



# LOCAL FEED RESOURCES BASED TOTAL MIXED RATION (TMR) AS A COMPLETE FEED FOR PRE-WEANING LAMBS

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## 01 | WHAT IS TMR?

**TMR of complete feed**

- Combination of forages, cereals/grain and supplements

**Complete feed at pre-weaning stage**

- Important for rumen development

## 02 | NOVELTY



First TMR for pre-weaning lamb in Malaysia



New formulation which consists of local raw materials



New replacement for conventional feeding

## 03 | APPLICABILITY

**SOLVING PROBLEMS IN INDUSTRY**

### BENEFIT

- Supply complete nutrients; energy, protein, minerals and vitamins
- Increase pre-weaning weight gain
- Cost-effective due to the use of variety of agro-industrial by-products
- Reduce risk of digestive upset and allow accuracy in diet

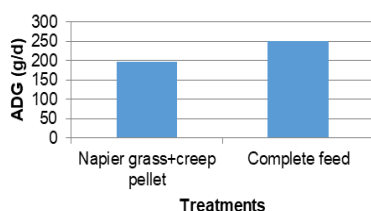
### FEATURES

- Save time.
- High benefit-conversion ratio
- Low feed conversion ratio

### FINDINGS

- High dry matter intake (1.0 kg/d)
- High average daily gain (251g/d)
- High nutrient intake

ADG of Lambs fed on Complete Feed and Commercial Creep Pellet



Components	Composition
DM %	62
CP %	18
Ash %	7
CF %	21
EE %	5
NFE %	49
TDN %	71
ME (MJ/kg DM)	11

## 04 | RESEARCH ACHIEVEMENT



### 03 PUBLICATION

Mira Panadi, Khairiyah Mat, Nor Dini Rusli, Rahman Abd Aziz. (2018). Evaluation of Local Feed Resources Based Total Mixed Ration on Weaning, Growth, Reproductive and Lactating Performance of Dorper Sheep. Research Innovation Seminar, UMK, 3-5 December 2018.

Mira Panadi, Khairiyah Mat, Nor Dini Rusli (2020). Effects of Varying Crude Protein Level on Nutrient Intake and Growth Performance of Pre-Weaning Dorper Lambs Fed on Creep Feed. Asian Australasian Journal of Animal Science (Submitted).

Mira Panadi, Khairiyah Mat, Nor Dini Rusli. (2020). Residual Feed Intake, Body Weight Gain and Cost Analysis of Creep Feed Fed on Dorper Lambs at Pre-Weaning Stage (To be submitted).



### TALENTS

- 1 PhD student



**RM 90,000**  
**RESEARCH FUND**

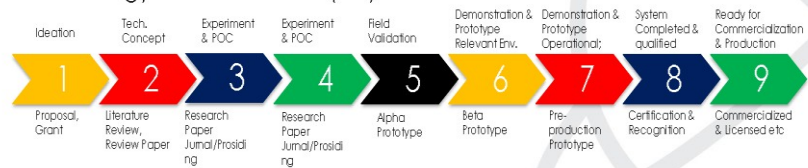
Fundamental Research Grant Scheme (FRGS)-KPM

## 05 | BUSINESS PARTNER

- Agropolitan Besut Setiu Terengganu Farm, Setiu, Terengganu

## 06 | TECHNOLOGY READINESS LEVEL

### Technology Readiness Level (TRL)



## 07 | LEVEL OF IMPACT



The utilisation of agro-industrial by-products as raw materials can help to reduce pollution load from the environment.



New TMR can fill the gap of nutrient deficiency in pre-weaning lamb, thus sheep industry will be improved.



TMR can improve performance of ruminants, thus increase the meat production. Ruminant livestock will become a driving force for food security and sustainable development.



Reducing excessive importation of animal feeds, amounting RM 4.0 billion per year by utilizing locally available feed resources as ruminant feed