

Overview Start Here (1)

General Instructions.

- Only enter data into the blue shaded boxes
- Complete this tab first, the information entered here will be distributed throughout the worksheet for you.
- Calculated values will be carried to the Financial Summary for you

Question 1. How many acres in the field?

410

Question 2. What is the expected sale price?

\$ 8.50

Question 3. What is the expected yield?

105

Question 4, What growing year will the crop be harvested?

2023

Question 5. How many miles will you have to haul the grain?

15

Question 6. Will this field be cropped under a conventional or no-till tillage system?

Place X after your Answer

Conventional

No-till

x

Question 7. What crop will be grown in this year of the crop rotation?

Soft White Winter Wheat

Question 8. Summarize at least three distinct bullet points, what your FFA consulting team has been hired to do by the farmer.

- Suggest the best seed blend to plant.
- Suggest pesticide or management options for weed and disease control.
- Determine total costs and income for the 2023 winter wheat crop.
- Determine the breakeven price in \$/bushel based on expected yield in 2023.
- Determine the profit or loss that the farmer will experience in 2023.

Question 9. Give a concise statement of the primary challenges the farmer has in this scenario.

Determine the best seed blend to use determine herbicide program
Decide whether or not to use IMI traited seed
Calculate cost of production.
Input prices are high and will the farmer meet his profit per acre goal.

Fertilizer (2)

Customer:	Three Moore Farms LLC
Plant Date	10/5/2022
Soft White Winter Wheat	Soft White Winter Wheat
Field Identification	Moore 5
Acres	410
Proposed Cropping System	Dry Land/Non-irrigated
Tillage System	No-till

Projected Fertilizer Pricing	Ammonium Sulfate	Urea	(11-52-00) Monoammonium Phosphate (MAP)	(UAN 32) Urea Ammonium Nitrate	Ammonium Phosphate	(KTS) Potassium Thiosulfate See Note 1	(KCl) Potassium Chloride	Tiger-sul 90 See note 2
Formulation	21-0-0-24	45-0-0	11-52-00	32-0-0	10-34-0	0-0-25-17S	0-0-60	0-0-0-90S
Cost per ton	\$ 842.00	\$ 1,100.00	\$ 1,060.00	\$ 695.00	\$ 1,005.00	\$ 927.00	\$ 895.00	\$ 1,300.00
State of matter	Dry	Dry	Dry	Liquid	Liquid	Liquid	Dry	Dry
Unit of Measurement	lbs	lbs	lbs	Gallon	Gallon	Gallon	lbs	lbs
Mass per Unit of Measurement	1.0	1.0	1.0	11.06	11.65	12.20	1.00	0
LBS Nitrogen per Unit of Measurement	0.21	0.45	0.11	3.54	1.17	0.00	0.00	0
LBS Phosphate per Unit of Measurement	0.00	0.00	0.52	0.00	3.96	0.00	0.00	0
LBS Potassium per Unit of Measurement	0.00	0.00	0.00	0.00	0.00	3.05	0.60	0
LBS Sulfur per Unit of Measurement	0.24	0.00	0.00	0.00	0.00	2.07	0.00	0.9
LBS Chloride per Unit of Measurement	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00

Note 1 - Can only be applied when blended in a liquid fertilizer.

Note 2 - Can only be applied when blended in a dry fertilizer

Question 1. How much nitrogen is recommended for the crop?

Expected Yield	Nitrogen per bushel of wheat	Total recommended lbs N/acre
105	2.5	262.5

Question 2: How much total nitrogen needs to be applied?

Total recommended pounds N/acre	Soil Test Indicated available nitrogen lbs/ac	Pounds of Nitrogen/acre to be applied
262.5	158	104.5

Question 3. All of the nitrogen will be applied at planting . What form of nitrogen will you use, if any, and why? If not using nitrogen fertilizer why not?

Urea with dry sulfur is the cheapest nitrogen source.
Urea is more concentrated reducing hauling/handling costs

Question 4. How much nitrogen fertilizer will be applied at planting? Round to the nearest whole pound.

If no nitrogen is to be applied, leave "0" for product rate from question 2, and skip the remainder of question 4.

Nitrogen rate lbs/ac	Product	Formulation	Pounds of Product per acre	Product Cost Per Ton	Product Cost \$/Acre
104.5	Urea	45-0-0	232	\$ 1,100.00	\$ 127.60

Fertilizer (2)

Question 5. All of the Phosphorus will be applied at planting . What form of Phosphorus will you use, if any, and why? If not using phosphorus fertilizer why not?

No phosphorus fertilizer needed

Question 6. How much Phosphorus fertilizer will be applied at planting? Round to the nearest whole pound.
If no phosphorus is to be applied, enter "0" for product rate, and skip the remainder of question 6.

Phosphorus rate lbs/ac	Product	Formulation	Pounds of Product per acre	Product Cost Per Ton	Product Cost \$/Acre
0					

Question 7. All of the Potassium will be applied at planting . What form of Potassium will you use, if any, and why? If not using potassium fertilizer why not?

No potassium fertilizer needed

Question 8. How much Potassium fertilizer will be applied at planting? Round to the nearest whole pound.
If no potassium is to be applied, enter "0" for product rate, and skip the remainder of question 8.

Potassium rate lbs/ac	Product	Formulation	Pounds of Product per acre	Product Cost Per Ton	Product Cost \$/Acre
0					

Question 9. All of the sulfur will be applied at planting . What form of sulfur will you use, if any, and why? If not using sulfur fertilizer why not?

Tiger-sul is the only sulfur form that can be blended with a dry fertilizer.

Question 10. How much sulfur fertilizer will be applied at planting? Round to the nearest whole pound.
If no sulfur is to be applied, enter "0" for product rate, and skip the remainder of question 10.

Sulfur rate lbs/ac	Product	Formulation	Pounds of Product per acre	Product Cost Per Ton	Product Cost \$/Acre
15	Tiger-Sul	0-0-0-90S	17	\$ 1,300.00	\$ 11.05

NUTRIENT APPLICATIONS						
Date of App	Nutrient	Product	Units Nutrient/Ac	LBS Product Per Acre	Product Cost/Acre	Total Fert Cost
10/5/2022	Nitrogen	Urea	104.50	232.00	127.60	\$ 52,316.00
	Nitrogen		0.00	0.00	0.00	
	Nitrogen		0.00	0.00	0.00	
10/5/2022	Phosphate	0	0.00	0.00	0.00	\$ -
	Phosphate		0.00	0.00	0.00	
	Phosphate		0.00	0.00	0.00	
10/5/2022	Potassium	0	0.00	0.00	0.00	\$ -
	Potassium		0.00	0.00	0.00	
	Potassium		0.00	0.00	0.00	
10/5/2022	Sulfur	Tiger-Sul	15.00	17.00	11.05	\$ 4,530.50
	Sulfur		0.00	0.00	0.00	
	Sulfur		0.00	0.00	0.00	
Total				249.00	\$ 138.65	\$ 56,846.50

Seed (3)

Customer:	Three Moore Farms LLC
Plant Date	10/5/2022
Crop	Soft White Winter Wheat
Field Identification	Moore 5
Acres	410
Proposed Cropping System	Dry Land/Non-irrigated
Tillage Practices	No-till

SEED Options					
Varieties(s)	Blend	IMI Tolerant	Unit Size	Seeds/ lb	Cost \$/Unit
LCS Art Deco/ LCS Blackjack	Yes	No	60 lbs	11,500	\$ 18.00
Sockeye CL+/Resilience CL + (Clearfield Blend)	Yes	Yes	60 lbs	11,500	\$ 21.00
Norwest Duet/Puma	Yes	No	60 lbs	11,500	\$ 18.00
UI Magic CL+/Stingray CL+ (Clearfield Blend)	Yes	Yes	60 lbs	11,500	\$ 21.00
AP Iliad/LCS Shine	Yes	No	60 lbs	11,500	\$ 18.00
Curiosity CL + Mela CL+ (Clearfield Blend)	Yes	Yes	60 lbs	11,500	\$ 21.00

See 2022 WSCIA Certified Seed Buying Guide for Variety characteristics

Question 1: Are you using a IMI herbicide tolerate variety blend?

Place X after your Answer

Yes:

x

No:

Question 2: Explain why you did, or did not, select a IMI herbicide tolerant variety blend?

A IMI tolerant variety is needed to use Beyond herbicide for control of Jointed Goatgrass

Question 3. What seed variety blend will you recommend for this field?

UI Magic CL+/Stingray CL+ (Clearfield Blend)

Question 4: Explain why you selected this variety blend.

This blend is suited for 12-16 inches of rain
Has the best wheat strip rating

Question 5. What does the seed cost per pound?

pounds per unit	Cost per Unit	Cost Per pound
60	\$ 21.00	\$ 0.35

Question 6. How much seed is needed for this field?

Seeding Rate		
pounds per acre	Cost Per pound	Cost Per Acre
120	\$ 0.35	\$ 42.00

Question 7. How many units of seed will be purchased for this field?

820

Question 8. What is the effective seeding rate in seeds/acre?

1,380,000

SEED COST					
Varieties	Cost Per LB	Rate Per Acre	Cost Per Acre	Acres Planted	Total Seed Cost
UI Magic CL+/Stingray CL+ (Clearfield Blend)	\$ 0.35	120.00	\$ 42.00	410.00	\$ 17,220.00

Customer:	Three Moore Farms LLC
Plant Date	10/5/2022
Crop	Soft White Winter Wheat
Field Identification	Moore 5
Acres	410
Proposed Cropping System	Dry Land/Non-irrigated
Tillage Practices	No-till

PESTICIDE COSTS			
Product	Type	Cost/unit	Unit
Anthem Flex	Herbicide	\$530	Gallon
Beyond	Herbicide	\$450	Gallon
Tilt	Fungicide	\$140	Gallon

Question 1. What are the two main diseases of concern with this crop?

Disease 1	Wheat Strip Rust
Disease 2	Leaf Strip

Question 2. How do you recommend managing Disease 1?

Two fungicide passes, on at green up, and one at flag leaf should control the rust.

Question 3. If you recommend the application of fungicide for Disease 1, complete the chart below. Otherwise, leave blank.
Calculate to the nearest fluid ounce. 1 gallon = 128 fluid ounces.

Fungicide Product	Use Rate floz/ac	Prod. cost \$/gallon	How many Applications?	Total Product Cost Per Acre For All Applications	* Values Transferred to Table Below to Calculate Final Cost
Tilt	4	\$ 140.00	2	\$ 8.75	

Question 4. How do you recommend managing Disease 2?

Select a seed variety or blend with genetic tolerance.

Question 5. If you recommend the application of fungicide for Disease 2, complete the chart below. Otherwise, leave blank.
Calculate to the nearest fluid ounce. 1 gallon = 128 fluid ounces.

Fungicide Product	Use Rate floz/ac	Prod. cost \$/gallon	How many Applications?	Total Product Cost Per Acre For All Applications	* Values Transferred to Table Below to Calculate Final Cost
				\$ -	

Question 6. What are the main weeds to be controlled

Weed 1	Downy Brome
Weed 2	Jointed Goatgrass
Weed 3	Prickly Lettuce
Weed 4	Rattail Foxtail

IPM (4)

Question 7. Which of these weeds can lead to additional discounts when selling the grain?

Jointed Goatgrass

Question 8. Which herbicide will you use and at what rate? **Use maximum labeled rate**
Calculate to the nearest fluid ounce. 1 gallon = 128 fluid ounces.

Fungicide Product	Use Rate floz/ac	Prod. cost \$/gallon	Total Product Cost for Field	Product Cost Per Acre
Beyond	6	\$ 450.00	\$ 8,646.90	\$ 21.09

*** Values Transferred to Table Below
to Calculate Final Cost**

Question 9. Why did you choose this herbicide?

This was the only herbicide choice that controls Jointed Goatgrass.

HERBICIDE APPLICATIONS								
Date of Application	Product	Units of Measurement	Units Per Acre	Acres Applied	Total Units Used	Price Per Gal	Product Cost	Cost Per Acre
	Beyond	Fl. Oz	6	410	2460	\$ 450.00	\$ 8,646.90	\$ 21.09
		Fl. Oz	0	410	0	\$ -	\$ -	\$ -
Total						\$ 450.00	\$ 8,646.90	\$ 21.09
FUNGICIDE APPLICATIONS								
Date of Application	Product	Units of Measurement	Units Per Acre	Acres Applied	Total Units Used	Price Per Gal	Product Cost	Cost Per Acre
	Tilt	Fl. Oz	8	410	3280	\$ 140.00	\$ 3,587.50	\$ 8.75
	0	Fl. Oz	0	410	0	\$ -	\$ -	\$ -
						\$ 140.00	\$ 3,587.50	\$ 8.75
INSECTICIDE APPLICATIONS								
Date of Application	Product	Units of Measurement	Units Per Acre	Acres Applied	Total Units Used	Price Per Gal	Product Cost	Cost Per Acre
		Fl. Oz		410	0		\$ -	\$ -
				410		\$ -	\$ -	\$ -

Total product Cost Per Acre \$ 29.84

Machinery and Hauling (5)

Customer:	Three Moore Farms LLC
Plant Date	10/5/2022
Crop	Soft White Winter Wheat
Field Identification	Moore 5
Acres	410
Proposed Cropping System	Dry Land/Non-irrigated
Tillage Practices	No-till

Activity	Equipment Used	Equipment Costs								Labor Cost				Total Operation Cost Per Acre
		Equipment Ownership Cost per Day of Operation	HRS	Acres per hour	Acres per day	Fuel/Hr (Gals)	Fuel \$/Gal	Total Daily Fuel Cost	Equip & Fuel Per Acre	Labor Cost Per Hour	Total Daily Labor Cost	Total Daily Cost	Daily Per Acre Labor Cost	
Single Pass Plant/Fertilizer	JD9520 pulling 60 ft JD 1995 seeder & 1910 Cart (Capable of liquid, gas, or dry fertilizer)	\$ 5,318.00	10	40	400	13.5	\$ 4.40	\$ 594.00	\$ 14.78	\$ 20.00	\$ 200.00	\$ 794.00	\$ 3.47	\$ 18.25
Spray	JD 4930	\$ 7,410.00	10	120	1200	10.5	\$ 4.40	\$ 462.00	\$ 6.56	\$ 20.00	\$ 200.00	\$ 662.00	\$ 0.94	\$ 7.50
Harvest	JD S690 Combine with 640FD	\$ 6,635.00	10	35	350	14.5	\$ 4.40	\$ 638.00	\$ 20.78	\$ 20.00	\$ 200.00	\$ 838.00	\$ 4.22	\$ 25.00

Contracted grain hauling costs \$0.20/bu up to 20 loaded miles. Additional \$0.08/bu/mile over 20 loaded miles.

Question 1. What will planting and fertilizer application cost?

Number of passes	Total Operation Cost Per Acre (\$)	Acres	Total Cost (\$)
1	\$ 18.25	410	\$ 7,482.50

Question 2. What will spraying cost?

Number of passes	Total Operation Cost Per Acre (\$)	Acres	Total Cost (\$)
2	\$ 7.50	410	\$ 6,150.00

Question 3. What will Harvest cost?

Number of passes	Total Operation Cost Per Acre (\$)	Acres	Total Cost (\$)
1	\$ 25.00	410	\$ 10,250.00

Machinery and Hauling (5)

Question 4. What is the total expected grain production?

Expected Yield Per Acre	Acres in field	Expected Bushels of Grain Produced
105	410	43050

Question 5. What is the cost of hauling the grain to terminal/elevator?

Bushels of Grain to Haul	Cost Per Mile to Haul Grain	Miles to Terminal	Total Cost to Haul Grain
43050	\$ 0.20	15	\$ 8,610.00

Machinery and Hauling Cost

Operation	Cost per acre/bu	Number of Passes	Bushels	Acres	Total Cost
Planting and Fertilizer Application	\$ 18.25	1	--	410	\$ 7,482.50
Spraying	\$ 7.50	2	--	410	\$ 6,150.00
Harvest	\$ 25.00	1	--	410	\$ 10,250.00
Hauling	\$ 0.20	--	43050	NA	\$ 8,610.00

Total Machinery and Hauling Costs \$ 32,492.50

Finacial Summary - (6)

Customer:	Three Moore Farms LLC
Plant Date	10/5/2022
Crop	Soft White Winter Wheat
Field Identification	Moore 5
Acres	410
Proposed Cropping System	Dry Land/Non-irrigated
Tillage Practices	No-till

Question 1. What is the total expected grain production?

Expected Yield Per Acre	Expected Price Per Bushel	Expected Income Per Acre	Acres in field	Expected Total Grain Sales
105	\$ 8.50	\$ 892.50	410	\$ 365,925.00

Question 2. Will the herbicide you selected control Jointed Goatgrass?

Place X after your Answer	Yes:	X
	No:	

Question 3. **If you answered "No" to Question 2, complete this question. If you answered "yes" to Question 2 Skip this question.**

What will the Discount be for Jointed Goatgrass seed in the grain?

Jointed Goatgrass Discount per bushel	Yield Per acre	Discount (lost revenue) per acre	Discount (lost revenue) Field Total
	105		

Question 4. Calculate the farmer's total cost per acre?

Enter percent as a whole number. For example 10% would be entered as 10

Famer's Share of Input Costs	Total Input Costs per Acre	Famer's Share of Input Costs	Machinery and Hauling Cost Per Acre	Famer's Total Cost Per Acre
50%	\$ 210.49	\$ 105.25	\$ 79.25	\$ 184.50

Question 5. Calculate the farmer's breakeven grain sale price at the expected yield. The farmer only receives a portion of the grain sale, what market price will meet the farmer's breakeven?

Famer's Share of Income	Total Expected Yield Per Acre	Famer's Share of Yield (bu)	Famer's Total Cost Per acre	Famer's Break Even Price per Bushel	Breakeven Market Price per Bushel
50%	105	52.5	\$ 184.50	\$ 3.51	\$ 7.02

Question 6. Calculate the farmer's breakeven grain sale price at the expected sale price. The farmer only receives a portion of the bushels produced, what total field production yield will meet the farmer's breakeven?

Round value to the nearest 0.1 bu.

Famer's Share of Income	Total Expected Grain Price Per Bushel	Famer's Share of grain price	Famer's Total Cost Per Acre	Famer's Breakeven Yield (Bu/Ac)	Breakeven Total Yield (bu/ac)
50%	\$ 8.50	\$ 4.25	\$ 184.50	44.1	88.2

Finacial Summary - (6)

Question 7. What does breakeven mean?

Point when income equal expenses.

Question 8. What is the farmer's projected profit per acre using this plan?

\$ 261.75

Question 9: Does this projected profit meet the farmer's per acre profit goal?

Place X after your Answer

Yes:

No:

X

Shared Expenses			
	Per Acre		Field Total
Fertilizer	\$ 138.65	\$	56,846.50
Seed	\$ 42.00	\$	17,220.00
Chemical	\$ 29.84	\$	12,234.40
Total Shared Expenses	\$ 210.49	\$	86,300.90
Additional Farmer Expenses			
	Per Acre		Field Total
Machinery	\$ 58.25	\$	23,882.50
Grain Hauling	\$ 21.00	\$	8,610.00
Total Additional Farmer Expenses	\$ 79.25	\$	32,492.50
Income			
	Per Acre		Field Total
Yield	105		43050
Sale price Per Bushel	\$ 8.50	\$	8.50
Gross revenue - Grain Sales	\$ 892.50	\$	365,925.00
Less discounts	\$ -	\$	-
Total Income	\$ 892.50	\$	365,925.00
Profit Summary Farmer			
Farmer Share of Input Costs	50%		50%
Farmer Expense	\$ 184.50	\$	75,642.95
Farmer Income	\$ 446.25	\$	182,962.50
Farmer Profit	\$ 261.75	\$	107,319.55
Farmer Breakeven price/bushel (at given yield)	\$ 7.02		
Farmer Breakeven yield/acre (at given price)	88.2		
Profit Summary Land Owner			
Land Owner Share of Input Costs	50%		50%
Land Owner Taxes & Insurance	\$ 37.68	\$	15,448.80
Land Owner Expense	\$ 142.93	\$	58,599.25
Land Owner Income	\$ 446.25	\$	182,962.50
Land Owner Profit	\$ 303.33	\$	124,363.25
Land Owner Breakeven price/bushel (at given yield)	\$ 2.72		
Land Owner Breakeven yield/acre (at given price)	33.6		