

1) (10 pts. total) Below is a simplified farm Balance Sheet.

a) (2 pts.) Use the information given and your knowledge of the relationships among Balance Sheet entries to fill in the **four** missing cells and then answer the questions below.

BALANCE SHEET	1/1/2019	1/1/2018		1/1/2019	1/1/2018
Current Assets	600,000		Current Liabilities	700,000	
Non-Current Assets		4,100,000	Non-Current Liabilities	2,100,000	2,200,000
			Total Liabilities	2,800,000	2,600,000
			Equity	1,800,000	
Total Assets	4,600,000	4,600,000	Total Liabilities & Equity		4,600,000

b) (2 pts.) Based on this Balance Sheet, what is the Current Ratio on 1/1/2019?

c) (2 pts.) Based on this Balance Sheet, what is the Debt to Asset Ratio on 1/1/2019?

d) (4 pts.) Suppose you sell grain from your farm for \$500,000, the value you had on your market basis balance sheet. You then spend \$400,000 to buy some land and \$100,000 to pay off short-term debt for the farm. The column **Before** in the balance sheet below gives the financial data for before you made these changes. For each entry in the **Before** column, write in the **After** column the new value that applies after you complete these changes.

BALANCE SHEET	Before	After		Before	After
Current Assets	800,000		Current Liabilities	300,000	
Non-Current Assets	1,500,000		Non-Current Liabilities	1,200,000	
			Total Liabilities	1,500,000	
			Equity	800,000	
Total Assets	2,300,000		Total Liabilities & Equity	2,300,000	

2) (15 pts. total) Below is a simplified farm Income Statement.

a) (3 pts.) Use the given information to fill in the **three** missing cells.

<b>INCOME STATEMENT</b>		<b>1/1/2018 to 1/1/2019</b>
Crop Sales		<input type="text"/>
Livestock/Dairy Sales		600,000
Total Revenue		1,100,000
Operating Costs		900,000
Interest Expenses		300,000
Total Costs		<input type="text"/>
Net Farm Income from Operations		<input type="text"/>
Unpaid Labor and Management		100,000
Net Farm Income		-200,000

Use the Income Statement above and the **FIRST** Balance Sheet in Question 1 to answer the questions below. Show how you calculate your answers for potential partial credit.

b) (3 pts.) What is this farm's Return on Assets? What is this farm's Rate of Return on Assets?

c) (3 pts.) What is this farm's Return on Equity? What is this farm's Rate of Return on Equity?

d) (3 pts.) What is this farm's Operating Profit Margin Ratio (i.e. Profit Margin)?

e) (3 pts) The income statement above shows a net farm income loss of \$200,000, which includes paying \$100,000 to the owner/manager for unpaid labor & management. Briefly explain how the farm can lose money and the farmer still pay himself/herself \$100,000. Where does this \$100,000 come from in terms of the farm balance sheet?

**3) (17 pts. total)** Briefly and concisely answer each question below.

**a) (1 pts.)** Do most US farms use cash or accrual accounting for filing taxes?

**b) (2 pts.)** Suppose you planted and harvested soybeans in 2018, but sold them in 2019. If you wanted to do accrual accounting, when would you claim this income, in 2018 or 2019?

**c) (2 pts.)** Suppose you buy fuel in October 2018 and use it to plant crops in May 2019. If you deduct the cost of the fuel on your 2018 taxes, is this cash accounting or accrual accounting?

**d)** Suppose you have been a sole proprietor for several years. A potential investor wants to evaluate your business skills before investing a lot of money to expand your farm as a partner. She wants to see your balance sheets and income statements from the last few years.

**i) (3 pts.)** Would you use a cost or market basis balance sheet, or both? Briefly explain why.

**ii) (3 pts.)** Would you use cash or accrual accounting, or both? Briefly explain why.

**f) (3 pts.)** Suppose your commercial grain farm has a current ratio of 1.01 (101%) in early October. Explain why this is or is not a problem.

**g) (3 pts.)** Suppose your commercial grain farm has a debt to asset ratio of 0.90 (90%). Explain why this is or is not a problem.

**4) (4 pts. total)** You buy a tractor for \$80,000 with a useful life of 4 years.

**a) (2 pts.)** Fill in the table below using Straight Line Depreciation for this truck assuming a \$20,000 salvage value. Show your work.

Year	Depreciation During Year	Value at Year End
1		
2		
3		
4		

**b) (2 pts.)** Fill in the table below using 150% Declining Balance Depreciation for this tractor for years 1 and 2 only. IGNORE SALVAGE VALUE. Show your work.

Year	Depreciation During Year	Value at Year End
1		
2		
3	xxxx	xxxx
4	xxxx	xxxx

**5) (8 pts.)** Suppose that in October of 2018 you paid \$8,000 for an awesome milk cow and have been and will be depreciating her for tax purposes using the tax table below.

**a) (2 pts.)** Enter the depreciation claimed in 2018 and that will be claimed for 2019 in the table.

Year	Calendar Year	Depreciation Rate	Depreciation Claimed
1	2018	15.00%	
2	2019	25.50%	
3	2020	17.85%	
4	2021	16.66%	
5	2022	16.66%	
6	2023	8.33%	

**b) (2 pts.)** What will be your tax basis in the awesome cow at the end of 2019?

**c) (2 pts.)** If you sold the awesome cow in December of 2019 for \$4,000, how much gain would you report on your tax return?

**d) (2 pts.)** For tax purposes, cows are breeding livestock. Consider ordinary income tax, self-employment tax, and capital gains tax, which one or ones is this gain subject to?

**6) (11 pts.)** Suppose in December of 2016 you expected \$150,000 in taxable income and so you bought a tractor for \$150,000 and chose the Section 179 election for depreciation of the tractor.

**a) (2 pts.)** Briefly explain how this affected your 2016 ordinary income and self-employment taxes.

**b) (2 pts.)** What was your income tax basis in the tractor at the end of 2016?

**c) (2 pts.)** If you sold the tractor in November of 2019 for \$50,000, how much gain or loss would you report on your 2019 tax return?

**d) (2 pts.)** Considering ordinary income tax, self-employment tax, and capital gains tax, which one or ones is this gain subject to?

**7) (22 pts. total)** Use the information provided to give short answers to the following questions. Bob and Ann own a farm, with all assets owned as marital property under Wisconsin's marital property law. Among their assets is corn worth \$500,000 with a \$0 income tax basis because they raised it and already deducted all of their production costs.

**a) (2 pts.)** If Bob and Ann sold the corn for \$500,000 to Judy, how much gain would they have to report as a result of the sale?

**b) (2 pts.)** Considering ordinary income tax, self-employment tax, and capital gains tax, which one or ones is this gain subject to?

- c) **(2 pts.)** If instead Bob and Ann gave the corn to Judy. Assuming this is their first major gift to Judy, based on current tax laws, would Bob and Ann have to pay gift taxes?
- d) **(2 pts.)** If Judy sold the corn for \$500,000 after they gave it to her, how much gain would she have to report?
- e) **(2 pts.)** Suppose instead Bob and Ann contribute the corn to an S corporation in exchange for an ownership interest in the corporation. If the corporation sells the corn for \$500,000, how much gain or loss would the corporation realize?
- i) **(2 pts.)** Would the S corporation pay income tax on this gain?
- ii) **(2 pts.)** Suppose instead of selling the corn, the S corporation gives it back to Bob and Ann. Would the corporation and/or Bob and Ann pay income tax due to this transfer?
- f) **(2 pts.)** If instead Bob and Ann contribute the corn to an LLC in exchange for an ownership interest in the LLC and then the LLC sells the corn for \$500,000, how much gain would the LLC realize?
- i) **(2 pts.)** Would the LLC pay income tax on this gain or loss?
- ii) **(2 pts.)** Suppose instead of selling the corn, the LLC returns it back to Bob and Ann. Would the LLC and/or Bob and Ann have to pay income tax as a result of this transfer?
- g) **(2 pts.)** Sadly, before they do any of these options, Ann dies. Her will gives her interest in the corn to Bob. How much gain would Bob have to report if he sold the corn for \$500,000?

**8) (9 pts. total)** Provide short answers to each question below.

a) **(3 pts.)** Which business entities discussed in class must file or register with the state to be legally established as a business?

b) **(3 pts.)** Which business entities discussed in class do not pay taxes on their income, but pass the income through to the owners who pay taxes?

c) **(3 pts.)** If your farm is organized as a general partnership and your partner (not spouse) buys a tractor for the farm on credit, could the lender seize your personal assets to pay off this debt? Briefly explain why/why not.

**9) (7 pts.)** True or False? Mark your answer based on material discussed in class.

- a) T \_\_\_ F \_\_\_      Inventory adjustments in farm accounting are a type of non-cash revenue.
- b) T \_\_\_ F \_\_\_      The new 2018 tax law lets US farms use cash accounting for the first time.
- c) T \_\_\_ F \_\_\_      As discussed in class, rotating milking parlors like in the Kinnard Farms video are now fairly common, even for small and mid-sized dairies.
- d) T \_\_\_ F \_\_\_      The PBS News video we discussed in class explained how smaller dairy farms are better sources for milk because the cows are healthier.
- e) T \_\_\_ F \_\_\_      As discussed in class, ag supply and food demand are relatively inelastic, generating large price swings for small supply/demand changes.
- f) T \_\_\_ F \_\_\_      Based on the USDA data discussed in class, most small farms actually have another job they consider their primary job or they are retired.
- g) T \_\_\_ F \_\_\_      Shareholders (owners) of farms organized as C or S corporations can also serve on the farm's board of directors and be the chief executive officer.