## Projections for Planning Purposes Only -- Not to be Used without Updating 2017 Estimated Costs and Returns per Acre Alamo Switchgrass, Full Season, Pivot Irrigated, Baled - 122 Acres Far West Extension District - 6

REVENUEQuantitySwitchgrass3.17Total Revenue3.17VARIABLE COSTSQuantityProduction CostsFertilizerFertilizer0.45Herbicide2,4-D Amine 42,4-D Amine 440Other Labor0.14Irrigation14Irrigation Labor0.03Machinery Labor0.03Machinery Labor15.99Repairs & Maintenance1Irrigation Equipment1Interest on Credit Line1Interest on Credit Line<	Units Ton Units Pound CWT Ounce Hour Hour Hour Gallon Acre	\$/Unit \$116.00 \$/Unit \$0.17 \$19.75 \$0.12 \$8.50 \$4.00 \$12.00 \$12.00 \$12.00	Total \$367.72 \$367.72 Total \$3.40 \$8.89 \$4.80 \$1.19 \$18.24 \$0.32 \$34.68 \$29.26	Enterprise Total \$44,861.84 \$44,861.84 Enterprise Total \$414.80 \$1,084.28 \$585.60 \$145.18 \$2,225.28 \$38.65 \$4,230.96 \$3,569.93
Switchgrass3.17Total RevenueVARIABLE COSTSQuantityProduction CostsFertilizerQuantityProduction CostsFertilizer20Urea, Solid (46% N)0.45Herbicide2,4-D Amine 440Other Labor0.14IrrigationEnergy Cost4.56Irrigation Labor0.03Machinery Labor7Tractors/Self-Propelled2.89Diesel Fuel1Tractors/Self-Propelled15.99Repairs & Maintenance1Interest on Credit Line1Total Variable Costs1Planned Returns Above Variable Costs:Breakeven Price to Cover Variable CostsFIXED COSTSQuantityMachinery Depreciation1Irrigation Equipment1Tractors/Self-Propelled1	Ton Units Pound CWT Ounce Hour Hour Hour Gallon	\$116.00 \$/Unit \$0.17 \$19.75 \$0.12 \$8.50 \$4.00 \$12.00 \$12.00 \$12.00 \$12.83	\$367.72 \$367.72 Total \$3.40 \$8.89 \$4.80 \$1.19 \$18.24 \$0.32 \$34.68	\$44,861.84 \$44,861.84 Enterprise Total \$414.80 \$1,084.28 \$585.60 \$145.18 \$2,225.28 \$38.65 \$4,230.96
Total Revenue         VARIABLE COSTS       Quantity         Production Costs       Fertilizer         N-32 in Water       20         Urea, Solid (46% N)       0.45         Herbicide       2,4-D Amine 4         2,4-D Amine 4       40         Other Labor       0.14         Irrigation       Energy Cost       4.56         Irrigation Labor       0.03         Machinery Labor       7         Tractors/Self-Propelled       2.89         Diesel Fuel       7         Tractors/Self-Propelled       15.99         Repairs & Maintenance       1         Interest on Credit Line       1         Total Variable Costs       1         Planned Returns Above Variable Costs:       Breakeven Price to Cover Variable Costs         FIXED COSTS       Quantity         Machinery Depreciation       1         Irrigation Equipment       1         Tractors/Self-Propelled       11	Pound CWT Ounce Hour Mcf Hour Hour Gallon	\$/Unit \$0.17 \$19.75 \$0.12 \$8.50 \$4.00 \$12.00 \$12.00 \$12.00 \$1.83	\$367.72 Total \$3.40 \$8.89 \$4.80 \$1.19 \$18.24 \$0.32 \$34.68	\$44,861.84 Enterprise Total \$414.80 \$1,084.28 \$585.60 \$145.18 \$2,225.28 \$38.65 \$4,230.96
VARIABLE COSTS       Quantity         Production Costs       Fertilizer         Production Costs       20         Urea, Solid (46% N)       0.45         Herbicide       2,4-D Amine 4         2,4-D Amine 4       40         Other Labor       0.14         Irrigation       0.14         Irrigation       4.56         Irrigation Labor       0.03         Machinery Labor       0.03         Machinery Labor       2.89         Diesel Fuel       7ractors/Self-Propelled         Tractors/Self-Propelled       15.99         Repairs & Maintenance       1         Implements       1         Interest on Credit Line       1         Total Variable Costs       1         Planned Returns Above Variable Costs:       Breakeven Price to Cover Variable Costs         FIXED COSTS       Quantity         Machinery Depreciation       1         Irrigation Equipment       1         Tractors/Self-Propelled       1	Pound CWT Ounce Hour Mcf Hour Hour Gallon	\$0.17 \$19.75 \$0.12 \$8.50 \$4.00 \$12.00 \$12.00 \$12.00 \$1.83	Total \$3.40 \$8.89 \$4.80 \$1.19 \$18.24 \$0.32 \$34.68	Enterprise Total \$414.80 \$1,084.28 \$585.60 \$145.18 \$2,225.28 \$38.65 \$4,230.96
Production Costs       Value       20         Fertilizer       N-32 in Water       20         Urea, Solid (46% N)       0.45         Herbicide       2,4-D Amine 4       40         Other Labor       40       40         Other Labor       0.14       11         Hand Labor       0.14       11         Irrigation       Energy Cost       4.56         Irrigation Labor       0.03       0.03         Machinery Labor       0.03       10         Tractors/Self-Propelled       2.89       2.89         Diesel Fuel       Tractors/Self-Propelled       15.99         Repairs & Maintenance       1       1         Interest on Credit Line       1       1         Interest on Credit Line       1       1         Total Variable Costs       1       1         Planned Returns Above Variable Costs:       3       2         Breakeven Price to Cover Variable Costs       3       3         FIXED COSTS       Quantity       1         Machinery Depreciation       1       1         Irrigation Equipment       1       1         Tractors/Self-Propelled       1       1	Pound CWT Ounce Hour Mcf Hour Hour Gallon	\$0.17 \$19.75 \$0.12 \$8.50 \$4.00 \$12.00 \$12.00 \$12.00 \$1.83	\$3.40 \$8.89 \$4.80 \$1.19 \$18.24 \$0.32 \$34.68	Total \$414.80 \$1,084.28 \$585.60 \$145.18 \$2,225.28 \$38.65 \$4,230.96
Fertilizer       0         N-32 in Water       20         Urea, Solid (46% N)       0.45         Herbicide       2,4-D Amine 4         2,4-D Amine 4       40         Other Labor       0.14         Hrrigation       0.14         Irrigation Labor       0.03         Machinery Labor       0.03         Tractors/Self-Propelled       2.89         Diesel Fuel       Tractors/Self-Propelled         Tractors/Self-Propelled       15.99         Repairs & Maintenance       1         Implements       1         Interest on Credit Line       1         Total Variable Costs       1         Planned Returns Above Variable Costs:       Breakeven Price to Cover Variable Costs         FIXED COSTS       Quantity         Machinery Depreciation       1         Irrigation Equipment       1         Irrigation Equipment       1         Irrigation Equipment       1         Irrigation Equipment       1	CWT Ounce Hour Mcf Hour Hour Gallon	\$19.75 \$0.12 \$8.50 \$4.00 \$12.00 \$12.00 \$1.83	\$8.89 \$4.80 \$1.19 \$18.24 \$0.32 \$34.68	\$1,084.28 \$585.60 \$145.18 \$2,225.28 \$38.65 \$4,230.96
N-32 in Water20Urea, Solid (46% N)0.45Herbicide2,4-D Amine 42,4-D Amine 440Other Labor0.14Irrigation0.14Irrigation4.56Irrigation Labor0.03Machinery Labor0.03Machinery Labor2.89Diesel Fuel7ractors/Self-PropelledTractors/Self-Propelled15.99Repairs & Maintenance1Irrigation Equipment1Interest on Credit Line1Total Variable Costs1Planned Returns Above Variable Costs: Breakeven Price to Cover Variable CostsQuantityMachinery Depreciation Irrigation Equipment1Irrigation Equipment1Irrigation Equipment1Irrigation Equipment1Interest on Credit Line0Variable Costs1Planned Returns Above Variable Costs: Breakeven Price to Cover Variable CostsFIXED COSTSQuantityMachinery Depreciation Irrigation Equipment1Irrigation Equipment1	CWT Ounce Hour Mcf Hour Hour Gallon	\$19.75 \$0.12 \$8.50 \$4.00 \$12.00 \$12.00 \$1.83	\$8.89 \$4.80 \$1.19 \$18.24 \$0.32 \$34.68	\$1,084.28 \$585.60 \$145.18 \$2,225.28 \$38.65 \$4,230.96
Urea, Solid (46% N)0.45Herbicide2,4-D Amine 440Other Labor14Irrigation0.14Irrigation4.56Irrigation Labor0.03Machinery Labor2.89Diesel Fuel7ractors/Self-PropelledTractors/Self-Propelled15.99Repairs & Maintenance1Implements1Interest on Credit Line1Total Variable Costs1Planned Returns Above Variable Costs:Breakeven Price to Cover Variable CostsFIXED COSTSQuantityMachinery Depreciation1Irrigation Equipment1Irrigation Equipment1Irrigation Equipment1Interest on Credit Line0Total Variable Costs1Breakeven Price to Cover Variable Costs1Interof Costs1Irrigation Equipment1Irrigation Equipment1 </td <td>CWT Ounce Hour Mcf Hour Hour Gallon</td> <td>\$19.75 \$0.12 \$8.50 \$4.00 \$12.00 \$12.00 \$1.83</td> <td>\$8.89 \$4.80 \$1.19 \$18.24 \$0.32 \$34.68</td> <td>\$1,084.28 \$585.60 \$145.18 \$2,225.28 \$38.65 \$4,230.96</td>	CWT Ounce Hour Mcf Hour Hour Gallon	\$19.75 \$0.12 \$8.50 \$4.00 \$12.00 \$12.00 \$1.83	\$8.89 \$4.80 \$1.19 \$18.24 \$0.32 \$34.68	\$1,084.28 \$585.60 \$145.18 \$2,225.28 \$38.65 \$4,230.96
Herbicide       2,4-D Amine 4       40         Other Labor       0.14         Irrigation       0.14         Irrigation       4.56         Irrigation Labor       0.03         Machinery Labor       2.89         Diesel Fuel       7ractors/Self-Propelled         Tractors/Self-Propelled       15.99         Repairs & Maintenance       1         Irrigation Equipment       1         Tractors/Self-Propelled       1         Implements       1         Interest on Credit Line       1         Total Variable Costs       Planned Returns Above Variable Costs:         Breakeven Price to Cover Variable Costs       1         FIXED COSTS       Quantity         Machinery Depreciation       1         Irrigation Equipment       1         Tractors/Self-Propelled       1	Ounce Hour Mcf Hour Hour Gallon	\$0.12 \$8.50 \$4.00 \$12.00 \$12.00 \$12.83	\$4.80 \$1.19 \$18.24 \$0.32 \$34.68	\$585.60 \$145.18 \$2,225.28 \$38.65 \$4,230.96
2,4-D Amine 440Other Labor14Irrigation0.14Irrigation4.56Irrigation Labor0.03Machinery Labor2.89Diesel Fuel2.89Diesel Fuel15.99Repairs & Maintenance1Irrigation Equipment1Implements1Interest on Credit Line1Total Variable Costs1Planned Returns Above Variable Costs: Breakeven Price to Cover Variable CostsQuantityIrrigation Equipment1Irrigation Equipment1Interest on Credit Line1Interest on Cover Variable Costs:1Breakeven Price to Cover Variable Costs1Interest On Credit Line1Interest On Cover Variable Costs1Interest On Cover Variable Costs1Interest On Credit Line1Interest On Cover Variable Costs1Interest On Cover Variable Costs1Interest On Credit Line1Interest On Credit Line1Interest On Credit Line1Interest On Credit Line1Interest On Credit Line1Interes	Hour Mcf Hour Hour Gallon	\$8.50 \$4.00 \$12.00 \$12.00 \$12.00 \$1.83	\$1.19 \$18.24 \$0.32 \$34.68	\$145.18 \$2,225.28 \$38.65 \$4,230.96
Other Labor       0.14         Irrigation       0.14         Irrigation       4.56         Irrigation Labor       0.03         Machinery Labor       2.89         Diesel Fuel       2.89         Tractors/Self-Propelled       15.99         Repairs & Maintenance       1         Irrigation Equipment       1         Tractors/Self-Propelled       1         Implements       1         Interest on Credit Line       1         Total Variable Costs       1         Planned Returns Above Variable Costs:       Breakeven Price to Cover Variable Costs         FIXED COSTS       Quantity         Machinery Depreciation       1         Irrigation Equipment       1         Tractors/Self-Propelled       1	Hour Mcf Hour Hour Gallon	\$8.50 \$4.00 \$12.00 \$12.00 \$12.00 \$1.83	\$1.19 \$18.24 \$0.32 \$34.68	\$145.18 \$2,225.28 \$38.65 \$4,230.96
Hand Labor0.14IrrigationEnergy Cost4.56Irrigation Labor0.03Machinery LaborTractors/Self-Propelled2.89Diesel FuelTractors/Self-Propelled15.99Repairs & MaintenanceIrrigation Equipment1Irrigation Equipment1Implements1Interest on Credit LineTotal Variable CostsPlanned Returns Above Variable Costs: Breakeven Price to Cover Variable CostsQuantityFIXED COSTSQuantityMachinery Depreciation Irrigation Equipment1Irrigation Equipment1	Mcf Hour Hour Gallon	\$4.00 \$12.00 \$12.00 \$1.83	\$18.24 \$0.32 \$34.68	\$2,225.28 \$38.65 \$4,230.96
Irrigation Energy Cost Irrigation Labor 0.03 Machinery Labor Tractors/Self-Propelled Tractors/Self-Propelled Tractors/Self-Propelled 15.99 Repairs & Maintenance Irrigation Equipment 1 Tractors/Self-Propelled 1 Implements 1 Interest on Credit Line Total Variable Costs Planned Returns Above Variable Costs: Breakeven Price to Cover Variable Costs FIXED COSTS Quantity Machinery Depreciation Irrigation Equipment 1 Tractors/Self-Propelled 1	Mcf Hour Hour Gallon	\$4.00 \$12.00 \$12.00 \$1.83	\$18.24 \$0.32 \$34.68	\$2,225.28 \$38.65 \$4,230.96
Energy Cost4.56Irrigation Labor0.03Machinery LaborTractors/Self-PropelledTractors/Self-Propelled2.89Diesel Fuel15.99Repairs & MaintenanceIrrigation EquipmentIrrigation Equipment1Tractors/Self-Propelled1Implements1Interest on Credit Line1Total Variable CostsPlanned Returns Above Variable Costs: Breakeven Price to Cover Variable CostsFIXED COSTSQuantityMachinery Depreciation Irrigation Equipment1Irrigation Equipment1Irrigation Equipment1Irrigation Equipment1Irrigation Equipment1Irrigation Equipment1Irrigation Equipment1	Hour Hour Gallon	\$12.00 \$12.00 \$1.83	\$0.32 \$34.68	\$38.65 \$4,230.96
Irrigation Labor 0.03 Machinery Labor Tractors/Self-Propelled 2.89 Diesel Fuel Tractors/Self-Propelled 15.99 Repairs & Maintenance Irrigation Equipment 1 Tractors/Self-Propelled 1 Implements 1 Interest on Credit Line Total Variable Costs Planned Returns Above Variable Costs: Breakeven Price to Cover Variable Costs FIXED COSTS Quantity Machinery Depreciation Irrigation Equipment 1 Tractors/Self-Propelled 1	Hour Hour Gallon	\$12.00 \$12.00 \$1.83	\$0.32 \$34.68	\$38.65 \$4,230.96
Irrigation Labor       0.03         Machinery Labor       Tractors/Self-Propelled       2.89         Diesel Fuel       15.99         Repairs & Maintenance       Irrigation Equipment       1         Tractors/Self-Propelled       1         Irrigation Equipment       1         Implements       1         Interest on Credit Line       1         Total Variable Costs       Planned Returns Above Variable Costs:         Breakeven Price to Cover Variable Costs       1         FIXED COSTS       Quantity         Machinery Depreciation       1         Irrigation Equipment       1         Tractors/Self-Propelled       1	Hour Gallon	\$12.00 \$1.83	\$34.68	\$4,230.96
Machinery Labor       Tractors/Self-Propelled       2.89         Diesel Fuel       15.99         Repairs & Maintenance       1         Irrigation Equipment       1         Tractors/Self-Propelled       1         Irrigation Equipment       1         Implements       1         Interest on Credit Line       1         Total Variable Costs       1         Planned Returns Above Variable Costs:       Breakeven Price to Cover Variable Costs         FIXED COSTS       Quantity         Machinery Depreciation       1         Irrigation Equipment       1         Tractors/Self-Propelled       1	Gallon	\$1.83	·	
Diesel Fuel Tractors/Self-Propelled 15.99 Repairs & Maintenance Irrigation Equipment 1 Tractors/Self-Propelled 1 Implements 1 Interest on Credit Line Total Variable Costs Planned Returns Above Variable Costs: Breakeven Price to Cover Variable Costs FIXED COSTS Quantity Machinery Depreciation Irrigation Equipment 1 Tractors/Self-Propelled 1	Gallon	\$1.83	·	
Diesel Fuel Tractors/Self-Propelled 15.99 Repairs & Maintenance Irrigation Equipment 1 Tractors/Self-Propelled 1 Implements 1 Interest on Credit Line Total Variable Costs Planned Returns Above Variable Costs: Breakeven Price to Cover Variable Costs FIXED COSTS Quantity Machinery Depreciation Irrigation Equipment 1 Tractors/Self-Propelled 1		·	\$29.26	
Repairs & Maintenance       1         Irrigation Equipment       1         Tractors/Self-Propelled       1         Implements       1         Interest on Credit Line       1         Total Variable Costs       1         Planned Returns Above Variable Costs:       Breakeven Price to Cover Variable Costs         FIXED COSTS       Quantity         Machinery Depreciation       1         Irrigation Equipment       1         Tractors/Self-Propelled       1		·	\$29.26	\$3,569.93
Repairs & Maintenance       1         Irrigation Equipment       1         Tractors/Self-Propelled       1         Implements       1         Interest on Credit Line       1         Total Variable Costs       1         Planned Returns Above Variable Costs:       Breakeven Price to Cover Variable Costs         FIXED COSTS       Quantity         Machinery Depreciation       1         Irrigation Equipment       1         Tractors/Self-Propelled       1		·	+	+-,
Irrigation Equipment 1 Tractors/Self-Propelled 1 Implements 1 Interest on Credit Line Total Variable Costs Planned Returns Above Variable Costs: Breakeven Price to Cover Variable Costs FIXED COSTS Quantity Machinery Depreciation Irrigation Equipment 1 Tractors/Self-Propelled 1	Acre			
Tractors/Self-Propelled       1         Implements       1         Interest on Credit Line       1         Total Variable Costs       1         Planned Returns Above Variable Costs:       Breakeven Price to Cover Variable Costs         FIXED COSTS       Quantity         Machinery Depreciation       1         Irrigation Equipment       1         Tractors/Self-Propelled       1		\$12.02	\$12.02	\$1,466.07
Implements       1         Interest on Credit Line       1         Total Variable Costs       1         Planned Returns Above Variable Costs:       1         Breakeven Price to Cover Variable Costs       1         FIXED COSTS       Quantity         Machinery Depreciation       1         Irrigation Equipment       1         Tractors/Self-Propelled       1	Acre	\$20.38	\$20.38	\$2,486.68
Interest on Credit Line Total Variable Costs Planned Returns Above Variable Costs: Breakeven Price to Cover Variable Costs FIXED COSTS Quantity Machinery Depreciation Irrigation Equipment 1 Tractors/Self-Propelled 1	Acre	\$1.63	\$1.63	\$199.31
Total Variable Costs         Planned Returns Above Variable Costs:         Breakeven Price to Cover Variable Costs         FIXED COSTS       Quantity         Machinery Depreciation         Irrigation Equipment       1         Tractors/Self-Propelled       1		6.50%	\$2.55	\$311.38
Planned Returns Above Variable Costs: Breakeven Price to Cover Variable Costs         FIXED COSTS       Quantity         Machinery Depreciation Irrigation Equipment       1         Tractors/Self-Propelled       1			\$137.36	\$16,758.11
Breakeven Price to Cover Variable Costs FIXED COSTS Quantity Machinery Depreciation Irrigation Equipment 1 Tractors/Self-Propelled 1		—	\$230.36	\$28,103.73
FIXED COSTS     Quantity       Machinery Depreciation     Irrigation Equipment       Irrigation Equipment     1       Tractors/Self-Propelled     1		\$43.33 To	on \$200.00	φ20,100.70
Machinery Depreciation         Irrigation Equipment       1         Tractors/Self-Propelled       1		φ10.00 T		Enterprise
Machinery Depreciation         Irrigation Equipment       1         Tractors/Self-Propelled       1	Units	\$/Unit	Total	Total
Irrigation Equipment 1 Tractors/Self-Propelled 1	01110	φ, ernt	10101	
Tractors/Self-Propelled 1	Acre	\$48.64	\$48.64	\$5,933.75
•	Acre	\$24.98	\$24.98	\$3,047.58
Implements 1	Acre	\$3.66	\$3.66	\$447.00
Equipment Investment				••••••
Irrigation Equipment \$364.78	Dollars	6.50%	\$23.71	\$2,892.70
Tractors/Self-Propelled \$185.01	Dollars	6.50%	\$12.03	\$1,467.14
Implements \$28.26	Dollars	6.50%	\$1.84	\$224.08
Coa Allocated Establishment Cost 1	Acre	\$41.84	\$41.84	\$5,104.48
Trans Pecos Irrigated Land	Acre	\$40.00	\$40.00	\$4,880.00
Total Fixed Costs		<i><i><i></i></i></i>	\$196.69	\$23,996.73
Total Specified Costs		_	\$334.06	\$40,754.83
Total Specified Costs		—	φ <b>3</b> 34.00	φ <del>4</del> 0,754.65
Returns Above Specified Costs			\$33.66	\$4,107.01
Breakeven Price to Cover Total Costs		\$105.38 To	on	
	manle D	eakeven Prio		
Example Example To Cover	les			

		Examp	Example Breakeven Prices		
Example	Example	To Cover	To Cover		
Yield	Yield	Variable	Total		
Percent	Ton	Costs	Costs		
75%	2.38	\$57.78	\$140.51		
90%	2.85	\$48.15	\$117.09		
100%	3.17	\$43.33	\$105.38		
110%	3.49	\$39.39	\$95.80		
125%	3.96	\$34.67	\$84.30		

Developed by Rob Hogan, Associate Professor and Extension Economist, Texas A&M AgriLife Extension, 830-278-9151.

Information presented is prepared solely as a general guide and not intended to recognize or predict the costs and returns from any one operation. Brand names are mentioned only as examples and imply no endorsement.