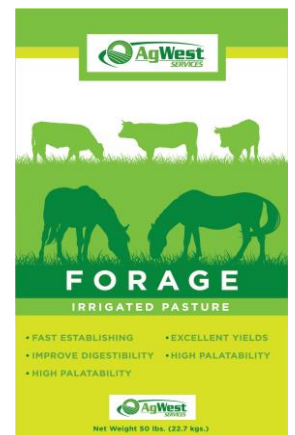
Planting Rates:

- Drilling / 20 lbs per acre
- Broad cast / 30lbs per acre

Planting Times:

Spring and Fall

Planting Zones:



SERVICE

QUALITY FORAGE

INNOVATION



AWS 418 RL Alfalfa

AWS 418 RL Alfalfa:

This variety was selected for herbage quality which delivers outstanding forage quality scores. With these high-quality attributes, AWS 418RL allows growers to extend their harvests 28-35 days. Along with outstanding forage quality, it delivers an excellent yield potential.

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Benefits:

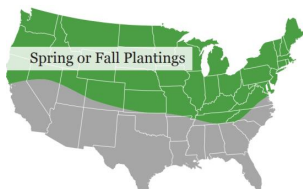
- ✓ High RFQ, NDFd forage quality scores
- ✓ Extend harvest to 35 days
- ✓ Delivers an excellent yield potential
- ✓ RL = Reduced Lignin for improve Dairy Quality

Agronomic Characteristics:

- ✓ Bacterial Wilt HR
- ✓ Fusarium Wilt HR
- ✓ Verticillium Wilt HR
- ✓ Anthracnose HR
- ✓ Phytophthora Root Rot HR
- ✓ Aphanomyces Root Rot 1HR
- ✓ DRI 30/30
- ✓ Fall Dormancy 4.0
- ✓ Winter Survival 1.8
- ✓ Saline Soils Tolerant
- ✓ Recovery good
- ✓ Crown placement good
- ✓ Root type Tap



Planting Zones:



Planting Rates:

- Drilling / 20 lbs per acre
- Broad cast / 30lbs per acre

Planting Times:

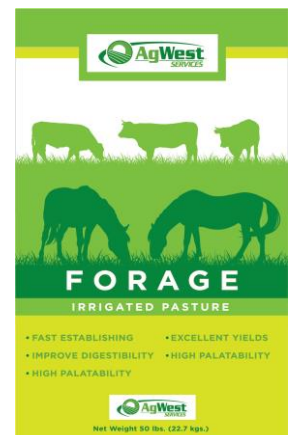
Spring and Fall

EVANSVILLE, WI - 2015 2016 Results

Variety	Yield	Lignin RFQ	M/A	30 hr NDFd uNDF	4 cut TTNDFD
AWS 418RL	42.16	41.21		6.06	6.74
		41.21		163	15.14
Hi-Gest 360	41.90	40.95		5.98	6.31
		40.95		151	15.43
Rebound 6.0	38.40	40.60		6.40	6.49
		38.40		155	15.78
		16.25		40.20	146

20 varieties in Trial- All Competitors Varieties Listed
Forage Quality Testing done @ Rock River Laboratory, Inc. © LSLLC 2016

Hi-Gest® is a Registered Trademark of Dow Agrosciences, LLC HarvXtra® variety tested was L-448HVXRR Megatron is a HarvXtra® product. HarvXtra® is a registered trademark of Forage Genetics International, LLC. / Roundup Ready® is a registered trademark of Monsanto Technology LLC, used under license by Forage Genetics LLC



SERVICE

QUALITY FORAGE

INNOVATION



AWS Bison Alfalfa

AWS Bison Alfalfa:

Bison Alfalfa is recommended by hay growers from central Utah and eastern Nevada. Bison is known among growers to have a long stand life and consistently good yields.

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Features:

- ✓ Excellent winter hardiness
- ✓ Long Stand life
- ✓ Good yield potential
- ✓ Tolerant to saline soils



Agronomic Characteristics:

- Bacterial Wilt R
- Fusarium Wilt R
- Verticillium Wilt R
- Anthracnose R
- Phytophthora Root Rot R
- Aphanomyces Root Rot (Race 1) R
- Fall Dormancy 3/4
- Winter Survival 1.9

**Grower
Approved from
Delta Utah!**

Kevin Knight



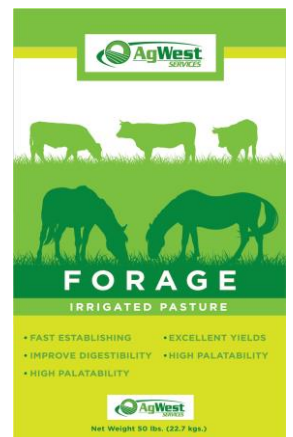
Planting Rates:

- Drilling / 20 lbs per acre
- Broad cast / 30lbs per acre

Planting Times:

Spring and Fall

Planting Zones:



SERVICE

QUALITY FORAGE

INNOVATION



AWS 608 Alfalfa

AWS 608 Alfalfa:

AWS 608 Alfalfa is an aggressive, high forage yielding, fall dormancy 6 alfalfa. AWS 608 is spring frost tolerant and will persist in the dormant growing regions. It expressed outstanding salt tolerance in a University of Arizona forage yield study

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Features:

- ✓ Full season fall dormancy 6
- ✓ High forage yield potential
- ✓ Salt tolerance

Agronomic Characteristics:

- ✓ Bacterial Wilt HR
- ✓ Fusarium Wilt HR
- ✓ Verticillium Wilt HR
- ✓ Anthracnose HR
- ✓ Phytophthora Root Rot HR
- ✓ Aphanomyces Root Rot 1HR
- ✓ DRI 30/30
- ✓ Fall Dormancy 8.0
- ✓ Winter Survival 2.5
- ✓ Saline Soils Tolerant
- ✓ Recovery good
- ✓ Crown placement good
- ✓ Root type Tap



Planting Zones:



Planting Rates:

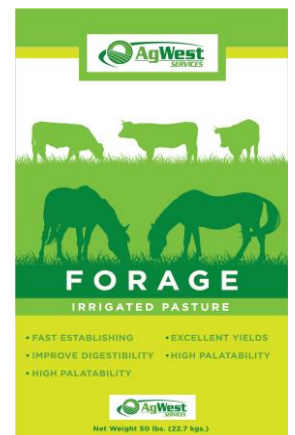
- Drilling / 20 lbs per acre
- Broad cast / 30lbs per acre

Planting Times:

Spring and Fall

Waupaca, Wisconsin 2018 2018-2019 Results / Seeded May 17, 2018 / 4 Replications

Entry	2018	2019	Total
AWS 608		3.12	7.78 10.90
Hi-Gest® 360	3.07		7.16 10.23
Hybriforce 3400	3.14		7.09 10.23
L-450RR			2.91 7.32 10.23
55Q27			2.89 7.04 9.93
Legendairy XHD	2.99		6.70 9.68
Megatron HarvXtra®	2.66		7.00 9.66





AWS 835 Alfalfa

AWS 835 Alfalfa:

AWS 835 is an aggressive, high forage yielding, fall dormancy 8 alfalfa. AWS 835 is performing well in California and Arizona. It expressed outstanding forage yields and performs well in saline soils.

Soil & Moisture:

Adaptable to a wide range of soil types and conditions. For maximum yield and quality results we recommend irrigation and a good fertility plan with your trusted agronomist.

Features:

- ✓ Full season fall dormancy 8
- ✓ High forage yield potential
- ✓ Salt tolerance

Agronomic Characteristics:

- ✓ Bacterial Wilt HR
- ✓ Fusarium Wilt HR
- ✓ Verticillium Wilt HR
- ✓ Anthracnose HR
- ✓ Phytophthora Root Rot HR
- ✓ Aphanomyces Root Rot 1HR
- ✓ DRI 30/30
- ✓ Fall Dormancy 4.0
- ✓ Winter Survival 1.8
- ✓ Saline Soils Tolerant
- ✓ Recovery good
- ✓ Crown placement good
- ✓ Root type Tap



**Grower
Approved from
Southwest!**

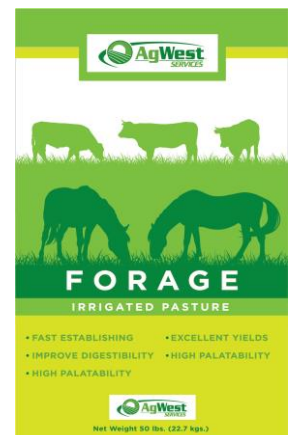
Planting Rates:

- Drilling / 20 lbs per acre
- Broad cast / 30lbs per acre

Planting Times:

Spring and Fall

Planting Zones:



SERVICE

QUALITY FORAGE

INNOVATION