



## Feed Blocks: Reduce chronic feed deficits and production costs

### What is it about?

Feed blocks are solid mixtures composed mainly of agro-industrial by-products and crop residues (see illustrations), associated with other products such as urea, mineral and vitamin supplements and other preservatives or binders. They are used to replace part of forages and concentrate feeds but also as a nutritional supplement for ruminants during periods of feed shortage or feed deficit. When properly mixed and dried, the feed blocks may be stored for long periods (2 to 3 years). They are consumed slowly by animals and have no detrimental effects on the digestion and the animal health and help to stabilize production even in dry years.

### Benefits:

Feed blocks are usually made from cheap and locally available products, which reduce the cost of production in comparison with the use of concentrated feeds. In addition, they are easy to use both in the barn and in the pasture. They are easily conserved and thus constitute a strategic feed reserve that can be used during feed shortages and drought periods. Since they are made from perishable by-products, they contribute to the environment protection

### Examples of by-products used for feed blocks making



Fruit processing waste



Olive cakes



Beet molasses



Bran



Tomato pulp



Low-quality cactus fruit



Beet pulp

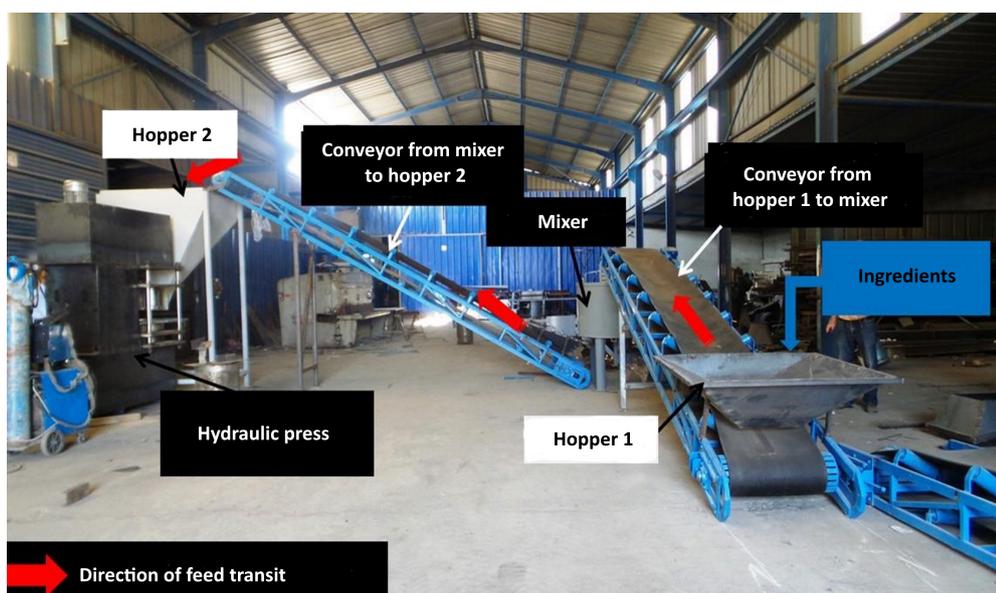
## Examples of feed blocks formulas based on available ingredients from Northwest and Central West of Tunisia

Ingredients	Formulas (%)								
	1	2	3	4	5	6	7	8	9
Urea	3	2	3	2	2	2	2	2	5
Molasses	10	10	10		10	10	10	10	10
Bran	20	25		10	20				
Crushed barley							15	15	
Groats					10				
Grinded crushed			20	15		20	15	15	25
Olive cake	20	30	10				15	15	
Cactus fruit	30		40	40				30	
Low-grade (low quality) apples		20				35	30		
Tomato pulps					45	20			45
Beet pulp				20					
Quicklime	10	10	10	10	10	10	10	10	10
Salt	5	1	4	1	2	2	2	2	3
CMV (minerals and vitamins mixture)	2	2	3	2	1	1	1	1	2
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

## Feed blocks making

After the weighing of all the ingredients, the blocks are manufactured according to the following steps:

- Urea, molasses and salt are dissolved in water and then added to the other ingredients in the hopper
- Lime and CMV are dissolved in water and filtered then added to the other ingredients in the hopper
- Once all the ingredients are prepared, they are transported to the mixer and then to the hydraulic press. The amount of water to be added is adjusted in order to obtain feed blocks which hold without being too solid. If the formula incorporates straw, it must be grinded beforehand in order to obtain particles not exceeding 2 cm in length
- At the exit of the press the blocks are stored under shelters for drying in the open air for at least 3 weeks



**Feed blocks making unit**

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### About ICARDA

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