

Left: A farmer cooperative member produces feed pellets using olive cakes, wheat bran, barley and faba beans. Middle: feed pellets. Right: Dairy cows feeding on locally manufactured feed pellets, replacing partly expensive imported feed concentrates. Photos ICARDA/Udo Rudiger

Context

- Animal feed comprises up to **70% of ruminant** production costs in Tunisia.
- Feed scarcity during certain periods of the year are leading to low meat and milk production.
- Rangelands are suffering from overstocking, overgrazing and soil erosion.
- Locally manufactured feed pellets composed mainly of agri-food by-products are an **inexpensive feed alternative** to forages (partially) and expensive imported livestock feed concentrates.

Our innovative approach

- Farmers in Tunisia are embracing feed pellet **production**, made accessible through farmer organizations that have adopted the feed business innovation.
- A range of feed pellet formulas has been developed in collaboration with Tunisian NARES, considering regional variations and availability of by-products (eg. in the south, oasis farmers utilize downgraded dates and kernels; in central Tunisia, olive cakes are produced).



INITIATIVE ON Sustainable Animal Productivity

Transforming locally available feed ingredients into affordable and nutritious livestock feed pellets

- Locally available feed resources like downgraded dates, date kernels, barley and wheat bran can be processed into valuable compound feed for ruminants using grinders and pellet machines.
- Local production of feed pellets reduces pressure on pastureland, reduces production costs for livestock farmers and can generate income for farmer cooperatives.

	Formula types and %		
Ingredients	#1	#2	#3
Olive cake	34	0	0
Faba beans	30	10	0
Luzerne	0	25	25
Barley	0	15	15
Downgraded dates, kernels	0	20	30
Wheat bran	30	26	26
Minerals + Vitamins	4	4	4
Protein	17	14	11



INITIATIVE ON Livestock and Climate

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Progress

Next steps

SAPLING

LIVESTOCK & CLIMATE



We thank all funders who support this research through their contributions to the CGIAR Trust Fund: www.cgiar.org/funders.

Over **500 imported pelletizing machines** of different sizes (capacity between 150 kg/ and 2,000 kg/h) are used by individual farmers and cooperatives after decentralized introduction of the technology by NARS and ICARDA.

One farmer cooperative has developed its **own feed** pellet label called "Youfeed" and sells about 7 tons of **Youfeed** per month to its members.

One local machine manufacturer has produced a **Tunisian prototype of a pelletizing machine**.

Ethiopia: Foster development of feed businesses managed by farmer cooperatives by introducing feed production chains. Three feed units already distributed, with ongoing training sessions on feed composition and market linkages.

Mali: Identify and explore small-scale mechanization possibilities for feed production, aimed at enhancing efficiency and productivity.

• **Tunisia**: Establish a pastural living lab in southern Tunisia, dedicated to the development of livestockrelated initiatives. Introduce feed production machinery such as pelletizers, grinders, and feed mixers to facilitate growth of the feed businesses.



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