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Take home message Identification and assessment of local alternative sources for rabbit feeding.

Introduction Feed supply is the main constraint to livestock production development in Algeria, while appears a renewal interest for former resources of diets. Thus, alternative feeding systems are aiming to mobilize neglected natural resources. The genus Fraxinus (Oleaceae) is distributed mostly in the temperate regions and the subtropics of the Northern Hemisphere. The main problem to use the ash leaves in rabbit nutrition is the ignorance of its nutritive value. Therefore, the aim of the present study is to evaluate the nutritive value of fresh ash leaves (*Fraxinus excelsior*), harvested in autumn, for growing rabbits.

Materials & methods Ten local Algerian white rabbits, weaned at 35d old (BW: 881± 54g) individually caged, were used to assess to determine the nutritive value, by direct method, of fresh Ash leaves (*Fraxinus excelsior*) harvested in autumn season. Samples of Ash tree leaves were collected throughout the digestibility trial period mixed and stored in polyethylene bag at –20 ºC until the chemical analysis. After 12 days adaptation period, rabbits were used for the digestibility trial following the European reference method described by Perez *et al.* (1995). The chemical analyses were performed at INRA of Toulouse (UMR 1388 GenPhySe, France). Because only one diet was used in this study, it was not allowed to use mean comparison. Thus, the results are presented with mean and standard error.

Results The crude protein (CP) content was moderate, 147 g/kg DM for a fresh forage. The daily average intake of DM was 97 g, corresponding to 106 g/kg $LW^{0.75}$ (Table 1). With this daily consumption, rabbit did not show symptoms of digestive troubles like diarrhea or other during the entire test and achieve a moderate growth. The apparent digestibility coefficient of Ash leaves energy was 70 %. The DE corresponds to 11.86MJ/kg DM with a standard error of 0.36 calculated by the equation proposed by Villamide (1996) for estimation the energy values of feed ingredients by direct method and the DP was 79.72 with a standard error of 03.96 (Table 2).

Digestible energy of Ash leaves was higher than of olive leaves and alfalfa 15 (respectively 5.94 and 8.22 Mj/kg DM; Maertens *et al*., 2002). Digestible protein of those leaves (79.72 g/kg DM) was clearly higher than that of mulberry leaves (16.38 g/kg DM; Deshmukh *et al*., 1993) but also than alfalfa 15 (10.02 g/kg DM; Maertens *et al*., 2002).

Table 1 Body weight, feed intake and digestibility coefficient of the fresh ash leaves (*Fraxinus excelsior*) given as a sole ration for growing rabbits.

	Weight and feed intake		Digestibility (%)	
	Mean	SE	Mean (%)	SE
Initial body weight (g)	816	21		
Final body weight (g)	881	24		
Feed intake (g DM/day)	118.5	06		
Feed intake (g as fed/day)	232.3	13		
Digestibility coefficient				
Dry Matter (DM)			67.1	2.01
Organic matter (OM)			65.2	2.10
Crude protein (CP)			60.9	3.04
Neutral detergent fibre (NDF)			50.1	3.40
Acid detergent fibre (ADF)			43.9	4.02
Gross Energy			61.9	2.62

SE: standard error

Table 2 Nutritive value of fresh Ash leaves (*Fraxinus excelsior*).

	Dietary nutritive value	
	Mean	SE
DE (MJ/Kg DM)[1]	11.86	0.50
DP (g/Kg DM)[2]	79.72	3.96

DE : digestible energy. [2] DP : digestible crude protein

Conclusion The rabbits consume comfortably the Ash leaves (*Fraxinus excelsior*) harvested at autumn season. Nutritive value of those leaves was 11.86±0.50 MJ DE/kg DM and 79.72±03.96g DP/kg DM. Thus, Ash leaves can be useful ingredients in rabbit feeding.

References

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