#### Analyse the effect of increasing the herd size.

#### Exercise 1.

Dave and Jodi are currently milking 210 cows; they have been offered a new position milking 390 cows. They currently have 210 mixed aged cows and 50 rising 1-year heifers. They will need to purchase 150 mixed age cows, 30 in-calf heifers and 30 rising 1-year heifers. They have adequate machinery for their new position, (value: $100,000 plus their car), and will have $45,000 debt at the end of this season. Without considering any contingencies, how much will their total term borrowings be?

Current market prices are;

* Mixed aged cows $1,800
* In-calf heifers $1,250
* Rising 1-year old heifers $600

#### Exercise 2.

The bank will use the following values:

 $1,500 for mixed age cows

 $1,000 for in-calf heifers

 $500 for rising 1-year heifers

The bank will lend up to the following:

 60% on stock

 50% on plant

Using the above information calculate the maximum term finance you could expect the bank to lend for the new position (Day 1) proposal? (Seasonal borrowings may require additional discussion.)

#### Exercise 3.

Dave and Jodi are paying an interest rate of 7.0% over a 5-year term, what is the annual cost of term finance to be included in the budget?

#### Exercise 4.

#### Assets

Dave and Jodi currently own the following stock and plant.

210 mixed age cows, valued at $1,800.

50 yearling replacements, valued at $600.

80 horse power tractor, valued at $45,000.

Mower, valued at $10,000.

Tedder, valued at $10,000.

Calf feeding equipment, valued at $2,000.

Motorbikes (2), together valued at $18,000.

Assorted plant. $15,000

Car, valued at $15,000.

#### Liabilities

They have a term loan with $45,000 still owing.

Currently, they are in overdraft of $10,000 in their seasonal finance account.

Calculate Dave and Jodi’s current equity as a percentage of their total assets.

#### Exercise 5.

List some likely causes of change between their forecast end of season financial position and the actual end of season financial position.

#### Exercise 6.

Dave and Jodi will need to purchase 150 mixed age cows, 30 in-calf heifers and 30 rising 1-year heifers. Current market prices are; $1,800 for mixed aged cows, $1250 for in-calf heifers and $600 for rising 1-year heifers. They have adequate machinery for their new position; have allowed for $2,000 covering shifting and legal expenses. At the end of the current season, they will have $45,000 term debt and no debt in their seasonal finance. Their forecast cashflow budget shows that they may require $40,000 of seasonal overdraft facility as working capital. Establish the borrowings for this exercise.

#### Exercise 7.

Once we have calculated the total borrowings required, we can then calculate the annual cost of debt servicing.

Calculate the annual cost of the term loan if the loan was table mortgage for 5 years at a 7% interest rate. (Do not include seasonal finance).

#### Exercise 8.

Part A.

Calculate Dave and Jodi’s equity position in their new situation. (Please note rising 2’s become mixed age cows on June 1st).

Part B.

Using the bank values below, calculate their security position

The bank will use the following values:

 $1500 for mixed age cows

 $1000 for in calf heifers

 $500 for rising 1-year heifers

#### Exercise 9.

Using the farm input plan for Dave and Jodi, milking 390 cows, complete a feasibility budget for their business (year 1 and 2).

#### Exercise 10.

Calculate operating profit for year 2.

Assume

* Opening + closing feedstock are the same.
* Opening and closing stock numbers are the same.

Wages for management = 1 FTE (full time equivalent)

Plus unpaid labour = 0.25 FTE

Depreciation = $15,000

#### Exercise 11.

Work out the ROA for Dave and Jodi’s 390-cow farm operation. (Yr2).

#### Exercise 12.

Work out the ROE for Dave and Jodi’s 390-cow farm operation. (Yr2)

#### Exercise 13.

Comment on the viability of the proposal over time.