



Food and Agriculture  
Organization of the  
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International Network of  
Salt-Affected Soils



# List of economic uses of species recorded in eHALOPH

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# List of economic uses of species recorded in eHALOPH

Code	Use	Sub Code	Use
000.0	FOOD AND DRINK	0100.0	Vegetables and fruit
		0200.0	Beverages
		0300.0	Cooking fats and oils
		0400.0	Miscellaneous foods and drinks
		0500.0	Breeding stock
0001.0	CROPS LISTED BY FAO	0001.0	
1000.0	DOMESTIC PRODUCTS	1200.0	Soaps
		1300.0	Cosmetics
		1400.0	Dental
		1700.0	Roofing thatching and green roofs
2000.0	TIMBER	2100.0	Fuel
		2200.0	Sawn timber
		2400.0	Construction timber
		2500.0	Carpentry
3000.0	FORAGE	3100.0	Grazing
		3200.0	Browse
		3300.0	Fodder
4000.0	LAND USE	4500.0	Soil stabilization
		4600.0	Soil improvement
		4700.0	Salt tolerance
		4800.0	Ornamental
5000.0	FIBERS	5100.0	Cordage
		5200.0	Textiles
6000.0	TOXINS	6000.0	
7000.0	MEDICAL	7100.0	General including traditional medicine
		7160.0	Antibiotics
8000.0	CHEMICALS	8100.0	Carbohydrates
		8200.0	Lipids, essential oils
		8300.0	Bioenergy/Biofuel



# SEPASAL

- eHALOPH uses SEPASAL - The Survey of Economic Plants for Arid and Semi-Arid Lands – to provide numerical codes for economic uses of plants
- SEPASAL is a database of useful wild and semi-domesticated plants of tropical and subtropical drylands
- SEPASAL was developed by G.E. Wickens and co-workers at the Royal Botanic Gardens, Kew, U.K held at the Royal Botanic Gardens, Kew, UK. and is no longer active at Kew (see <https://sftp.kew.org/pub/data-repositories/sepasal/>)

SEPASAL		All (around 80 mM NaCl)	%	Halophytes (>200 mM NaCl)	%
0	FOOD AND DRINK (0000.0); Crops	152	11.1	107	11.7
1000	DOMESTIC PRODUCTS (1000.0)	39	2.9	27	2.9
2000	TIMBER (2000.0)	80	5.9	56	6.1
3000	FORAGE (3000.0)	275	20.1	189	20.6
4000	LAND USE (4000.0)	206	15.1	149	16.2
5000	FIBERS (5000.0)	27	2.0	14	1.5
6000	TOXINS (6000.0)	42	3.1	25	2.7
7000	MEDICAL (7000.0)	404	29.6	258	28.1
8000	CHEMICALS (8000.0)	140	10.3	93	10.1
	<b>Totals</b>	<b>1365</b>	<b>100</b>	<b>918</b>	<b>100</b>

**1365 uses**

1. Medical
2. Forage
3. Land use

# Medical uses of species

Family	Number	%	Sum %	% all species in family
Fabaceae	50	12		54
Amaranthaceae	42	10	23	13
Asteraceae	24	6	29	47
Plumbaginaceae	21	5	34	38
Poaceae	20	5	39	13
Rhizophoraceae	16	4	43	84
Solanaceae	12	3	46	67
Apiaceae	11	3	49	85
Malvaceae	11	3	51	73

217 studies

1. Fabaceae
2. Amaranthaceae
3. Asteraceae

Quality assessments {  
Flavonoids concentration  
Phenols and polyphenols concentration  
Tannins concentration



# Forage uses of species

SEPASAL codes	Forage 3000	Grazing 3100	Browse 3200	Fodder 3300	All	%
<b>Amaranthaceae</b>	36	22	6	40	104	38
<b>Poaceae</b>	38	26	1	19	84	68
<b>Fabaceae</b>	24	6	1	12	43	84
<b>Cyperaceae</b>	3	1	0	0	4	85
<b>All families</b>	112	64	13	86	275	100

Three families dominate use as forage and only 31 of the 93 families have any recorded use as forage

## Quality assessments

- Acid detergent fibre (ADF)
- Acid detergent lignin (ADL)
- Ash content
- Crude fibre (CF)
- Crude protein (CP)
- in vitro organic matter digestibility (IVOMD)
- Neutral detergent fibre (NDF)



# Land uses or bioremediation capacity of species

269 species

Amaranthaceae, Poaceae and Fabaceae accounts for 52% of uses



Families	No.	%
Amaranthaceae	63	23
Poaceae	53	20
Fabaceae	24	9
Cyperaceae	12	4
Asteraceae	10	4
Tamaricaceae	9	3
Rhizophoraceae	8	3
Myrtaceae	7	3
Aizoaceae	6	2
Juncaceae	6	2
Zosteraceae	6	2
Brassicaceae	5	2
Casuarinaceae	4	1
Hydrocharitaceae	4	1

# Biofuels uses of species

Families	Number	Percentage
Fabaceae	14	15
Amaranthaceae	12	13
Poaceae	10	11
Rhizophoraceae	9	10
Tamaricaceae	9	10
Arecaceae	7	7
Casuarinaceae	5	5
Myrtaceae	5	5
Combretaceae	4	4
Malvaceae	4	4

97 species

1. Fabaceae
2. Amaranthaceae
3. Poaceae





WHILE SALINITY HAS A DETRIMENTAL EFFECT ON THE YIELD OF MOST OF OUR CONVENTIONAL CROPS, THE POTENTIAL OF HALOPHYTES FOR MEDICAL AND FORAGE USES, SOIL BIOREMEDIATION AND FUEL PROPERTIES WILL REQUIRE FURTHER ATTENTION IN THE RECENT YEARS





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**eHALOPH and the economic uses of salt-tolerant plants**

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