## SUMMARY

Component	Cost (w/o shipping)	Weight (lb)
Base/Frame	\$464	133
Plow	\$237	13
Conveyor	\$632	35
Basket	\$56	3
Motor/RC	\$400-\$700	25-50
TOTAL:	\$1,789-2,089 (+shipping)	

#### Fulfillment of user needs:

Cost: GOOD

Under-budget with extra (prob. need to purchase on-shore conveyor)

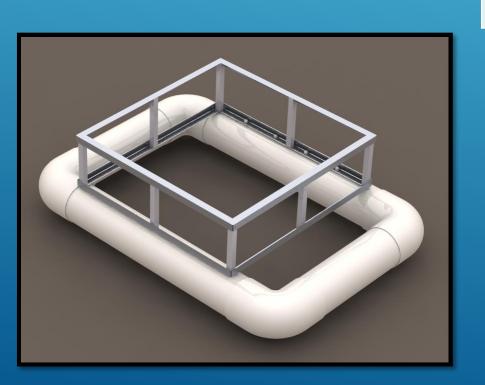
Weight: MEDIUM

Heaviest component 133 lb (goal <100, could be alleviated w/ trailer, good grips)

Capacity: GOOD

4-6 ft plow span, able to hold up to 18 cubic ft azolla

## FRAME

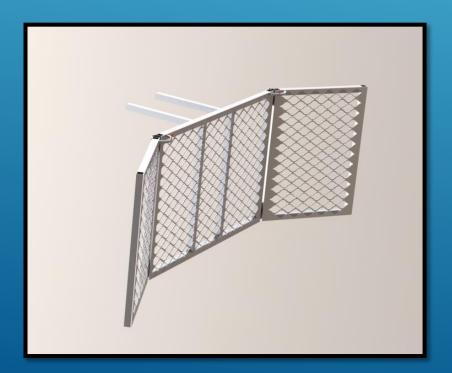


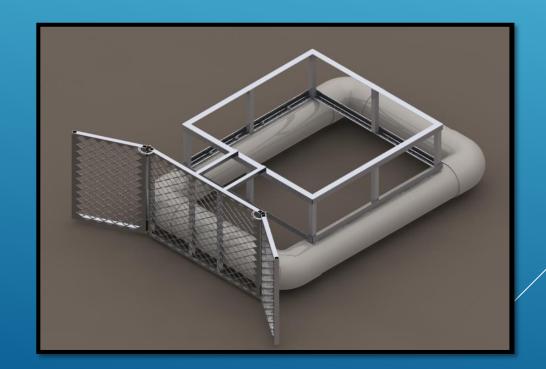
Item	Cost =(w/o shipping)	Weight (lb)	Supplier
8" PVC pipes		79	PVC pipe supplies
PVC elbows	\$339	36	PVC pipe supplies
Aluminum L's	\$68	12	Online Metals
Aluminum sqr.	\$38	5	Online Metals
SS Bolts	~\$5	<1	McMasterCarr
SS Nuts	~\$3	<1	McMasterCarr
Sealing Washers	~\$1	~0	McMasterCarr
TOTALS:	\$464	~133	

Note: w/ shipping PVC/Elbows were \$519, Frame was \$177.

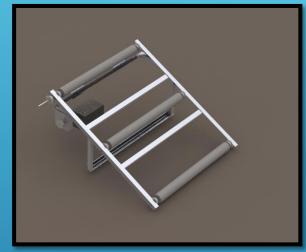
# PLOW

Item	Cost =(w/o shipping)	Weight (lb)	Supplier
Aluminum Tubing	\$164.89	9	Moscow Building Supply
Mesh/Screen	\$18.99	2	Moscow Building Supply
Grommets	\$7.99	~0	Moscow Building Supply
Duct Tape	\$4.5	~0	Moscow Building Supply
Zipe Ties	\$3.69	~0	Moscow Building Supply
Hinges	\$37.32	2	Whole Sale Marine
TOTALS:	\$237	13	





## CONVEYOR



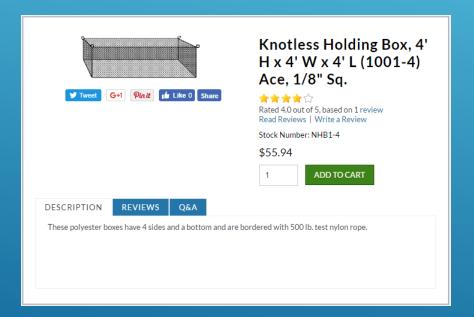


Other option: Hoffmeyer – awaiting quote

Item	Cost =(w/o shipping)	Weight (lb)	Supplier
4' Aluminum L	\$51	10	Online Metals
Acetal chain	\$216	3	McMasterCarr
Belt Sprockets	\$92	1.5	McMasterCarr
Mesh	\$40	2	Sailrite
Idle Rods	\$17	2	Online Metals
Drive Rod	\$9	<1	Online Metals
Foam Rollers	\$24	<1	Foambymail
Bearings	\$20	<1	McMasterCarr
1' Aluminum L	\$3	<1	Online Metals
1' Aluminum tube	\$10	<1	Online Metals
2' Aluminum tube	\$18	3	Online Metals
Motor Shaft Sprocket	\$15	<1	McMasterCarr
Drive Rod Sprocket	\$15	<1	McMasterCarr
DC Motor	\$56	3	Zoro
Battery	\$17	3.5	Walmart
WP Box (estimate)	\$30	5	TBD
TOTALS:	\$632	~35	

### **BASKET**

Item	Cost =(w/o shipping)	Weight (lb)	Supplier
Basket	\$56	3	Memphis Net& Twine
TOTALS:	\$56	3	



Should hold ~ 100 lb with a safety factor, since that is the max weight goal.

## MOTOR/RC

Estimated Power Req: ~1 hp ----- We plan to use a trolling motor

#### Planned Tests:

- SolidWorks Computer Model
- Water test with plow & frame once constructed

Then decide: Convert vs. Buy to get RC control



Item	Cost =(w/o shipping)	Weight (lb)	Supplier
Trolling motor			TBD
RC components			TBD
Battery Pack	\$400-\$700	25-50	TBD
TOTALS:	\$400-\$700	25-50	

## TIME MANAGEMENT: PLANNED SCHEDULE

DECEMBER 20 S M T W T 4 5 6 7 8 11 12 13 14 15 18 19 20 21 22 25 26 27 28 29	F S 2 3	JANU	JARY	201	S M	BRUARY 2017  T W T F S 1 2 3 4 7 8 9 10 11 14 15 16 17 18 21 22 23 24 25 28
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 New Year's Day	2	3	4	5	6	7
8	9	10	11	12		14 Frame Validation
				Frame Plan		Conveyor/Plow Plan
15	16 M L King Day	17	18	Order Frame	20	21
22	23	24	25	26 Conveyor/Plow Validation	27	28
				Motor/RC plan	(Onshore conveyor also?)	
29	30	31	1	2	3	4

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
29	3	0 31	1	2	Order Conveyor/Plow	
	5	5 7	8	9	10	
		Construct Frame				
				Validate Motor/RC	17	
12	2 1	3 14 Valentine's Day	15	Order Motor/RC	17	
19	Presidents' Day	Prame Test	22	23	24	
Conveyor/Plow Construction						
26	5 2	7 28	1	2	3	

FEBRUARY 2	117					APRIL 2017
S M T W T	F S				S M	TWTFS
5 6 7 8 9 12 13 14 15 16 19 20 21 22 23 26 27 28	10 11 17 18	MAI	RCH	2017	2 3 9 10 16 17 23 24 30	1 4 5 6 7 8 11 12 13 14 15 18 19 20 21 22 25 26 27 28 29
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
26	27	28	1	2	3	4
5	6	7	8	9	10	11
						Order Motor/RC
					Test Conveyor/Plow	
Spring break	13	14	15	16	17	18
19	20	21	22	23	24	25
				Test Motor/RC		
26	27	28	29	30 MODIFICATIONS	31	1



# BASE WEIGHT DISCUSSION

