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ASCORBIC ACID CONTENTS FROM SOME ARID ZONE TILIACEOUS PLANT SPECIES

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Ascorbic acid contents of roots, shoots and fruits of *Corchorus depressus, Corchorm tridens* and *Grewia tenax* have been analysed. Maximum ascorbic acid contents were found in the fruits of *Grewia tenax* (97.37mg/100g.d.w.) while, minimum in roots of *Corchorus tridens* (47.39 mg/100g.d.w.). The climate of arid zone plays a dominant role in structutring its physical as well as biotic environment. The plants growing in this region containt sufficienit amount of nutrients, so they may be considered as livestock feed. Ascorbic acid, also called as antiscorbutic (Vitamin C), is an important primary product and well known for its property as an electron dormer in photosynthetic photophosphorylation.

Keywords : Arid zone; Ascorbic acid; Tiliaceous plants.

Free endogenous ascorbic acid has been recently reported from some arid zone tree species[1-8]. In the present investigation, attempts have been made to investigate the quantitative production of free endogenous ascorbic acid in the roots, shoots and fruits of *Corchorus depressus, Corchrus tridens and Grewia tenax.*

Fresh and healthy roots, shoots and fruits, collected from different sites *i.e.* Gajner (Bikaner), Phalodi (Jodhpur) and Thayat Hamira (Jaisalmer), were dried and homogenized in a mortar with 2% metaphosphoric acid (MPA) (10 mg powder : 100 ml MPA) and were allowed to macerate for one hour. The mixtures were centrifuged at low speed (2500 rmp) and supernatants were used for estimation of ascorbic acid following the colorimetric method[9]. Absorbancy of each of the sample was measured on a spectronic-20 colorimeter (Bausch & Lamb) set at 546nm against blank. Five replicates were taken and values are expressed in mg/100 g.d.w.+SE.

The roots, shoots and fruits of all the three plant species showed much variation in the ascorbic acid contents. The maximum ascorbic acid contents were found in the fruits of *Grewia tenax* (97.37mg/100g.d.w.) collected from Phalodi (Jodhpur district) while minimum in roots of *Corchorus tridens* (47.39 mg/100g.d.w.) collected from Thayat Hamira (Jaisalmer district) (Table 1).

The present study thus indicates that investigated plant species are good source of ascorbic acid (Vitamin C) so they can be used as livestock feed.

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Table 1. Ascorbic acid contents (mg/100 g.d.w.±SE.) of roots, shoots and fruits of selected plant species.

Plants Species	Roots			Shoots			Fruits		
	I	II	III	I	II	III	I	II	III
Corchorus depressus	54.68 ±0.2866	60.51 ±0.2308	49.75 ±0.2294	69.33 ±0.2375	71.89 ±0.0762	74.46 ±0.1528	91.24 ±0.2013	85.67 ±0.1037	95.00 ±0.2076
Corchours tridens	59.38 ±0.1344	52.84 ±0.1969	47.39 ±0.1574	76.06 ±0.2097	68.10 ±0.2078	79.18 ±0.1778	96.41 ±0.1551	87.69 ±0.1170	92.40 ±0.1420
Grewia tenax	61.85 ±0.1083	53.72 ±0.1832	58.30 ±0.2260	70.79 ±0.2866	73.32 ±0.1849	77.73 ±0.2537	90.79 ±0.0919	97.37 ±0.1157	82.11 ±0.2040

I Gajner (Bikaner district), II Phalodi (Jodhpur district), III Thayat Hamira (Jaisalmer district).

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