The adoption and diffusion outcome prediction tool

Adoption report for:

UNIDEB TNWS - Pregnancy scanning

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For more information about ADOPT contact adopt@csiro.au

Project Details

MODEL

Standard agriculture

YOUR INNOVATION

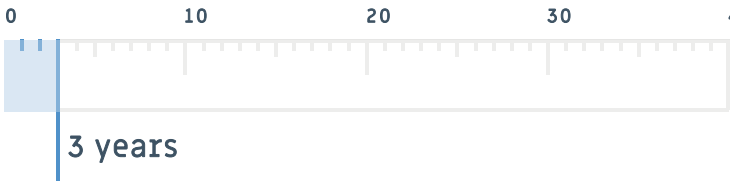
Pregnancy Scanner

YOUR POPULATION

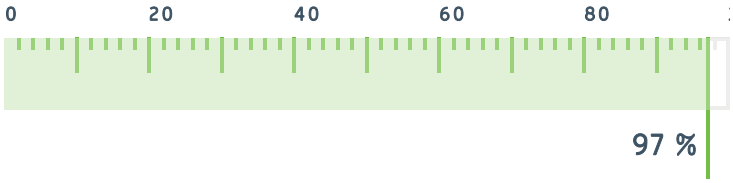
Hungarian sheep farmers

Adoption Level

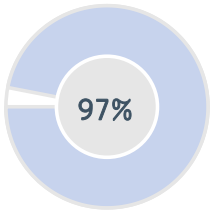
TIME TO NEAR-PEAK ADOPTION LEVEL
(years)



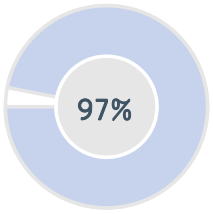
PEAK ADOPTION LEVEL
(percent %)



Predicted adoption levels



IN 5 YEARS FROM START



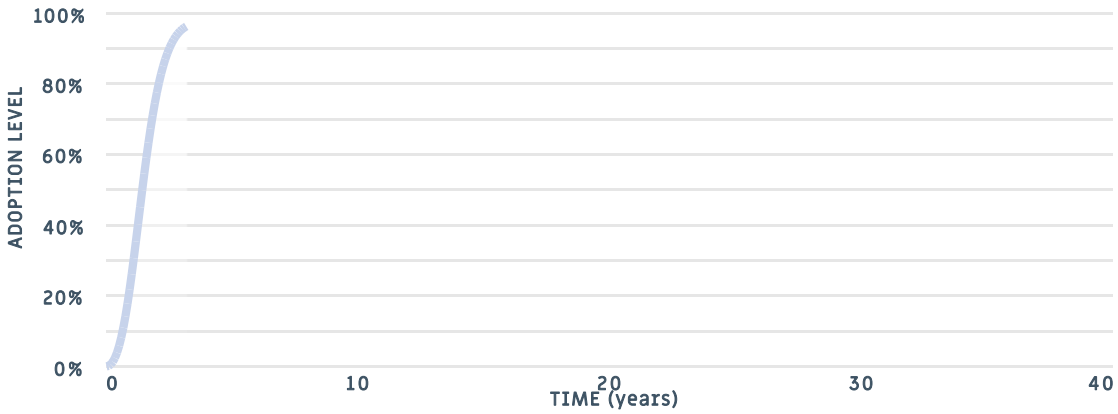
IN 10 YEARS FROM START

TIME TO 50% OF PEAK ADOPTION
(years)

NOTES: The predictions of Peak Adoption Level and Time to Peak Adoption Level are numeric outputs that are provided to assist with insight and understanding and like any forecasts should be used with caution. Time to Near Peak Adoption represents the time to 99% of the maximum predicted adoption level.

Adoption level S-Curve

The following chart shows how the level of adoption in the relevant population of farmers changes over time.



Yearly Adoption Levels

Year	Adoption %
1	26
2	78
3	95

(Peak Adoption)

Changing the adoption levels

Many of the factors can be changed by activities such as extension. Based on the data entered, the ADOPT model suggests that changing the following factors would have the biggest effect on adoption.

Changing the peak adoption level

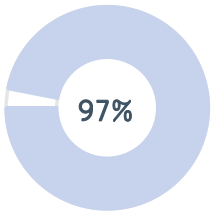
MOST SENSITIVE QUESTION

4 Enterprise scale

On what proportion of the target farms is there a major enterprise that could benefit from the innovation?

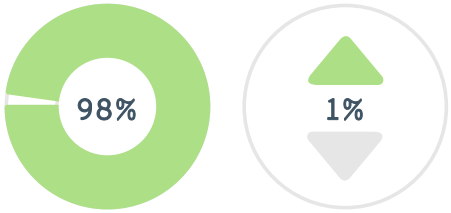
YOUR RESPONSE

A minority of the target farms have a major enterprise that could benefit



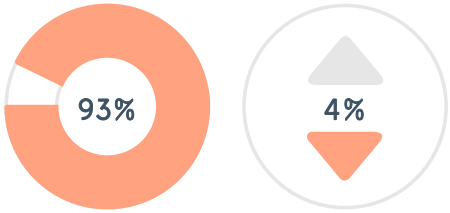
STEP UP RESPONSE

About half of the target farms have a major enterprise that could benefit



STEP DOWN RESPONSE

Almost none of the target farms have a major enterprise that could benefit



Changing the time to peak adoption level

MOST SENSITIVE QUESTION

7 Trialable

How easily can the innovation (or significant components of it) be trialled on a limited basis before a decision is made to adopt it on a larger scale?

YOUR RESPONSE

Easily trialable

STEP UP RESPONSE

Very easily trialable

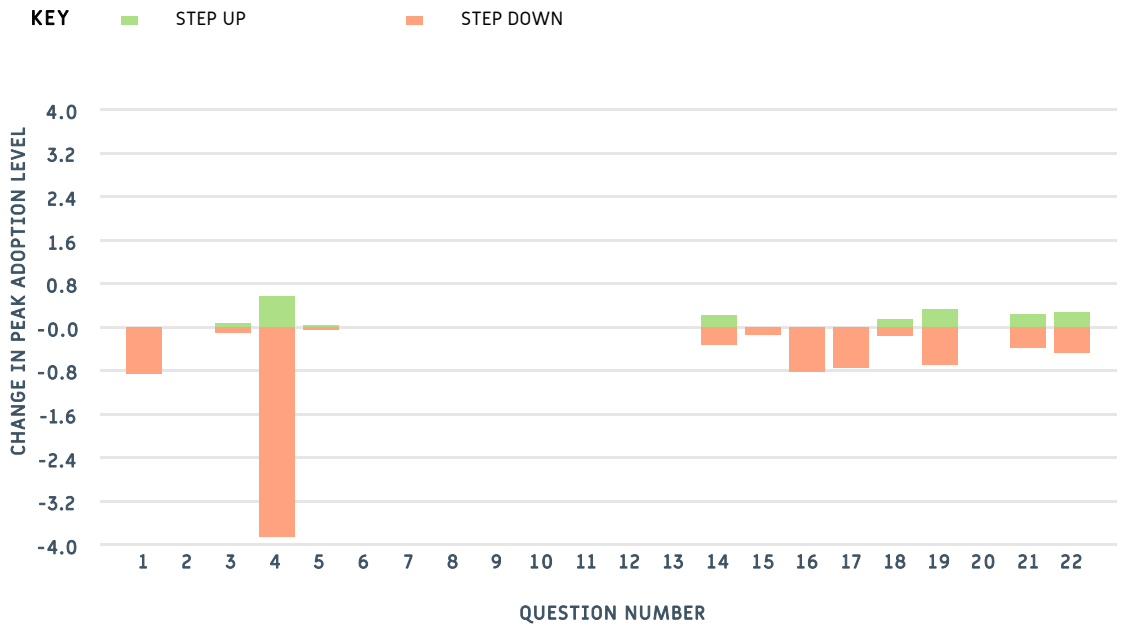
STEP DOWN RESPONSE

Moderately trialable

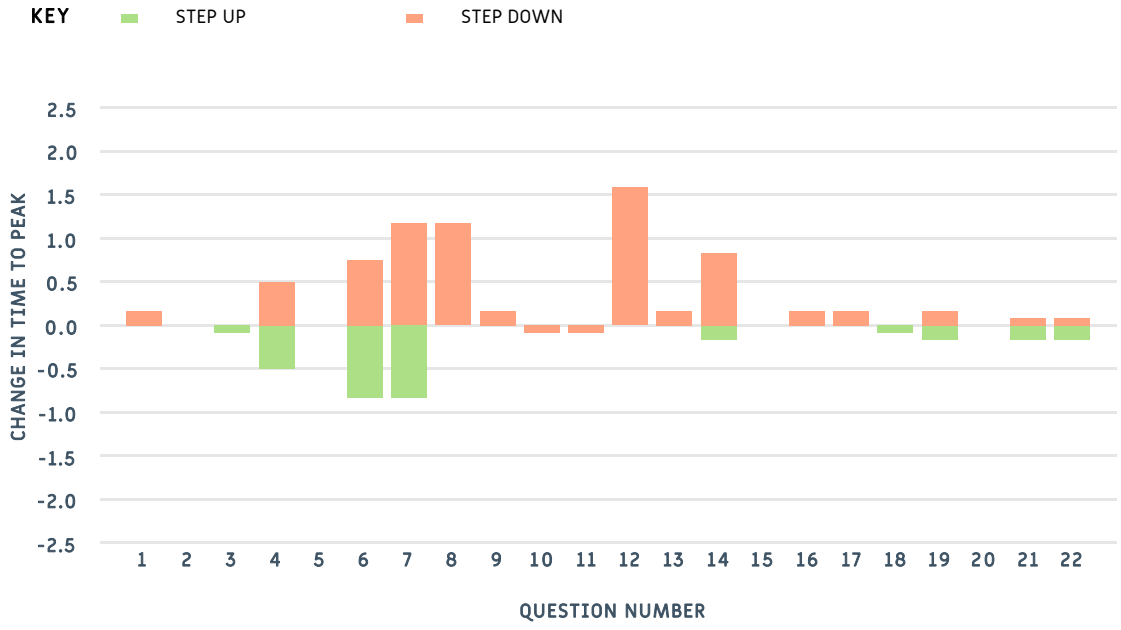
Sensitivity Analysis

The following charts show the effects on Peak Adoption Level and Time to Peak Adoption of single step changes up and down for all questions.

Peak level, sensitivity analysis

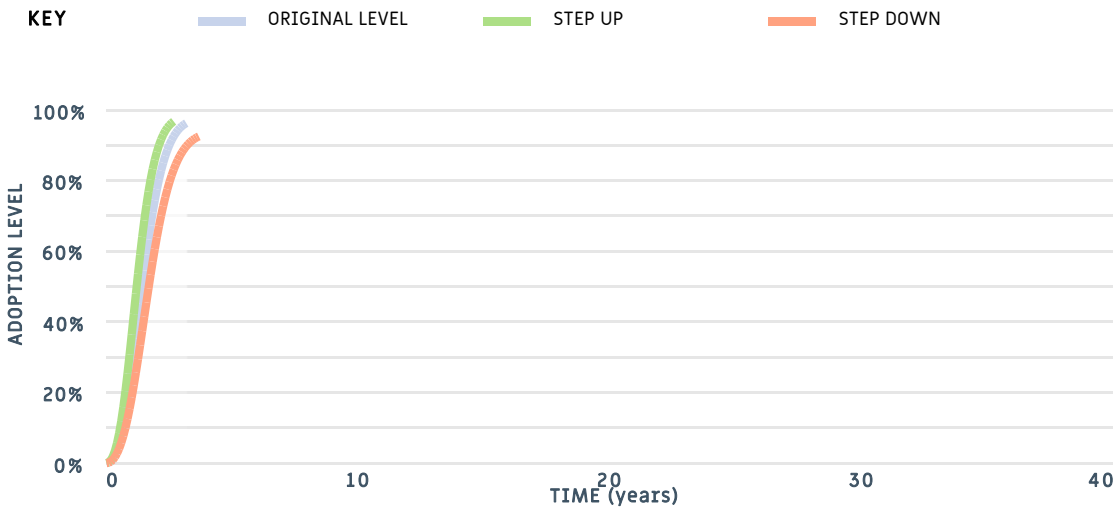


Time to peak, sensitivity analysis

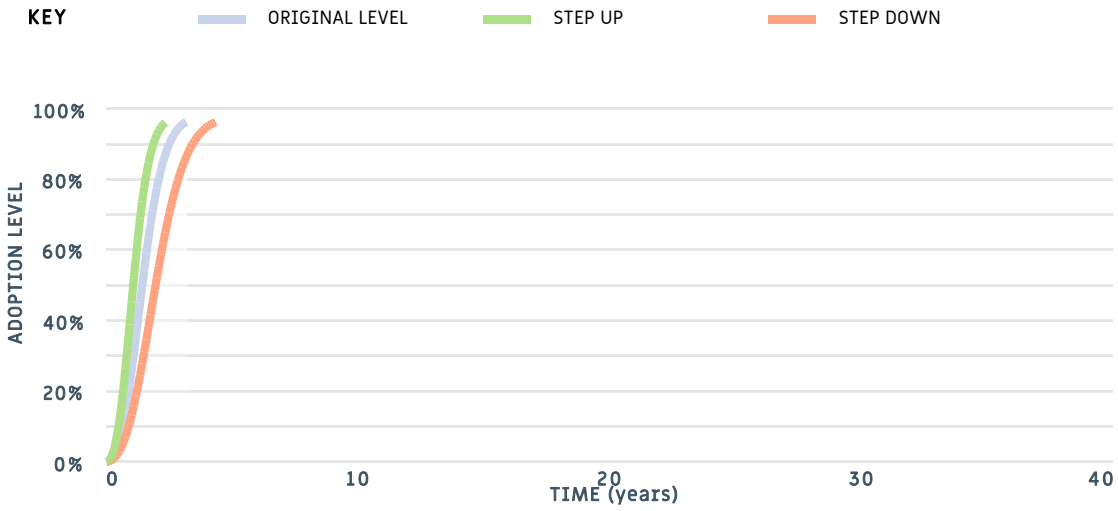


S-Curve Sensitivity

The following chart shows how the S-Curve is predicted to change when a single step change is made to the most sensitive question(s) with respect to Peak Adoption Level



The following chart shows how the S-Curve is predicted to change when a single step change is made to the most sensitive question(s) with respect to Time to Near Peak Adoption.



Responses

Question	Response	Reasoning
Relative Advantage for the Population		
1. Profit orientation	Almost all have maximising profit as a strong motivation	
2. Environmental orientation	About half have protection of the environment as a strong motivation	
3. Risk orientation	A minority have risk minimisation as a strong motivation	
4. Enterprise scale	A minority of the target farms have a major enterprise that could benefit	
5. Management horizon	A minority have a long-term management horizon	
6. Short term constraints	A minority currently have a severe short-term financial constraint	
Learnability Characteristics of the Innovation		
7. Trialable	Easily trialable	
8. Innovation complexity	Not at all difficult to evaluate effects of use due to complexity	
9. Observability	Very easily observable	
Learnability of Population		
10. Advisory support	A minority use a relevant advisor	
11. Group involvement	A minority are involved with a group that discusses farming	
12. Relevant existing skills & knowledge	Almost none will need new skills or knowledge	
13. Innovation awareness	Almost all are aware that it has been used or trialed in their district	

Relative Advantage of the Innovation	
14. Relative upfront cost of the project	Moderate initial investment
15. Reversibility of the innovation	Very easily reversed
16. Profit benefit in years that it is used	Very large profit advantage in years that it is used
17. Future profit benefit	Very large profit advantage in the future
18. Time until any future profit benefits are likely to be realised	Immediately
19. Environmental costs & benefits	No net environmental effects
20. Time to environmental benefit	Not Applicable
21. Risk exposure	Moderate reduction in risk
22. Ease and convenience	Large increase in ease and convenience

ADOPT can be cited as: Kuehne G, Llewellyn R, Pannell D, Wilkinson R, Dolling P, Ouzman J, Ewing M (2017) Predicting farmer uptake of new agricultural practices: A tool for research, extension and policy, Agricultural Systems 156:115-125 https://doi.org/10.1016/j.agsy.2017.06.007