WARRIOR II
ORCHARDGRASS

BREEDER
Radix Research, Inc.

DESCRIPTION
Warrior II is an intermediate flowering, soft leaved, upright growing orchardgrass with exceptional forage yield. Warrior II has deep-seated crowns and exhibits tolerance to intensive grazing pressure. Warrior II is highly recommended as a component in legumes mixtures containing alfalfa, red clover and birdsfoot trefoil. Warrior II exhibits resistance to foliar disease, drought resistance, summer stay green, winter active growth, and tolerance to heat and humidity.

APPLICATION
Warrior II is recommended for intensive rotational grazing, pasture, hay, green chop and silage but requires better management than tall fescue for higher yields and forage quality. Warrior II will tolerate modest continuous grazing pressure without weakening stands.

MATURITY
Orchardgrass typically matures earlier in the spring than legume companion crops. This results in decreased protein and digestibility of the orchardgrass when the legume companion crop is at its highest stage of forage quality. Therefore, orchardgrass varieties are often classified based upon relative maturity to assist in forage quality management decisions. Three classifications of maturity are recognized; early, intermediate and late. If orchardgrass is to be grown in association with legumes then select those maturity classes that will match most closely with the associated legume or companion crop.

PERFORMANCE
Warrior II has been tested extensively in North America. Recent tests in Michigan and Tennessee show Warrior II is an excellent forage producer among new and improved orchardgrass varieties.

Forage Variety Update
Forage Yield Results
University of Tennessee
Planted fall 2008

VARIETY	Locations			
	Greenville	Rank	Milan	Rank
	Yield (lb DM/Acre)			
Megabite	12,887	(2)	3,829	(5)
Benchmark Plus	11,555	(5)	3,563	(6)
Warrior II	**12,349**	**(3)**	**4,185**	**(3)**
Olympia	10,736	(7)	4,392	(2)
Persist	13,100	(1)	4,629	(1)
Survivor	11,792	(4)	3,600	(8)
Shiloh II	10,618	(8)	3,330	(7)
Profit	11,238	(6)	4,091	(4)
LSD @ 0.05	2,511		870	

SEEDING
Dates: Spring and fall when soil temperatures are above 60°F or higher. Orchardgrass is generally intermediate to slow in tillering. Therefore, higher soil temperatures and an increasing photoperiod in spring or warm soils with a decreasing photoperiod is the fall provide optimal environment for seedling emergence.

Growth Habit	Estab. Rate days	Anerobic Soil Toler.	PH Range	Min. Rainfall Inch	Seeding Rate lb/a	Dry Matter	N. Req	Re-growth	Primary Utilization	Veg. Reprod. Tiller Rate	Endophyte	CP%[2]	NDF[2]	ADF[2]	TDN[2]
Perennial Bunch	6-10	Poor	5.5-7.5	>18	15-20	2-5	Med-High 100-200 lbs/acre	Fair to good	1-Hay 2-Pasture 3-Rotational Grazing	Medium	No	12-16	50-56	30-34	55-60

Soil preparation: Prepare a firm seed bed free of clods, sticks and vegetative debris. Seed should be in contact with the soil. Rolling the soil following harrowing to aid in retaining soil moisture should be considered.

Rate: Drill 15-20 pounds per acre. Seeded with legumes consider: 3-5 pounds of Warrior II and 12-15 pounds of alfalfa, red clover, white clover or birdsfoot trefoil per acre. Soils must be well drained with good fertility for optimal forage production.

Depth: Drill sow ¼ - ½ inch.

Forage Variety Update
Forage Yield Results, MSU East Lansing

VARIETY	*2009*	*2008*	*2007*	*3 Year*
Megabite	3.06	5.37	2.18	10.61
Potomac	2.91	5.48	2.02	10.41
Warrior II	**2.98**	**5.01**	**2.16**	**10.15**
Elsie	3.10	4.29	2.12	9.51
LSD @ 0.05	0.19	0.49	0.79	1.03

CULTURAL PRACTICES.

pH: Soil pH is best in range of 7.0. Orchardgrass is more tolerant of alkaline than highly acidic soils.

NPK requirements: Orchardgrass is very responsive to nitrogen fertility and requires more than other cool season forage grasses. A split application in spring and fall of 50-150 lbs nitrogen per acre annually is recommended. Apply 1/3 in fall and the other 2/3 in late winter to mid-spring. The fertility requirement for phosphorous and potassium is moderate to high respectively. If P and K are limiting, then other cool season grasses such as tall fescue and Kentucky bluegrass can dominate. In mixtures with legumes, the absence of available P and K will significantly contribute to legume decline in forage production systems.

Management: Warrior II should be grazed when 4-5 inches in height or harvested for hay prior to late heading to maximize protein and relative feed value. Delay in harvest will reduce forage quality significantly.

Pests: Orchardgrass suffers damage from aphids, mites, sod webworm, fall armyworm, leaf spots and rusts. Nematodes are very serious on orchardgrasss grown in sandy soils. These pests can be controlled with standard management and cultural practices such as grazing, forage harvest and proper fertility to discourage excessive pest populations.

Weed Control: On sites where establishment is critical, use weed control prior to harvest or grazing by domestic animals. Many grass herbicides are generally very harmful to broadleaf species; therefore caution should be taken to avoid drift onto adjoining cropland. Post-emergent use: Banvel +2,4-D; Crossbow, Ally, Tordon, Curtail, Buctril and Prowl.

Any and all reference to pesticides, herbicides and fungicides, whether generic or named products, is for general informational purposes only. Text reference is not intended as an endorsement, nor does omission imply criticism. Always read and follow label directions.