

Grower Decision-making Matrix

Check out the video featuring Cam Nicholson explaining the ways growers make decisions with their heart, gut and intuition using relevant examples.

<https://www.youtube.com/watch?v=gFERuVXOcII>

<https://www.youtube.com/watch?v=nsMa2VtnONU>

Step 1: Define the Decision

Step 2: (optional): Define when the decision needs to be made

Step 3: List the major considerations (critical factors) that should influence the decision

Step 4: What are the tipping points for each decision.

Step 1: Define the Decision.

Example (from the Eastern States)

There has been a severe frost. Should I cut this crop for fodder, or take it through for grain?

Step 2 (optional): Define when the decision needs to be made

Quickly

Step 3: List the major considerations (critical factors) that should influence the decision. List them in order of importance.

An on-line App has been generated to walk you through the steps

<https://decisionwizard.sfs.org.au/>

Should I cut this crop for hay (or take it through to grain)?

Trigger

Immediately after late season frost event

Consideration	Condition when I would think differently	Value	Test Score
Estimated area frosted	>80% frosted	10	
	50% to 80% frosted	7	
	20% to 50% frosted	4	
	< 20% of crop frosted	0	
Grain value if harvested compared to other uses for the fodder	Fodder value much higher than the grain value	10	
	Grain and fodder value about equal	5	
	Grain value much higher than the fodder value	0	
Likelihood the unfrosted parts of the crop will finish	Low (minimal soil moisture and unfavourable forecast)	6	
	Moderate (combination of current soil moisture and forecast OK)	3	
	High (good soil moisture and favourable forecast)	0	
Fodder storage	Yes	2	
	No	0	
Market to sell into	Yes and immediate	6	
	Yes, but over time	3	
	Very limited	0	
Presence of problem weeds	Yes and could be successfully controlled with cutting	4	
	Yes, but cutting won't help	1	
	No	0	
Max value	38		
Risk tolerance	high		

Decision	Suggested score	Confirmed score
Definitely cut the crop	More than 25	More than 25
Hedge my bets and cut some (ideally the worst affected areas)	17 to 25	17 to 25
Don't cut the crop, take through to grain	Less than 17	Less than 17

Test the scores by running a number of scenarios and make amendments to the assigned values as necessary. This can be adjusted annually if you feel it didn't guide you to the right decision.

If to apply more nitrogen to increase protein.

Trigger

Consideration	Condition when I would think differently	Value	Test
Current markets	\$50+ premium price difference between feed grade and milling grade.	12	
	\$30 - \$50 premium price difference between feed grade and milling grade.	6	
	\$0 - \$30 premium price difference between feed grade and milling grade.	0	
Summer climate outlook	Dry harvest will reduce the risk of grain being down graded.	10	
	Wet harvest will have a high risk of down graded grain.	0	
Diseases	Low disease on leaf will increase uptake of nitrogen.	10	
	High disease on leaf will reduce uptake of nitrogen.	0	
Timing of application	Late flowering so nitrogen increases protein instead of yield	8	
	Wrong timing of application will not maximize potential protein increase	0	
Forecasted budget	Capital still available for allocation.	6	
	Full capital allocation already spent.	0	
Is the paddock accessible.	Wheel tracks are dry and compacted for machinery to cause limited crop damage	5	
	Too wet to access paddock with machinery and will cause damage to crop	0	
Max value	51		
Risk tolerance	moderate		

Decision	Suggested score	Confirmed score
Yes apply 10 units of nitrogen	More than 36	More than 47
Do not consider UAN application	Less than or equal 36	Less than or equal 47

<https://decisionwizard.sfs.org.au/>

Question: Should I apply nitrogen to my wheat crop?

Critical factors		Conditions	Points
Current soil moisture status		Full soil profile	10
		75%	8
		50%	6
		25%	3
		<25%	0
Crop yield potential		High	8
		Average	4
		Low	0
Current soil N status		Low	8
		Medium	4
		High	0
Seasonal forecast rainfall		Decile 8-10	6
		Decile 5-8	4
		Decile 3-5	2
		Decile 0-3	0
Expected commodity price		High	6
		Average	3
		Low	0
		Maximum score	38
Points	Decision		
>28	Maximise N application to maximise yield		
22-28	Apply up to 75% of N requirement		
15-22	Apply up to 30% of N requirement		
<15	Don't apply any N		

When developing a decision matrix, there are five important steps you need to take:

1. Be clear on what the choice or decision is (define the decision).
2. List the major factors which influence the decision.
3. What considerations might make me change my decision – the range of scenarios.
4. Assign each critical factor a score or weighting.
5. Make a call based on all of the above – does the decision make sense?