

Miscanthus
Perennial - Med Input

														Present	Annualized PV	
														Value	(compare to corn	
															yearly cost)	
	Quantity	Unit	Price /Unit	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10	Total		
REVENUE SOURCE																
Biomass	Mature yield (est.) ¹	10 ton		0	5	10	10	10	10	10	10	10	10	85		
	Revenue Stream		\$ 60.00	\$0	\$300	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$600	\$5,100	\$3,790	\$491
SELECT CASH EXPENSES																
Plant Material																
	Rhizomes	4050 rhizome	\$1.80	\$7,290	\$911	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,201	\$7,769	\$1,006
Fertilizer²																
	Nitrogen	75 lb	\$ 0.46	\$0	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$35	\$311	\$234	\$30
	P ₂ O ₅	1.5 lb/ton	\$ 0.62	\$0	\$5	\$9	\$9	\$9	\$9	\$9	\$9	\$9	\$9	\$79	\$59	\$8
	K ₂ O	12 lb/ton	\$ 0.63	\$0	\$38	\$76	\$76	\$76	\$76	\$76	\$76	\$76	\$76	\$643	\$477	\$62
Pest Control																
	Pendimethalin	0.34 3.3 # (gal)	\$ 29.70	\$10	\$10	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20	\$19	\$2
	2,4-D	0.46 4 # (gal)	\$ 17.20	\$8	\$8	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$16	\$15	\$2
Machine Costs																
	Chisel plow	1 acre	\$ 14.17	\$14	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14	\$13	\$2
	Soil Finish	1 acre	\$ 11.10	\$11	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11	\$11	\$1
	Potato Planter, 8-row	1 acre ³	\$ 30.41	\$30	\$4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$34	\$32	\$4
	Sprayer	2 acre	\$ 5.60	\$11	\$11	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$22	\$21	\$3
Labor																
	Potato Planter	0.21 hours	\$ 15.65	\$3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4	\$4	\$0
Post-harvest																
	Mowing	1 acre	\$ 13.50	\$0	\$7	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$14	\$115	\$85	\$11
	Raking	1 acre	\$ 6.00	\$0	\$3	\$6	\$6	\$6	\$6	\$6	\$6	\$6	\$6	\$51	\$38	\$5
	Baling - lg round	13.33 bale	\$ 8.35	\$0	\$56	\$111	\$111	\$111	\$111	\$111	\$111	\$111	\$111	\$946	\$703	\$91
	Bale-to-storage	13.33 bale	\$ 3.10	\$0	\$21	\$41	\$41	\$41	\$41	\$41	\$41	\$41	\$41	\$351	\$261	\$34
	Trucking	10 ton	\$ 3.00	\$0	\$15	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$30	\$255	\$189	\$25
	Marketing		3.5%	\$0	\$11	\$21	\$21	\$21	\$21	\$21	\$21	\$21	\$21	\$179	\$133	\$17
TOTAL CASH EXPENSES				\$7,378	\$1,133	\$343	\$343	\$343	\$343	\$343	\$343	\$343	\$343	\$11,252	\$10,063	\$1,303
REV ABOVE EXPENSES				-\$7,378	-\$833	\$257	\$257	\$257	\$257	\$257	\$257	\$257	\$257	-\$6,152	-\$6,273	-\$812
Labor				hours/acre	0.60	0.63	0.53	0.53	0.53	0.53	0.53	0.53	0.53			

1. Max yield after 3 yrs on fertile land, 4-5 years on marginal land (Misc Growers Guide - Univ of IL)
2. Fertilizer rates based on Iowa State recommendations
3. Not custom rate

Calculation Assumptions:

Interest Rate	5%
Years of Production	10
(1+i) ⁿ - 1	0.63
i(1+i) ⁿ	0.08



Extension Bulletin E-3084, Profitability of Converting to Biofuel Crops
Web: <http://bioenergy.msu.edu/economics/index.shtml>