

TABLE 1. Acreage Summary, Quay County, Projected 2013.

BUDGET AREA.....ARCH HURLEY CONSERVANCY DISTRICT, QUAY COUNTY			
FARM SIZE.....600 ACRES			
IRRIGATION TYPE.....SPRINKLER			
NUMBER OF CROPS.....3..			
WATER USE			
ACREAGE SUMMARY:	LAND USE (ACRES)	AC.IN. PER AC.	TOTAL AC.IN.
ALFALFA ESTABLISHMENT	25.00 *	6	150
ALFALFA	200.00	24	4,800
GRAIN SORGHUM	170.00	18	3,060
ARP	0.00		
FLEX IN GRAIN SORGHUM	30.00	12	360
WHEAT	170.00	12	2,040
ARP	0.00		
FLEX IN GRAIN SORGHUM	30.00	12	360
TOTAL	600.00		10,410
ACRE FEET PER ACRE OF WATER ALLOCATION			1.45

* DOUBLE-CROPPED

TABLE 2. Basic cost information for the Arch Hurley Conservancy District, Quay County, Projected 2013.

Item			
Labor Wage Rate:			
Equipment operators	\$/hour		\$8.55
General & Irrigators	\$/hour		\$7.50
Purchased Inputs:			
Fertilizer:			
Nitrogen (N)	\$/pound		\$0.61
Phosphate (P205)	\$/pound		\$0.60
Seed:			
Alfalfa	\$/pound		\$6.50
Grain Sorghum	\$/pound		\$2.04
Wheat	\$/pound		\$0.65
Wire	\$/pound		\$0.91
Canal Water			
Assessment	\$/acre		\$10.00
Water	\$/acre foot		\$10.00
Energy:			
Diesel fuel	\$/gallon		\$3.00
Gasoline	\$/gallon		\$3.80
LP Gas	\$/gallon		\$3.05
Electricity (Farmers Elec Coop)	cents/KwHr		8.27
Employee Liability Insurance	\$/ \$1,000 wages		\$20.00
Employee Benefits	percent/wages		18.00%
Labor Downtime	percent		25.00%
Financial Rates:			
Operating Capital Interest Rate	percent		5.00%
Land Interest Rate	percent		5.00%
Equipment Interest Rate	percent		5.00%
Real Interest Rate	percent		3.00%
Land Taxes	\$96.00 /acre (full value)		\$0.81
Personal Property Tax Rate	- NR	\$/ \$1,000 (Assessed Value)	\$25.37
	- R		\$23.51
Supervision Factors			
Field Crop-Irrigation	\$/labor hour		\$1.00
Field Crop-Equipment & General	\$/labor hour		\$0.50
Management Rate	percent		7.00%

TABLE 3. Overhead cost information for the Arch Hurley Conservancy District, Quay County, Projected 2013.

Item			
Electricity (Domestic & Shop)		\$242.00 per month	\$2,904
Telephone		\$121.00 per month	\$1,452
Accounting & Legal			\$1,900
Misc. Supplies & Hand Tools			\$2,589
Pickup and Auto			
miles	24,926	@ \$0.500 per mile	\$12,463
Insurance			
- general liability (non-employee)			\$1,912
- fire/theft			\$1,500
Property Taxes			
- non-planted land			\$0
- other than land & machinery			\$6,010
Building repairs and maintenance			\$1,452
Dues, fees, publications			\$436
Farmstead Equipment			\$182
Total			\$32,799
Total per planted acre			\$54.67

TABLE 6. Alfalfa establishment, sprinkler-irrigated, budgeted per acre costs and returns for a 600 acre farm, Arch Hurley Conservancy District, Quay County, Projected 2013.
Planting dates: August 1 - September 15

ITEM	PRICE	QUANTITY	PURCHASED INPUTS						TOTAL	
PURCHASE INPUTS										
SEED	\$6.50	16 LBS	\$104.00						\$104.00	
OAT SEED	\$0.23	40 LBS	\$9.20						\$9.20	
NITROGEN (N)	\$0.61	30 LBS	\$18.30						\$18.30	
PHOSPHATE (P205)	\$0.60	60 LBS	\$36.00						\$36.00	
CANAL WATER	\$10.00	6 AC. IN.	\$5.00						\$5.00	
SUBTOTAL			\$172.50						\$172.50	
PREHARVEST OPERATIONS										
	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL		
CHISEL	145 HP	0.08 HR		\$0.68	\$2.15	\$0.86	\$2.65	\$6.35		
DISC	145 HP	0.14 HR		\$1.20	\$3.77	\$1.27	\$2.59	\$8.83		
FLOAT	145 HP	0.19 HR		\$1.62	\$5.11	\$1.03	\$2.97	\$10.73		
FERT SPREADER	70 HP	0.05 HR		\$0.43	\$0.91	\$0.09	\$0.62	\$2.05		
DRILL	70 HP	0.18 HR		\$1.54	\$3.29	\$0.36	\$2.65	\$7.83		
IRRIGATE (3X)		0.30 HR		\$2.25	\$6.45	\$0.00	\$1.34	\$10.04		
SUBTOTAL		0.94 HR	\$0.00	\$7.72	\$21.68	\$3.61	\$12.82	\$45.84		
OVERHEAD EXPENSES										
DOWNTIME		0.24 HR		\$2.01						\$2.01
EMPLOYEE BENEFITS				\$1.39						\$1.39
INSURANCE			\$0.02						\$0.02	
SUPERVISION AND MANAGEMENT				\$15.87						\$15.87
SUBTOTAL		0.24 HR	\$0.02	\$19.27						\$19.29
TOTAL OPERATING EXPENSES		1.18 HR	\$172.52	\$26.99	\$21.68	\$3.61	\$12.82	\$237.63		

TABLE 7. Alfalfa hay, sprinkler-irrigated, budgeted per acre costs and returns for a 600 acre farm with above average management, Arch Hurley Conservancy District, Quay County, Projected 2013.
Harvesting dates: May 25 - October 15

ITEM	PRICE	YIELD	TOTAL
GROSS RETURNS			
ALFALFA HAY	\$245.00	4.50 TONS (STACKED)	\$1,102.50
GRAZING	\$48.00	1.00 ACRE	\$48.00
TOTAL			\$1,150.50

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS	FIXED COST	TOTAL
PHOSPHATE (P205)	\$0.60	60 LBS	\$36.00		\$36.00
WIRE	\$0.91	39 LBS	\$35.09		\$35.09
ESTABLISHMENT: Principal		8 YEARS		\$29.70	\$29.70
: Interest				\$6.68	\$6.68
CANAL WATER: Assessment	\$10.00	1 ACRE	\$10.00		\$10.00
Water	\$10.00	24 AC. IN.	\$20.00		\$20.00
SUBTOTAL			\$101.09	\$36.39	\$137.48

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
FERT SPREADER	70 HP	0.05 HR		\$0.43	\$0.91	\$0.09	\$0.62	\$2.05
IRRIGATE		1.20 HR		\$9.00	\$25.82	\$0.00	\$5.35	\$40.17
SUBTOTAL		1.25 HR		\$9.43	\$26.73	\$0.09	\$5.97	\$42.22

HARVEST OPERATIONS								
SWATHER (4X)	16 FT	0.44 HR		\$3.76	\$4.94	\$0.64	\$19.63	\$28.97
BALER (4X)	70 HP	0.84 HR		\$7.18	\$15.35	\$0.92	\$3.72	\$27.17
BALE WAGON, PTO (4X)	145 HP	0.80 HR		\$6.84	\$21.52	\$5.33	\$16.35	\$50.04
SUBTOTAL		2.08 HR	\$0.00	\$17.78	\$41.81	\$6.89	\$39.70	\$106.19

OVERHEAD EXPENSES								
DOWNTIME		0.83 HR		\$7.12				\$7.12
EMPLOYEE BENEFITS				\$6.18				\$6.18
INSURANCE			\$0.08					\$0.08
LAND TAXES							\$0.81	\$0.81
SUPERVISION AND MANAGEMENT				\$82.62				\$82.62
OTHER EXPENSES			\$54.67					\$54.67
SUBTOTAL		0.83 HR	\$54.75	\$95.91			\$0.81	\$151.47

TOTAL OPERATING EXPENSES		4.16 HR	\$155.84	\$123.12	\$68.54	\$6.99	\$82.87	\$437.36
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NET OPERATING PROFIT \$713.14

INTEREST ON OPERATING CAPITAL (\$61.31 @ 5.00%) \$3.07
 INTEREST ON EQUIPMENT INVESTMENT \$19.47

RETURN TO LAND AND RISK \$690.60

BUDGET SUMMARY			
GROSS RETURN	\$1,150.50		
VARIABLE OPERATING EXPENSES	\$231.37		
RETURN OVER VARIABLE EXPENSES	\$919.13	(GROSS MARGIN)	
FIXED EXPENSES	\$82.87		
NET FARM INCOME	\$836.26	(RETURN TO CAPITAL, LABOR, LAND & RISK)	
LABOR AND MANAGEMENT COST	\$123.12		
NET OPERATING PROFIT	\$713.14	(RETURN TO CAPITAL, LAND & RISK)	
CAPITAL COSTS	\$22.54		
RETURN TO LAND AND RISK	\$690.60		

TABLE 8. Grain sorghum, sprinkler-irrigated, budgeted per acre costs and returns for a 600 acre farm with above average management, Arch Hurley Conservancy District, Quay Co
Projected 2013.

Planting dates: May 15 - July 1

Harvesting dates: October 15 - December 15

ITEM	PRICE	YIELD	BASE	TOTAL
GROSS RETURNS				
GRAIN SORGHUM	\$10.43	50.00 CWT		\$521.61
DIRECT PAYMENT	\$0.00	50.00 CWT	0.85	\$0.00
COUNTER CYCLICAL PAYMENT	\$0.00	0.00 CWT		\$0.00
GRAZING	\$48.00	1.00 ACRE		\$48.00
TOTAL				\$569.61

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS	FIXED COST	TOTAL
SEED	\$2.04	7.00 LBS	\$14.28		\$14.28
NITROGEN (N)	\$0.61	80.00 LBS	\$48.80		\$48.80
PHOSPHATE (P205)	\$0.60	20.00 LBS	\$12.00		\$12.00
HERBICIDE (CUSTOM)	\$15.07	1.00 ACRE	\$15.07		\$15.07
CANAL WATER: Assessment	\$10.00	1.00 ACRE	\$10.00		\$10.00
Water	\$10.00	18.00 AC. IN.	\$15.00		\$15.00
CROP INSURANCE	\$0.22		\$0.22		\$0.22
SUBTOTAL			\$115.36		\$115.36

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
SWEEP	145 HP	0.08 HR		\$0.68	\$2.15	\$0.86	\$2.65	\$6.35
DISC	145 HP	0.14 HR		\$1.20	\$3.77	\$1.27	\$2.59	\$8.83
FLOAT	145 HP	0.19 HR		\$1.62	\$5.11	\$1.03	\$2.97	\$10.73
DISC & SPRAY	145 HP	0.17 HR		\$1.45	\$4.57	\$1.66	\$4.01	\$11.69
FERT SPREADER	70 HP	0.05 HR		\$0.43	\$0.91	\$0.09	\$0.62	\$2.05
ROD WEED	145 HP	0.08 HR		\$0.68	\$2.15	\$0.49	\$1.59	\$4.91
PLANTER	70 HP	0.17 HR		\$1.45	\$3.11	\$0.51	\$4.18	\$9.25
CULTIVATOR	70 HP	0.13 HR		\$1.11	\$2.37	\$0.53	\$1.79	\$5.81
IRRIGATE (12X)		1.20 HR		\$9.00	\$19.36	\$0.00	\$4.01	\$32.38
SUBTOTAL		2.21 HR		\$17.64	\$43.51	\$6.45	\$24.41	\$92.00

HARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
COMBINE	18 FT	0.19 HR		\$1.62	\$6.74	\$0.42	\$10.36	\$19.14
HAUL	2T	0.19 HR		\$1.62	\$3.62	\$1.22	\$11.99	\$18.46
SUBTOTAL		0.38 HR		\$3.25	\$10.37	\$1.64	\$22.34	\$37.59

OVERHEAD EXPENSES	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DOWNTIME	0.65 HR		\$5.54				\$5.54
EMPLOYEE BENEFITS			\$4.76				\$4.76
INSURANCE		\$0.08					\$0.08
LAND TAXES						\$0.81	\$0.81
SUPERVISION AND MANAGEMENT			\$41.82				\$41.82
OTHER EXPENSES		\$54.67					\$54.67
SUBTOTAL	0.65 HR	\$54.74	\$52.11			\$0.81	\$107.66

TOTAL OPERATING EXPENSES	3.89 HR	\$170.11	\$72.99	\$53.88	\$8.08	\$47.57	\$352.62
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NET OPERATING PROFIT							\$216.98
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INTEREST ON OPERATING CAPITAL	(\$71.17	@	5.00%)		\$3.56
INTEREST ON EQUIPMENT INVESTMENT							\$18.09

RETURN TO LAND AND RISK							\$195.34
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BUDGET SUMMARY

GROSS RETURN		\$569.61	
VARIABLE OPERATING EXPENSES	\$232.07		
RETURN OVER VARIABLE EXPENSES		\$337.54	(GROSS MARGIN)
FIXED EXPENSES	\$47.57		
NET FARM INCOME		\$289.98	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$72.99		
NET OPERATING PROFIT		\$216.98	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$21.65		
RETURN TO LAND AND RISK		\$195.34	

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TABLE 9. Wheat, sprinkler-irrigated, budgeted per acre costs and returns for a 600 acre farm with above average management, Arch Hurley Conservancy District, Quay County, Projected 2013.
 Planting dates: August 15 - September 15
 Harvesting dates: June 15 - July 10

ITEM	PRICE	YIELD	BASE	TOTAL
GROSS RETURNS				
WHEAT	\$7.75	20.00 BUSHELS		\$155.00
DIRECT PAYMENT	\$0.00	20.00 BUSHELS	0.85	\$0.00
COUNTER CYCLICAL PAYMENT	\$0.00			\$0.00
GRAZING	\$48.00	1.00 ACRE		\$48.00
TOTAL				\$203.00

PURCHASED INPUTS	PRICE	QUANTITY	PURCHASED INPUTS	FIXED COST	TOTAL
SEED	\$0.65	60.00 LBS	\$39.00		\$39.00
NITROGEN (N)	\$0.61	80.00 LBS	\$48.80		\$48.80
PHOSPHATE (P205)	\$0.60	20.00 LBS	\$12.00		\$12.00
HERBICIDE	\$15.07	1.00 ACRE	\$15.07		\$15.07
CANAL WATER: Assessment	\$10.00	1.00 ACRE	\$10.00		\$10.00
Water	\$10.00	12.00 AC. IN.	\$10.00		\$10.00
CROP INSURANCE	\$0.29		\$0.29		\$0.29
SUBTOTAL			\$135.16		\$135.16

PREHARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
CHISEL	145 HP	0.08 HR		\$0.68	\$2.15	\$0.86	\$2.65	\$6.35
DISC (2X)	145 HP	0.28 HR		\$2.39	\$7.53	\$2.55	\$5.18	\$17.65
FLOAT	145 HP	0.24 HR		\$2.05	\$6.46	\$1.30	\$3.75	\$13.56
FERT SPREADER	70 HP	0.05 HR		\$0.43	\$0.91	\$0.09	\$0.62	\$2.05
DRILL	70 HP	0.18 HR		\$1.54	\$3.29	\$0.36	\$2.65	\$7.83
IRRIGATE (8X)		0.80 HR		\$6.00	\$12.91	\$0.00	\$2.68	\$21.58
SUBTOTAL		1.63 HR		\$13.10	\$33.25	\$5.16	\$17.53	\$69.03

HARVEST OPERATIONS	POWER UNIT	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
COMBINE	18 FT	0.19 HR		\$1.62	\$6.74	\$0.42	\$10.36	\$19.14
HAUL	2T	0.19 HR		\$1.62	\$3.62	\$1.22	\$11.99	\$18.46
SUBTOTAL		0.38 HR		\$3.25	\$10.37	\$1.64	\$22.34	\$37.59

OVERHEAD EXPENSES	ACCOMPLISHMENT RATE	PURCHASED INPUTS	LABOR	FUEL & LUBE	REPAIRS	FIXED COST	TOTAL
DOWNTIME	0.50 HR		\$1.88				\$1.88
EMPLOYEE BENEFITS			\$2.45				\$2.45
INSURANCE		\$0.05					\$0.05
LAND TAXES						\$0.81	\$0.81
SUPERVISION AND MANAGEMENT			\$10.15				\$10.15
OTHER EXPENSES		\$54.67					\$54.67
SUBTOTAL	0.50 HR	\$54.72	\$14.48			\$0.81	\$70.01

TOTAL OPERATING EXPENSES 2.51 HR \$189.88 \$30.83 \$43.61 \$6.80 \$40.68 \$311.79

NET OPERATING PROFIT (\$108.79)

INTEREST ON OPERATING CAPITAL (\$78.18 @ 5.00%) \$3.91
 INTEREST ON EQUIPMENT INVESTMENT \$15.76

RETURN TO LAND AND RISK (\$128.46)

BUDGET SUMMARY

GROSS RETURN	\$203.00	
VARIABLE OPERATING EXPENSES	\$240.29	
RETURN OVER VARIABLE EXPENSES	(\$37.29)	(GROSS MARGIN)
FIXED EXPENSES	\$40.68	
NET FARM INCOME	(\$77.97)	(RETURN TO CAPITAL, LABOR, LAND & RISK)
LABOR AND MANAGEMENT COST	\$30.83	
NET OPERATING PROFIT	(\$108.79)	(RETURN TO CAPITAL, LAND & RISK)
CAPITAL COSTS	\$19.67	
RETURN TO LAND AND RISK	(\$128.46)	

TABLE 10. Summary of per acre costs and returns for a 600 acre farm, Arch Hurley Conservancy District, Quay County, Projected 2013.

	ALFALFA ESTABLISHMENT	ALFALFA HAY	GRAIN SORGHUM	WHEAT
		TONS	CWT	BU
PRIMARY YIELD		4.50	50.00	20.00
PRIMARY PRICE		\$245.00	\$10.43	\$7.75
GOVERNMENT PAYMENTS		\$0.00	\$0.00	\$0.00
SECOND INCOME		\$48.00	\$48.00	\$48.00
GROSS RETURN		\$1,150.50	\$569.61	\$203.00
CASH OPERATING EXPENSES				
SEED	\$113.20		\$14.28	\$39.00
FERTILIZER	\$54.30	\$36.00	\$60.80	\$60.80
CHEMICALS			\$15.07	\$15.07
CROP INSURANCE			\$0.22	\$0.29
OTHER PURCHASED INPUTS		\$35.18	\$0.08	\$0.05
CANAL WATER	\$5.00	\$30.00	\$25.00	\$20.00
FUEL, OIL & LUBRICANTS-EQUIPMENT	\$15.23	\$42.72	\$34.51	\$30.71
FUEL-IRRIGATION	\$6.45	\$25.82	\$19.36	\$12.91
REPAIRS	\$3.61	\$6.99	\$8.08	\$6.80
CUSTOM CHARGES		\$0.00		
LAND TAXES		\$0.81	\$0.81	\$0.81
OTHER EXPENSES	\$0.02	\$54.67	\$54.67	\$54.67
TOTAL CASH EXPENSES	\$197.82	\$232.18	\$232.88	\$241.10
RETURN OVER CASH EXPENSES	-\$197.82	\$918.32	\$336.73	-\$38.10
FIXED EXPENSES	\$12.82	\$82.06	\$46.75	\$39.87
TOTAL EXPENSES	\$210.64	\$314.24	\$279.63	\$280.97
NET FARM INCOME	-\$210.64	\$836.26	\$289.98	-\$77.97
LABOR AND MANAGEMENT COSTS	\$26.99	\$123.12	\$72.99	\$30.83
NET OPERATING PROFIT	-\$237.63	\$713.14	\$216.98	-\$108.79
CAPITAL COSTS				
INTEREST ON OPERATING CAPITAL		\$3.07	\$3.56	\$3.91
INTEREST ON EQUIPMENT INVESTMENT		\$19.47	\$18.09	\$15.76
TOTAL CAPITAL COSTS	\$0.00	\$22.54	\$21.65	\$19.67
RETURN TO LAND AND RISK	-\$237.63	\$690.60	\$195.34	-\$128.46

TABLE 11. Whole farm summary, Arch Hurley Conservancy District, Quay County,
Projected 2013.

GROSS RETURNS		
ALFALFA HAY	200.00 ACRES	
CROP		\$220,500
GRAZING		\$9,600
GRAIN SORGHUM	230.00 ACRES	
CROP		\$119,970
GRAZING		\$11,040
DIRECT PAYMENT		\$0
COUNTER CYCLICAL PAYMENT		\$0
WHEAT	170.00 ACRES	
CROP		\$26,350
GRAZING		\$8,160
DIRECT PAYMENT		\$0
COUNTER CYCLICAL PAYMENT		\$0
GROSS RETURN		<u>\$395,620</u>
CASH OPERATING EXPENSES		
SEED		\$12,744
FERTILIZER		\$32,878
CHEMICALS		\$6,026
CROP INSURANCE		\$100
OTHER PURCHASED INPUTS		\$7,062
CANAL WATER		\$15,275
FUEL, OIL & LUBRICANTS-EQUIPMENT		\$22,083
FUEL-IRRIGATION		\$11,972
REPAIRS		\$4,502
CUSTOM CHARGES		\$0
LAND TAXES		\$487
OTHER EXPENSES		\$32,800
TOTAL CASH EXPENSES		<u>\$145,930</u>
RETURN OVER CASH EXPENSES		\$249,690
FIXED EXPENSES		\$28,322
TOTAL EXPENSES		<u>\$174,252</u>
NET FARM INCOME		\$221,367
LABOR AND MANAGEMENT COSTS		\$47,328
NET OPERATING PROFIT		\$174,039
CAPITAL COSTS		
INTEREST ON OPERATING CAPITAL		\$2,096
INTEREST ON EQUIPMENT INVESTMENT		\$10,735
TOTAL CAPITAL COSTS		<u>\$12,831</u>
RETURN TO LAND AND RISK		<u>\$161,208</u>

LAND VALUE	RETURN TO RISK*	RETURN ON INVESTMENT**
\$200 /ACRE	\$157,608	58.31%
\$400 /ACRE	\$154,008	41.59%
\$600 /ACRE	\$150,408	32.32%
\$800 /ACRE	\$146,808	26.43%
\$1,000 /ACRE	\$143,208	22.36%
\$1,200 /ACRE	\$139,608	19.37%

* RETURN TO LAND AND RISK MINUS (INTEREST RATE TIMES LAND VALUE TIMES ACREAGE)

** NET OPERATING PROFIT DIVIDED BY (MACHINERY AND EQUIPMENT VALUE PLUS LAND VALUE)