

## Why Field Peas?

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## Why Field Peas?

- Same Equipment as Soybeans
- Short Season Crop so Double Cropping an Option
- **Huge Potential Market in Iowa**



### Crop Production Costs

	Corn	Beans	Wheat	Peas	Bean f Peas
Seed	\$ 52.00	\$ 30.00	\$ 18.00	\$ 32.00	\$30.00
Fert	\$ 38.90	\$ 17.00	\$ 26.24	\$ 8.25	\$17.00
land prep *1	\$ 28.30				\$25.95
Chemical w/appl	\$ 35.00	\$ 17.00	\$ 12.00	\$ 16.00	\$8.00
plant	\$ 11.80	\$ 12.55	\$ 12.55	\$ 12.55	\$12.55
combine	\$ 24.15	\$ 23.40	\$ 21.85	\$ 21.85	\$23.40
Lime	\$ 6.00	\$ 6.00	\$ 3.00	\$ -	\$3.00
Insurance	\$ 12.00	\$ 9.00	\$ 8.95	\$ -	\$4.50
rent / land pymt	\$ 120.00	\$ 120.00	\$ 60.00	\$ 60.00	\$60.00
drying exp	\$ 14.00	\$ -	\$ -	\$ 5.00	\$0.00
Total	\$ 333.95	\$ 234.95	\$ 162.59	\$ 155.65	\$184.40
Yield	175	50	60	45	\$40.00
Price	\$ 1.90	\$ 5.00	\$2.44	\$3.50	\$5.00
LDP			\$50.00	\$0.00	
Straw value			\$50.00		
Gross \$/acre	\$ 332.50	\$ 250.00	\$196.40	\$157.50	\$200.00
Net \$/acre	\$ (1.45)	\$ 15.05	\$33.81	\$1.85	\$15.60
Net \$ double crop			soft red w \$ 35.66	P-F-W B-F-P \$ 17.45	
Cost per bushel	\$ 1.91	\$ 4.70	\$ 2.71	\$3.46	\$4.61

\*1 Land preparation: Corn deep rip field cult \$12.70+7.60=\$20.30  
 beans no till no tillage  
 wheat no till no tillage  
 spring peas shred stalks- chisel plow- field cult. \$7.15+11.20+7.60=\$25.95

### Projected Gross/Net Income/Acre

Total Expenses	Corn \$ 333.95	Soybean \$ 234.95	Wheat \$ 162.59	Peas \$ 155.65	Beans/pea \$ 184.40
Yield	175	50	60	45	40
Price	\$ 1.90	\$ 5.00	\$ 2.44	\$ 3.50	\$ 5.00
Straw value			\$ 50.00		
Gross \$/acre	\$ 332.50	\$ 250.00	\$ 196.40	\$ 157.50	\$ 200.00
Net \$/acre	\$ (1.45)	\$ 15.05	\$ 33.81	\$ 1.85	\$ 15.60
			soft red w	P-F-W	B-F-P
Net \$ double crop				\$ 35.66	\$ 17.45
Cost per bushel	\$ 1.91	\$ 4.70	\$ 2.71	\$ 3.46	\$ 4.61

## Impact on profitability

- Commercial pea seed is expensive \$30+A
- Peas should return 1.25-1.5 lbs N/bu
- Straw needs to be sold/used for best return in wheat/pea double crop
- LDP/loan rate \$3.50/bu
- Yield???

## Field Peas

- Planted in Narrow Rows
- Population – 300,000
- Can Emerge From 3"
- Plant As Soon As Fields Are Fit in the Spring



## Filling drill with treated peas and adding inoculant



## Planting Spring Field Peas



## Field Peas A Cool Season Crop

- Hypogeal Emergence
- Cold Tolerant
- Hot Weather During Flowering Reduces Yield



## Spring Planted Field Peas 05

Eclipse Mean = 34.7  
WFP0027 Mean = 45.0  
Eclipse Moisture % = 18.5  
WFP0027 Moisture % = 13.1  
Yields adjusted to 15%  
moisture (60 lb bushel)

## Challenges for Field Peas

- Wide variation in protein and energy content between varieties
- Disease Resistance of Varieties
- Should varieties be selected for yield or \$ protein/energy/acre?
- Anti-nutritional factors
- Swine industry acceptance



## Field peas in swine diets?

- Widely used in European swine rations
- Increasingly used in Canada
- Compared to soybean meal-
  - Field peas have low levels of fat
  - Moderately high levels of protein
  - Medium levels of carbohydrates
  - High levels of fiber

## Nutrient Profiles

	Corn	Field Peas	SBM 44%
C protein %	8.3	23.4	44
C fat %	3.9	.9	1.5
C fiber	2.3	5.6	7.3
ME, kcal/kg	3421	3132	3179
Lysine %	.26	1.7	2.83
Tryptophan	.06	.2	.61
Threonine	.29	.9	1.73
Methionine	.17	.2	.61

## Field Peas and DDGS

- Amino acid profile may work extremely well with DDGS
- DDGS from new ethanol plants contain:
  - .76% lysine
  - 1.01% threonine
  - .225% tryptophan
  - .85% meth + cys



## Analysis of 2005 Spring Planted Field Peas (Iowa)

Variety	Eclipse	WFO 0097
Crude Protein	22.12	21.49
Moisture	14.55	12.23
Crude Fat	0.76	0.62
Crude Fiber	5.64	5.36
Ash	3.10	3.02
Gross Calories	333	342
Calcium	0.15	0.09
Phosphorus	0.42	0.42





### Field Pea Rations

Formulation Summary			MIXED									
			Ration Name: PEA 90-145		PEA 145-185		PEA 185-225		PEA 225-MKT			
			Ration Number		Ration 1		Ration 2		Ration 3		Ration 4	
Prod. #	Product/Ingredient	Cost/Lb.	(Wt)	(Cost)	(Wt)	(Cost)	(Wt)	(Cost)	(Wt)	(Cost)	(Wt)	(Cost)
	CORN (8.300.24)		650.4	\$	676.2	\$	839.4	\$	937.1	\$		
	SBM 48% (47.503.D4)		339.5	\$	323.7	\$	165.5	\$	62.89	\$		
	FAT- ANIMAL (LARD)		60.00	\$	60.00	\$	60.00	\$	60.00	\$		
	GREINER PEA BASE 4								40.00	\$		
	GREINER PEA BASE 3						35.00	\$				
	GREINER PEA BASE 2				40.00	\$						
	GREINER PEA BASE 1		50.00	\$								
	DOGS BIG RIVER		300.0	\$	300.0	\$	300.0	\$	300.0	\$		
	FIELD PEAS ECLIPSE		600.0	\$	600.0	\$	600.0	\$	600.0	\$		
			2000	\$	2000	\$	2000	\$	2000	\$		

# Field Pea Rations

Formulation Summary			MIXED									
			Ration Name: CONTROL 90-145		CONTROL 145-185		CONTROL 185-225		CONTROL 225-MKT			
			Ration Number		Ration 1		Ration 2		Ration 3		Ration 4	
Prod. #	Product/Ingredient	Cost/Lb.	(Weigh 1 )	(Cost)	(Weigh 1 )	(Cost)	(Weigh 1 )	(Cost)	(Weigh 1 )	(Cost)	(Weigh 1 )	(Cost)
	CORN (8.30/0.24)		1,097. 2 7	\$ -	1,115. 5 2	\$ -	1,255. 1 0	\$ -	1,353. 7 2	\$ -		
	SBM 48% (47.50/3.04)		499.7 3	\$ -	481.4 8	\$ -	349.9 0	\$ -	253.2 8	\$ -		
	FAT-ANIMAL (LARD)		60.00	\$ -	60.00	\$ -	60.00	\$ -	60.00	\$ -		
	DDGS 33-L W/OA		43.00	\$ -	43.00	\$ -	35.00	\$ -	33.00	\$ -		
	DDGS BIG RIVER		300.0 0	\$ -	300.0 0	\$ -	300.0 0	\$ -	300.0 0	\$ -		
			<b>2000</b>	<b>\$ -</b>	<b>2000</b>	<b>\$ -</b>	<b>2000</b>	<b>\$ -</b>	<b>2000</b>	<b>\$ -</b>		