



**Contributions of the ethnobotanical investigation carried out in Amasya district of Turkey (Amasya-Center, Bağlarüstü, Boğaköy and Vermiş villages; Yassıçal and Ziyaret towns)**

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**Abstract**

In this study a field investigation done before in Amasya - Turkey (Amasya-Center, Bağlarüstü, Boğaköy and Vermiş villages; Yassıçal and Ziyaret towns) was evaluated. The aim of the ethnobotany research carried out between September 2004 and March 2006 was to determine the knowledge on plants for various purposes in Turkey (Black Sea Region / Amasya-Center, Bağlarüstü, Boğaköy and Vermiş villages; Yassıçal and Ziyaret towns) with the support of the Turkish Academy of Sciences (TUBA). A team of 2 worked periodically for total 30 days (20 days in villages and towns, 10 days in Amasya-Center). During this period 50 local people were interviewed and 350 plant samples were collected. 12 of these endemic to Turkey and total 257 taxa were determined. Although there were some overlapping uses (especially between food and medicinal plants) 127 plants were used for food, 93 for medicinal purpose, 12 as fuel, 16 as animal feed and 60 for hand-crafts, as well as 49 plant species useful for diverse purposes. From the area 407 recipes were collected for diverse uses. The obtained data were transferred into the database of "Kültür-Kitap" programme of the Turkish Academy of Science (TUBA) Turkey's Cultural Inventory Project. Furthermore, the results were published as a report in the TUBA Cultural Inventory Journal. The results in the mentioned report were discussed and evaluated in the current study and some new ethnobotany data have been put forward.

**Key words:** Turkey, Black Sea Region, Amasya, Ethnobotanical contributions

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**Türkiye'nin Amasya yöresinde (Amasya-Merkez, Bağlarüstü, Boğaköy ve Vermiş Köyleri, Yassıçal ve Ziyaret Kasabaları) gerçekleştirilmiş olan bir etnobotanik araştırmaya katkılar**

**Özet**

Bu çalışmada Türkiye'nin Amasya yöresinde (Amasya-Merkez, Bağlarüstü, Boğaköy ve Vermiş Köyleri, Yassıçal ve Ziyaret Kasabaları) daha önce yapılmış olan bir etnobotanik alan araştırması değerlendirilmiştir. Amasya merkez ilçe, Bağlarüstü, Boğaköy ve Vermiş köyleri; Yassıçal ve Ziyaret beldelerinde halkın değişik alanlardaki bitki bilgisini belirlemeye yönelik etnobotanik çalışmaları, Eylül 2004 - Mart 2006 tarihleri arasında Türkiye Bilimler Akademisinin (TÜBA) destekleriyle sürdürülmüştür. 2 kişilik bir ekiple aralıklı olarak toplam 30 gün (20 gün köylerde ve beldelerde, 10 gün merkez ilçede) çalışılmış, 50 kaynak kişi ile görüşülmüş, 350 bitki örneği toplanmıştır. Bu örneklerden 12'si Türkiye'ye endemik olmak üzere toplam 257 takson belirlenmiştir. Özellikle gıda bitkileri ile tıbbi bitkiler arasında bazı örtüşen türler olmakla birlikte 127 gıda, 93 ilaç, 12 yakacak, 16 yem, 60 el sanatları alanındaki kullanımın yanı sıra 49 bitki türünün de farklı alanlarda yararlı oldukları saptanmıştır. Alandan farklı bitki kullanımlarına ilişkin 407 kullanım biçimi (reçetesi) derlenmiştir. Elde edilen bulgular Türkiye Bilimler Akademisinin Türkiye Kültür Envanteri Projesi kapsamındaki "Kültür-Kitap" veritabanına da aktarılmıştır. Ayrıca, sonuçlar TÜBA Kültür Envanteri Dergisinde bir rapor halinde yayımlanmıştır ki şu anki çalışma ile bahsedilen raporun sonuçları tartışılarak değerlendirilmiş ve bu raporun sonuçlarına birtakım katkılarda bulunulmuştur.

**Anahtar Kelimeler:** Türkiye, Karadeniz Bölgesi, Amasya, Etnobotanik Katkılar

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## 1. Introduction

Ethnobotanic studies which could be defined shortly as the influence between humans and plants consist of valuable information gained through try and error methods and it reached us through the generations (Yıldırım, 2004). With the evaluated study, carried out in Bağlıüstü, Boğaköy and Vermiş villages, Ziyaret and Yassıçal towns, in Amasya Center in Black Sea region between the dates of September 2004 and March 2005, how the plants are used by local people tried to be determined. For instance, they use them for feeding, curing humans and animals, producing paint, against evil eye, decoration and as fence plant, for animal feeding and as fuel. Thus, a part of potential of folklore in Amasya was determined.

Turkey is situated in the temperate zone and has the richest flora among the western pale arctic countries. It also attracts attention with its high endemism rate in the Turkish flora (34.4 %). Nearly one third of the flowering plants and ferns that grows naturally in Turkey (10.765) are endemic (3022). In the temperate zone, except the isolated islands and tropical countries, the high rate of endemism is not seen in any other countries (Özhatay et al., 2003). As can be seen, Turkey is very rich in terms of floristic structure. However, there are not enough studies in ethnobotany field.

Amasya province has a 7500 year old history (Anonymous, 2002). 13 different civilizations existed in the city (Anonymous, 2003). The earliest ethnobotanic study in the field is done by Alpınar (Alpınar, 1979). There are also studies by Fujita et al. (Fujita et al., 1995), Ezer and Mumcu Arısan (Ezer and Arısan-Mumcu, 2006), Cansaran, Kaya and Yıldırım (Cansaran et al., 2007a). In the regions close to Amasya, there are some other studies, too (Sezik et al., 1992; Dönmez, 2000; Ertuğ, 2000; Sezik et al., 2001; Vural and Karavelioğulları, 1997 etc.).

The altitude of the places where this study was done was measured by altimeter. Accordingly, Amasya is 412 m., Yassıçal 1050 m., Vermiş 1100 m., Boğaköy 700 m., Bağlıüstü 750 m., Ziyaret is 500 m. Amasya province is in the Middle Black Sea Region on the borders of Northern and Central Anatolia (Baytop and Alpınar, 1980). Amasya is in the middle part of Black Sea region, but since it does not have an access to the Sea, it has Central Anatolia socioeconomic and cultural features. The location of the province is between 35.00 and 36.30 eastern longitude and 40.15 and 41.02 northern latitude. Yeşilirmak divided mountain ranges into two sides by creating wide valleys. The highest point is Akdağ with 2062 m. Amasya takes place within A5/A6 in the Grid system in Turkey (Davis, 1965-1985). In Figure 1, the map showing the topographic structure of the study field was included. Amasya, which is in the southern part of Black Sea region, has a harsher climate compared to other Black Sea provinces. However, compared to other provinces, it is considered dry. Within the province, rain fall decreases from north to south (Anonymous, 1991). In Amasya, a transition climate is dominant. Also, the geology, topographic and orographic structure of the regions is effective on the climate of the province. According to Emberger, in Amasya semi-dry Mediterranean climate with an extremely cold winter is dominant (Akman, 1990).

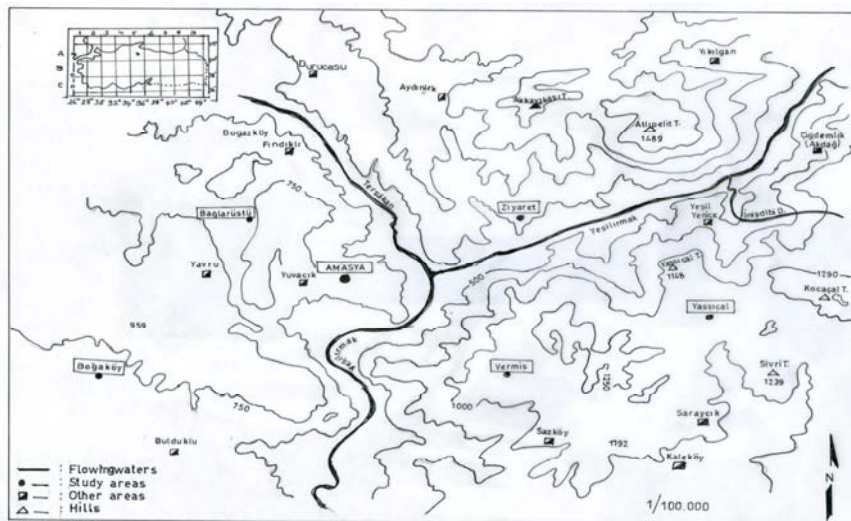


Figure 1. Topographic map of the study area

In Amasya, mostly, floristic studies have been carried out (Ketenöğlü et al., 1994; Cansaran and Aydoğdu, 1998; Cansaran, 2002; Cansaran et al., 2007b; Korkmaz et al., 2005; Celep et al., 2006 etc.). There are also some vegetation studies, some have been completed and some are ongoing (Ketenöğlü et al., 1994; Cansaran and Aydoğdu, 2001 etc.).

In terms of the structure of the study area, it took its shape at mesozoic in the second period and tertiary in the third period. There are also areas belonging to the last mesozoic period, which consists of hard and soft calcareous and chalky parts. In the study area, the alluvions (sand, stones, clay), sedimentary belonging to the third period (calcareous,

marl., clay stone etc), sedimentary belonging to the pre-third period (especially calcareous) and crystal rock masses (granite, serpentine, andesite, basalt etc) have been placed (Anonymous, 1986).

The chestnut coloured soils are commonly seen in the study area. Furthermore, colluvial and alluvial soils are rarely seen in the area. The massive soil groups in the area are occurred with the effect of topographic, vegetation and the main soil in a period under certain climate and they have certain profile characters (Anonymous, 1970).

**2. Material and Method**

The ethnobotanic field investigation evaluated in this current study was carried out in the Middle Black Sea region (Amasya-Center, Bağlıüstü, Boğaköy and Vermiş villages; Yassıçal and Ziyaret towns) in Turkey. Field study was done between September 2004 and March 2006. 50 informants were interviewed and 350 plants were collected. The ages of the informants range from 35 to 65 and most of them (4/5) were woman. The villages were visited three times in the spring, in the summer and in the fall, and the villages were visited only once in the winter. “Turkish Flora” (Davis, 1965-1985; Davis et al., 1988; Güner et al., 2000) was used for determination of the plants. The plants are kept in the Faculty of Education in Amasya University.

In the investigation evaluated and contributed with current study, by asking questions it is determined how certain plants are used and whether they have local names. Question form contains the location of the plant, its Latin name, local name, which purposes it is used for, which part is used and how it is used. Question form also has interview date, name of the village or town, and the person who answered the questions. Later, the information collected in groups such as food, medicine, animal feeding and handicrafts were sorted out. For the usages codes of the plants, the pilot project carried out in Buldan (Denizli) was taken as a base (Ertuğ et al., 2004) (Table 1). The parts of plants used were also given in Table 2. Later, the plants were listed alphabetically given in the “results” (Table 3). The Flora of Turkey (Davis, 1965-1985; Davis et al., 1988; Güner et al., 2000) were utilized in the identification of the specimens. Experts were consulted for some controversial cases. When the authors of the plant takson were being written, “Authors of Plant Names” was used (Brummit and Powell, 1992). Endemic plants in the field were given by checking from Red Data Book of Turkish Plants (Ekim et al., 2000). If there are various usages of a certain plants, all of them were listed. Local names of the plants that are not used in the region were also given since there are not enough information about the local names of the plants. Above mentioned ethnobotanic field study (Cansaran and Kaya, 2006) is the basis of current investigation. In current investigation, the data in field study report (Tablo 3) were evaluated and new data were added to these results.

Table 1. Plant groups / usage (plants usage codes)

I. Food Plants	II. Plants Used For Medical purpose	III. Plants Used For Fuel	IV. Plants Used As Animal Food	V. Plants Used For Handycrafts	VII. Other Useful Plants	VII. Plants Accepted As Useful/ Harmful
Those used as food <b>01</b>	For human treatment <b>01</b>	-	-	Those used for painting <b>01</b>	Plants used for roof cover, balconies, camelia and fence <b>01</b>	Harmful plants <b>01</b>
Those whose leaves and shoots are edible	For animal treatment <b>02</b>	-	-	Straw knitting- <b>02</b>	Those used for oil source (daphne) <b>02</b>	Those signify another beneficial plants <b>02</b>
Those whose roots and bodies are edible	-	-	-	For making basket <b>03</b>	Tar- <b>03</b>	Those that are not liked and eaten by animals <b>03</b>
Those whose knobs are edible	-	-	-	Brom <b>04</b>	Adhesive- <b>04</b>	Those known as poisonous or believed to be poisonous <b>04</b>
Those whose fruits and seeds are edible	-	-	-	Woodwork (containers, spoons, staff, toys, pipes, musical instruments) <b>05</b>	Anesthetics, sedatives- <b>05</b>	Those liked with their scent <b>05</b>
Mushroom	-	-	-	Beads <b>06</b>	Amulet, charm, incense <b>06</b>	Plants with an odor and named because of this qulaity <b>06</b>

Table 1. Continue

Those whose flowers are edible	-	-	-	Charm against evil eye <b>07</b>	Those used for bird and fish hunting <b>07</b>	Those according how they look <b>07</b>
Those used as drinks <b>02</b>	-	-	-	Other (rope, handles, souvenirs etc) <b>08</b>	Decorative plants <b>08</b>	Those named according where they grow commonly <b>08</b>
Those used as spice, sweeteners <b>03</b>	-	-	-	-	Used for shade <b>09</b>	Other (seasonal signs) <b>09</b>
Those used for medicine <b>04</b>	-	-	-	-	Insect repellents <b>10</b>	-
Snacks <b>05</b>	-	-	-	-	Against mold and fungus <b>11</b>	-
Gum <b>06</b>	-	-	-	-	Soap <b>12</b>	-
Others (yeast-plant essence) <b>07</b>	-	-	-	-	Plants that bees use for honey <b>13</b>	-
-	-	-	-	-	Used against erosion <b>14</b>	-
-	-	-	-	-	Using to clean and dry Water <b>15</b>	-
-	-	-	-	-	Social usages (child plays, decoration) <b>16</b>	-
-	-	-	-	-	Wind blockers <b>17</b>	-
-	-	-	-	-	Other (incubation, insemination) <b>18</b>	-

Table 2. Plants used parts

<b>A</b>	whole plant	
<b>B</b>	roots	
<b>C</b>	body under the soil	<b>Ca</b> knob body
		<b>Cb</b> rizom
		<b>Cc</b> bulb
		<b>Cd</b> hard bulb
<b>D</b>	body	
<b>E</b>	leaves-shoots	
<b>F</b>	flowers	
<b>G</b>	fruits	
<b>H</b>	seeds	
<b>I</b>	other	<b>Ia</b> Essence
		<b>Ib</b> Shell
		<b>Ic</b> Latex
		<b>Id</b> Resinous
		<b>Ie</b> Cone
<b>If</b> Tar		
<b>K</b>	Fungus	

### 3. Results

At the end of the evaluated field study done between September 2004 and March 2006, 407 recipes were collected. 257 taxa were evaluated by adding the plants which are not used but have local names (Table 3). Of the total 257 plants evaluated, 211 were natural and 46 were cultural plants. Of the plants evaluated, 13 were from Mediterranean, 17 were from Euro-Siberian, 14 were from Irano-Turanian phytogeographic region. Although there are plants used in more than one field, here are the number of plants according to fields they are used: Food (127), Medicine (93), Fuel (12) Animal food (16), Handy crafts (60), Other useful plants (22), beneficial/ harmful plants (27), those who are not used, but have local names (21). 4.66 % of all the plants were endemic. Since one cannot determine how endemic plants are used anywhere else in the world, it is important to know how these plants are used not only for cultural history but also for preservation if needed (Ertuğ et al., 2004).

Table 3. The list of the plants determined in Amasya (Amasya Center, Bağlarustu (Moramil), Bogakoy and Vermis Villages; Ziyaret and Yassical Towns)

Inventory no.	Family	Genus / Species	Local name	Locality	Used plant part	Usage codes	Specimen no.	Endemism and phytogeographic region
1	Divisio: ASCOMYCOTA	<i>Morchella sp.</i>	kuzu göbeği	1, 6	K	I01	4242	-
2	Divisio: BASIDIOMYCOTA	* <i>Agaricus sp.</i>	kültür mantarı	6	K	I01		-
3	Sınıf: ASCOLICHENES	<i>Parmelia sp.</i>	taş (şeytan) kınası	5, 6	L	V01	4288-B	-
4	EQUISETACEAE	<i>Equisetum ramosissimum</i> Desf.	kırk kilit/ sazak	6	A	II01	4201	-
5	AMARANTHACEAE	<i>Amaranthus retroflexus</i> L.	karagöz pancarı/ kara sirkem/ karagöz otu/ kara pancar	2, 3, 5, 6	E	I01	3429	-
6	ANACARDIACEAE	<i>Pistacia terebinthus</i> L. ssp. <i>palaestina</i> (Boiss.)Engl.	sakızlık ağacı/ çetene/ menengüç	4, 6	G	I05, II01	3303	E. Medit El.
					D	V08		
					E	V01		
7		<i>Rhus coriaria</i> L.	tetre/ sumak	2, 3	G	II02	4202	-
8	APIACEAE	<i>Anethum graveolens</i> L.	dere otu/ ırzadane	2, 6	E	I01, I03	4203	-
9		<i>Bifora radians</i> M. Bieb.	kins otu/ madenüs otu/ kötü ot/ acı ot/ kişmirim otu	5, 6	E	I03	3316	-
					A	VII06		
10		<i>Bupleurum rotundifolium</i> L.	tavuk götü/ gıcır	1	E	I01	4115	-
11		<i>Caucalis platycarpos</i> L.	telli kara pıtırak	2	A	IV, V04	4139	-
12		<i>Conium maculatum</i> L.	baldıran/ baldırgan	1, 2, 3, 6	A	VII04	3420	-
13		<i>Eryngium campestre</i> L. var. <i>virens</i> Link	sütlü diken/ kuşkonmaz otu	5, 6	B	I01	4204	-
14		<i>Heracleum platytaenium</i> Boiss.	hava otu/ hava çalığı otu	1, 3, 6	E	II01	4205	End./ Öksin El.
					G	V08		
15		* <i>Petroselinum crispum</i> (Mill.) A.W.Hill	madenüs/ maydanoz	1, 4, 5, 6	E	I01, II01		-
16		<i>Turgenia latifolia</i> (L.) H. Hoffm.	karapıtırak	2	A	IV	4133	-
17	ARACEAE	<i>Arum euxinum</i> R.B. Mill.	minik/ nünük/ gavur pancarı	1, 3, 4	E	I01	4206	-
					A	II01		
18	ASTERACEAE	<i>Achillea biebersteinii</i> Afan.	hava otu/ civan perçemi/ kesik otu	6	E, F	II01	3351	Ir.-Tur. El.
					F (kuru)	V08		
19		<i>Achillea millefolium</i> L. ssp. <i>pannonica</i> (Scheele) Hayek	harıca ot/ civan perçemi/ hezeran	2, 3, 6	A	VII04	4150	-
					F (kuru)	V08		
20		<i>Achillea setacea</i> Waldst.&Kit.	civan perçemi/ hezeran	2, 3, 6	F (kuru)	V08	4207	Euro.-Sib. El.
21		<i>Bellis perennis</i> L.	papatya	1	F	II01	4208	Euro.-Sib. El.
22		<i>Calendula arvensis</i> L.	-	6	F	VI08	4293	-
23		<i>Carduus nutans</i> L. sensu lato	peygamber düğmesi	6	F, H	II01	4126	-
24		<i>Carduus pycnocephalus</i> L. ssp. <i>albidus</i> (M.Bieb.) Kazmi	dikencik	1, 2, 5	E	I01	3418	-

25		<i>Centaurea virgata</i> Lam. Group A	barama otu	6	A	V04, VI18	4122	-
26		<i>Chondrilla juncea</i> L. var. <i>juncea</i>	sakız otu	1,6	Ic	I06, II01	3283	-
27		<i>Cichorium intybus</i> L.	sakızlık otu/ eşek sakızı/ yabani hindiba/ yer sakızı/ ayakçak otu	3, 5, 6	Ic	I06	4209	-
					A	VII09, II01		
28		<i>Cirsium arvense</i> Scop. ssp. <i>vestitum</i> (Wimm.&Grab.)P etr.	dikencik/ köy göçüren	1,2,5	A	VII01	3414	-
					E	I01		
29		* <i>Helianthus annuus</i> L.	ayçiçeği	5	H	I01		-
					A (kuru)	III		
30		* <i>Helianthus tuberosus</i> L.	yer elması	3, 6	Ca	I01, II01		-
31		<i>Helichrysum plicatum</i> DC. ssp. <i>plicatum</i>	yayla çiçeği/ arı çiçeği/ yılan çiçeği/ altın çiçek/ ölmez çiçek/ pire çiçeği	2, 3, 6	F	II01	3384	-
32		<i>Lactuca serriola</i> L.	badik otu/ ayakçak otu/ kibrit otu	5, 6	E	IV, VII09	3444	Euro.-Sib. El.
33		<i>Matricaria chamomilla</i> L. var. <i>recutita</i> (L.) Grierson	koyun gözü	1, 2	E	I02, II01, II02	3386	-
					A	V01, VII03		
34		<i>Picris strigosa</i> M.Bieb.	sütlücan	1	E	I01	3439	Ir.-Tur. El.
					A	IV		
35		<i>Reichardia glauca</i> Matthews	acı ot	3	A	VII04	3441	Ir.-Tur. El.
36		<i>Scorzonera cana</i> (C.A.Mey.) H.Hoffm. var. <i>radicosa</i> (Boiss.) D.F.Chamb.	tekeli/ tekelman	1, 4, 5, 6	E	I01	3451-B	-
37		<i>Scorzonera mollis</i> M. Bieb. ssp. <i>szowitzii</i> (DC) D.F.Chamb.	geçi ciciği	1	Ca	I01	3383	-
38		<i>Tanacetum balsaminata</i> L. ssp. <i>balsaminata</i>	mesmelek	6	E	I03	3284	-
39		<i>Taraxacum officinale</i> Weber	karahindiba/ eşek sakızı	5, 6	E	I01	4210	-
					Ic	I06		
					A	II01		
40		<i>Tragopogon longirostris</i> Bisch. Ex Sch. Bip. var. <i>abbreviatus</i> Boiss.	yemlik	2, 4, 5, 6	E	I01	3406	-
41		<i>Xeranthemum annuum</i> L.	-	6	F	VI08	4211	-
42	BERBERIDACEAE	<i>Berberis vulgaris</i> L.	hanım tuzluğu	1, 6	G	II01	4212	-
					B	V01		
43		<i>Leontice leontopetalum</i> L. ssp. <i>leontopetalum</i>	çakıldak/ cingit bardağı	1	G	VI16	3331	-
44	BORAGINACEAE	<i>Anchusa leptophylla</i> Roem.&Schultes ssp. <i>incana</i> Ledeb.	-	4	F	V01	3304-A	End./Ir.-Tur. El.?

45		<i>Anchusa leptophylla</i> Roem.&Schultes ssp. <i>leptophylla</i>	sığır dili	2	E	I01	4143	-
46		<i>Anchusa strigosa</i> Labill.	dikencik	1, 2, 5	E	I01	3328	-
47		<i>Anchusa undulata</i> L. ssp. <i>hybrida</i> (Ten.) Coutinho	-	4	F	V01	3304-B	Medit. El.
48		<i>Buglossoides arvensis</i> (L.) I.M.Johnst.	karerüş	2	E	I01	3397	-
49		<i>Echium italicum</i> L.	hava civa	6	B	II01	3353	Medit. El
50		<i>Nonea caspica</i> (Willd.) G. Don.	dana dili	6	E	I01	4213	Ir.-Tur. El.
51	BRASSICACEAE	* <i>Brassica oleracea</i> L. var. <i>oleracea</i>	kelem/ lahana	5, 6	E	I01, II01, II02		-
52		<i>Capsella bursa-pastoris</i> (L.) Medik.	kuş ekmeği	1, 2, 4, 5, 6	E	I01	3290	-
53		<i>Descurainia sophia</i> (L.) Webb ex Prantl	kıl namzan	2	A	V04	4134	-
54		* <i>Eruca sativa</i> Mill.	roka	6	E	I01		-
55		* <i>Lepidium sativum</i> L. ssp. <i>sativum</i>	tere	6	E	I01		-
56		<i>Neslia apiculata</i> Fisch.	gıcır otu/ tarla gıcırı/ gıcır tavuk	1, 3, 5	E	I01	3325	-
57		<i>Sinapis arvensis</i> L.	namzan	2, 3, 4, 5, 6	E A	I01 VII04	3244	-
58	BUXACEAE	* <i>Buxus sempervirens</i> L.	şimşir	6	D	V05		Euro.-Sib. El.
59	CAMPANULACEAE	<i>Asyneuma limonifolium</i> (L.) Janch. ssp. <i>pestalozzae</i> (Boiss.) Damboldt	-	3	A	V04	4214	End.
60	CANNABACEAE	<i>Humulus lupulus</i> L.	maya otu	4,6	F	I07	4197	Euro.-Sib. El.
61	CAPPARACEAE	<i>Capparis ovata</i> Desf. var. <i>herbacea</i> (Willd.) D. Zohary	gebere	6	F	I01	4215	-
62	CAPRIFOLIACEAE	<i>Lonicera etrusca</i> Santi var. <i>etrusca</i>	hanımeli	4, 6	F	I01, VII05	4292	Medit. El.
63	CARYOPHYLLACEAE	<i>Cerastium brachypetalum</i> Pers. ssp. <i>roeseri</i> (Boiss.&Heldr.) Nyman	Tavşan topuğu, tavşan ekmeği	2, 6	E	I01	3296	-
64		<i>Cerastium dichotomum</i> L. ssp. <i>dichotomum</i>	dingilcük	2	E	I01	3403	-
65		<i>Holosteum umbellatum</i> L. var. <i>tenerrimum</i> (Boiss.) Gay.	erişte	1, 6	E	I01	4216	-
66		<i>Saponaria officinalis</i> L.	sabun otu/ köpürük otu	1, 2, 6	E, F	VI12	4289	-
67		<i>Silene alba</i> (Mill.) Krause ssp. <i>ericalycina</i> (Boiss.) Walters	kurt kulağı	2, 6	E G	I01 VI16	3299	-
68		<i>Silene vulgaris</i> (Moench) Garcke	tavuk gıcırı/ gıcır tavuk/	2, 6	E	I01	3436	-

		var. <i>vulgaris</i>	kıncıl					
69		<i>Stellaria media</i> Vill. ssp. <i>media</i> (L.) Vill.	yılancık/ kaz otu/ kaz ayağı/ cincilim/ yer yayıltısı	1, 2, 4, 5, 6	E	I01	3302	-
70	CHENOPODIACEAE	* <i>Atriplex hortensis</i> L.	hayat süpürgesi	5, 6	A	V04	3281	-
71		* <i>Beta vulgaris</i> L. provar. <i>altissima</i> (Döll) J. Helm	kocabaş/ şeker pancarı	2, 5, 6	E B	I01 I01, II01, VI16		-
72		<i>Chenopodium album</i> L. ssp. <i>album</i> var. <i>album</i>	sirkem/ tatlı sirkem/ ak sirkem	2, 3, 5, 6	E	I01	3427	-
73		<i>Chenopodium murale</i> L.	altıgöz	1	E	I01	3342	
74	CONVOLVULACEAE	<i>Convolvulus arvensis</i> L.	şarışık otu/ dana şarışığı/ dana otu/ şarışık	3, 6	E	I01, II01	4151	-
75	CORYLACEAE	<i>Carpinus betulus</i> L.	gürgen	3, 6	D	III, V08	4217	Euro.-Sib. El.
76		<i>Carpinus orientalis</i> Mill. ssp. <i>orientalis</i>	meşe	2,3,6	D	III, V08	4218	-
77		<i>Corylus colurna</i> L.	fındık	4	G D	II01 III V03	4219	Euro.-Sib. El
78	CUCURBITACEAE	<i>Bryonia alba</i> L.	ilingür	1, 6	E	I01	3338	Euro.-Sib. El
79		* <i>Cucumis sativus</i> L.	salatalık/ hıyar	6	G Ia	I01 II01		-
80		* <i>Cucurbita pepo</i> L.	kabak	5, 6	G H	I01 II01		-
81		<i>Ecballium elaterium</i> (L.) A. Rich.	it hıyarı/ it kavunu/ yabancı kavun	4, 6	Ia	II01	4220	-
82		* <i>Momordica charantia</i> L.	kudret narı	6	G H	II01 VII09		-
83	CUPRESSACEAE	* <i>Cupressus sempervirens</i> L.	selvi	6	Ie	II01, V08		-
84		<i>Juniperus oxycedrus</i> L. ssp. <i>oxycedrus</i>	ardıç	3, 6	Ie	II01	4221	-
85	CYPERACEAE	<i>Cyperus rotundus</i> L.	topalak otu	6	B	II01	4194	-
86	DIPSACACEAE	<i>Dipsacus laciniatus</i> L.	-	1, 3	F	V08	4222	-
87		<i>Scabiosa rotata</i> M. Bieb.	-	3	A	V04	4223	Ir.-Tur. El.
88	ELAEAGNACEAE	* <i>Elaeagnus angustifolia</i> L.	iğde	1, 4, 6	D F G	V07 VII05 I05		-
89	EUPHORBIACEAE	<i>Andrachne telephioides</i> L.	boncuk otu	6	G	V06	4224	-
90		<i>Euphorbia cardiophylla</i> Boiss. & Heldr.	sütlağen/ acı ot/ sütlaç otu	4, 6	Ic A	II01 VII04	4228	End.
91		<i>Euphorbia rigida</i> M. Bieb.	sütlağen/ acı ot/ sütlaç otu	1, 6	Ic A	II01 VII04	4227	Medit. El.
92	FABACEAE	<i>Astragalus angustifolius</i> Lam. ssp. <i>pungens</i> (Willd.) Hayek	geven	2, 6	A	IV, V08	4226	-



93		<i>Astragalus pseudocaspicus</i> Fisch.	geven	2, 6	A	IV, V08	4225-A	-
94		▲ <i>Cassia angustifolia</i> Vahl.	sinameki	4, 5, 6	E	II01		-
95		<i>Colutea cilicica</i> Boiss. & Bal.	patlangaç	3, 5, 6	G	VI16	4225-B	-
96		<i>Medicago minima</i> (L.) Bartal. var. <i>minima</i>	yabani yonca/ kara yonca/ ikçil otu	5	A	II02, IV	3412	-
97		<i>Medicago sativa</i> L. ssp. <i>sativa</i>	efek/ kara yonca	5	A	IV, VII04	3413	-
98		<i>Robinia pseudoacacia</i> L.	akasya	6	G	I01	4290	-
					F	I01		
99		* <i>Vicia anatolica</i> Turril	fiğ	1	A	IV	3335	Ir.-Tur. El.
100		<i>Vicia bithynica</i> L.	Şaban paklası	2	E	I01	4144	-
101		<i>Vicia cracca</i> L. ssp. <i>stenophylla</i> Vell.	kuş pasılı/ dağ yoncası/ yalancı yonca	5	H	I05	3447	-
					A	IV		
102		<i>Vicia narbonensis</i> L. var. <i>narbonensis</i>	pasıl/ paklava otu/ yabani bakla/ yılan yastığı	1, 2, 5	E	I01	3407	-
					H	I05		
103		<i>Vicia sativa</i> L. ssp. <i>incisa</i> (M.Bieb.) Archibald var. <i>cordata</i> (Wulfen ex Hoppe) Archibald	-	1	A	IV	4123	-
104	FAGACEAE	<i>Quercus cerris</i> L. var. <i>cerris</i>	pelit	2, 3, 4	G	I05, VI16	4229	-
					D	III		
					E, G	V01		
					E	VI18		
105		<i>Quercus pubescens</i> Willd.	pelit	2, 3, 4	G	I05, VI16	4231	-
					D	III		
					E, G	V01		
					E	VI18		
106	HYPERICACEAE	<i>Hypericum perforatum</i> L.	kantaron otu	6	E, F	II01	3352	-
107	GERANIACEAE	<i>Erodium ciconium</i> (L.) L' Hér.	keklik tırnağı	6	E	I01	3349	-
108		<i>Erodium cicutarium</i> (L.) L' Hér. ssp. <i>cutarium</i>	leylek burnu	6	E	I01	4230	-
109		<i>Geranium macrostylum</i> Boiss.	dedaban/ dere daban/ deli daban/ deve tabanı	1, 2, 3, 5	Ca	I01	3368	E. Medit. (mt.) El.
110		<i>Geranium pusillum</i> Burm.	gelin parmağı	6	E	I01	3348	-
111		<i>Geranium rotundifolium</i> L.	yüzük kaşı	1, 2, 4, 6	E	I01	3287	-
112		* <i>Pelargonium zonale</i>	sardunya	6	F	VI10		-
113	IRIDACEAE	<i>Crocus ancyrensis</i> (Herbert) Maw	sarıçiğdem	1, 2, 3, 5	Cd	I01	3294	End. / Ir.-Tur. E.I.
114		<i>Crocus reticulatus</i> Steven ex Adams ssp. <i>reticulatus</i>	çiğdem	1, 2, 3, 5	Cd	I01	4233	-
115		<i>Iris galatica</i> Siehe	nevruz/ menevşe	6	Ca	I01	4234	End. / Ir.-Tur. E.I.
					F	I01		
116		<i>Iris histrioides</i>	nevruz/	2, 3	Ca	I01	4232	End. / Euxine

		(Wilson) Arnott	menevşe		F	I01		El.
117	JUGLANDACEAE	* <i>Juglans regia</i> L.	ceviz	5, 6	H	I05, II01		-
					G	III		
					E, G	V01		
					D	V05		
118	LAMIACEAE	<i>Lamium purpureum</i> L. var. <i>purpureum</i>	ballık/ bal mumu/ ballı baba/ balluhan/ göğen gözü	1, 6	E	I01	3289	Euro.-Sib. El.
119		<i>Melissa officinalis</i> L. ssp. <i>officinalis</i>	oğul otu/ kör ısırgan/ limon otu	1, 3, 6	E	II01	4235	-
120		<i>Mentha longifolia</i> (L.) Huds. ssp. <i>longifolia</i>	su nanesi	2, 3	E	I03	4236	Medit. El.
121		* <i>Mentha suaveolens</i> Ehrh.	nane	4, 5, 6	E	I03		-
					A	II01		
122		<i>Nepeta italica</i> L.	adaçayı	6	F	I02	4239	-
123		* <i>Ocimum basilicum</i> L.	reyhan/ fesleğen/ irehan	4, 6	E	I03	3277	-
					F	VI10		
124		<i>Salvia candidissima</i> Vahl. ssp. <i>occidentalis</i> Hedge	ellik otu	2, 5	E	VI18	4145	Ir.-Tur. El.?
125		<i>Salvia sclarea</i> L.	ellik otu	2, 5	E	VI18	4238	-
126		<i>Salvia tomentosa</i> Mill.	ellik otu	2, 5	E	VI18	3425	Medit. El.
127		<i>Salvia verticillata</i> L. ssp. <i>amasiaca</i> (Frey&Bornm.) Bornm.	ellik otu	2, 5	E	VI18	4147	Ir.-Tur. El.?
128		<i>Salvia virgata</i> Jacq.	ellik otu	2, 5	E	VI18	4146	-
129		<i>Satureja hortensis</i> L.	kekik	2, 3	E	I03	4240	-
					E, F	II01		
130		<i>Satureja wiedemanniana</i> (Lallem.) Velen.	kekik	1, 2, 3	E	I03	4199	End.
					E, F	II01		
131		<i>Sideritis dichotoma</i> Huter	tüylü adaçayı	1, 6	F	I02	4241	End.
					E, F	II01		
132		<i>Teucrium polium</i> L.	harman otu/ karın ağrısı otu/ mayasıl otu	1, 6	F	II01	3320	-
133		<i>Thymbra spicata</i> L. var. <i>spicata</i>	karabaş kekiği	2, 3, 6	E,F	II01	4243	E.Medit.El.
134		<i>Thymus sipyleus</i> Boiss. ssp. <i>rosulans</i> (Borbas) Jalas	kekik otu	1, 2, 6	E	I03	4248	-
					E, F	I02, II01, II02		
135		<i>Wiedemannia orientalis</i> Fisch.&C.A.Mey.	emzik otu/ emecek/ ballık/ balcık/bal otu	1, 2, 5	F	I01	4237	End./ Ir.- Tur. El.
136	LILIACEAE	* <i>Allium cepa</i> L.	soğan	2, 5, 6	Cc, E	I01		-
					Cc	II01		
					Cc	V01		
137		* <i>Allium sativum</i> L.	sarımsak	5	H	I01, II01		-
138		<i>Asparagus officinalis</i> L.	menevcer/ kuşkonmaz	1, 4, 5, 6	E	I01	3265	-

139		<i>Muscari armeniacum</i> Leichtlin ex Baker	horoz ibiği/ karga pabucu/ it sarımsağı/ karga sarımsağı	5, 6	F	V01	4244	-
					A	VII04		
140		<i>Muscari bourgaei</i> Baker	horoz ibiği/ karga pabucu/ it sarımsağı/ karga sarımsağı	5, 6	F	V01	4245	End. / Medit. El.
					A	VII04		
141		<i>Muscari neglectum</i> Guss.	horoz ibiği/ karga pabucu/ it sarımsağı/ karga sarımsağı	5, 6	F	V01	4246	-
					A	VII04		
142		<i>Ornithogalum oligophyllum</i> E.D. Clarke	sabun otu	4	E	VI12	4247	-
143		<i>Ornithogalum sphaerocarpum</i> A. Kern	sabun otu	4	E	VI12	4252	-
144	LINACEAE	* <i>Linum bienne</i> Mill.	sağrek/ seyrek/ zeyrek/ susam	4, 5, 6	H	I01, II01	4109	Medit. El.
145	LORANTHACEAE	<i>Viscum album</i> L. ssp. <i>album</i>	gökçe otu/ ökse otu	4, 6	E, G	II01	4249	-
146	MALVACEAE	<i>Alcea pallida</i> Waldst.&Kit.	gül hatmi/ fatmagül	6	E, F	II01	4251	-
147		* <i>Hibiscus esculentus</i>	bamya	5	G	II01,I01		-
148		<i>Malva neglecta</i> Wallr.	kömeç/ ebemgümeçi	1, 2, 3, 4, 5, 6	E	I01	3389	-
					E, B	II01		
149		<i>Malva sylvestris</i> L.	kömeç/ ebemgümeçi	1, 2, 3, 4, 5, 6	E	I01	4253	-
					E, B	II01		
150	MORACEAE	* <i>Ficus carica</i> L. ssp. <i>carica</i>	incir	5, 6	Ic	II01		-
					D	V05		
					G	I01		
151		* <i>Morus alba</i> L.	beyaz dut	2, 6	G	I01		-
					E	I01		
					D	V05		
152		* <i>Morus nigra</i> L.	kara dut	1, 2, 6	G	I01, II01		-
					E	I01		
					D	V05		
153	OLEACEAE	<i>Jasminum frutians</i> L.	at otu	6	G	II02	4121	Medit. El.
154		▲ <i>Olea europaea</i> L. var. <i>sylvestris</i> (Mill.) Lehr	zeytin	2, 5, 6	G	I01		-
					G, H	II01		
155		<i>Phillyrea latifolia</i> L.	gökçe ağaç/ göğçe ağacı	6	D	V04	3285	Medit. El.
156	ONAGRACACEAE	<i>Epilobium angustifolium</i> L.	yakı otu	1, 2, 3	F	II01	4250	-
157	ORCHIDACEAE	<i>Orchis palustris</i> Jacq.	salep otu	3, 6	Ca	II01	4254	-
158	PAPAVERACEAE	<i>Fumaria asepalata</i> Boiss.	cıvık ot	5, 6	E,F	II01	4131	-
159		<i>Fumaria officinalis</i> L.	-	5, 6	E,F	II01	3312	-
160		<i>Papaver lacerum</i> Popov	lale/ gelincik/ gelin eli	2, 5, 6	F	I01	3408	-
					A	VII06		
161		<i>Papaver rhoeas</i> L.	lale/ gelincik/ gelin eli	2, 5, 6	F	I01	4255	-
					A	VII06		

162		<i>Papaver somniferum</i> L.	afein/ haşhaş/ hakkaş	5	H	II01, I01		-
					G	V01		
163	PINACEAE	<i>Pinus brutia</i> Ten.	kızılçam	2, 3	Id	I06	4267	-
					E	II01		
					D, E, Ie	III		
					Ie	V08		
					D	V05		
164		<i>Pinus nigra</i> Arn. ssp. <i>pallasiana</i> (Lamb.) Holmboe	karaçam	2, 3, 6	Id	I06	4260	-
					E	II01		
					D, E, Ie	III		
					Ie	V08		
					D	V05		
165		<i>Pinus sylvestris</i> L.	sarıçam	2, 3, 6	Id	I06	4264	-
					E	II01		
					D, E, Ie	III		
					Ie	V08		
					D	V05		
166		<i>Pinus pinea</i> L.	fıstık çamı	2, 3	Id	I06	4256	-
					E	II01		
					D, E, Ie	III		
					Ie	V08		
					D	V05		
					H	I01		
167	PLANTAGINACEAE	<i>Plantago lanceolata</i> L.	demra otu	1, 5, 6	E	I01	3280	-
					B	II01		
168		<i>Plantago major</i> L. ssp. <i>major</i>	sinir otu/ bağ yaprağı/ siğilli yaprak/ çiban otu/ bahar otu	2, 4, 6	E	I01, II01	3398	-
169	PLUMBAGINACEAE	<i>Acantholimon acerosum</i> (Willd.) Boiss. var. <i>acerosum</i>	erkek geven	2, 6	A	IV	4266	Ir.- Tur. El.
					F	VI08		
170	POACEAE	<i>Avena fatua</i> L. var. <i>fatua</i>	yabani yulaf/ piç yulaf	5	A	II02, IV	4130	-
171		* <i>Avena sativa</i> L.	kara yulaf	3	A	IV	3246	-
172		<i>Chrysopogon gryllus</i> (L.) Trin. ssp. <i>gryllus</i>	damat süpürgesi	6	A	V04	4257	-
173		* <i>Coix lacrym-jobi</i> L.	tespih otu	6	H	V06	4196 (	-
174		<i>Hordeum murinum</i> (L.) ssp. <i>glaucum</i> (Steud.) Tzvelev	avrum otu	5, 6	A	IV	4265	-
175		* <i>Hordeum vulgare</i> L.	arpa	5	A	III, IV	3445	-
					H	II01		
176		* <i>Secale cereale</i> L. var. <i>cereale</i>	çavdar	2	A	IV	4128	-
177		<i>Sorghum halepense</i> (L.) Pers. var. <i>halepense</i>	kelem ayrığı	4	A	VII04	3282	-
178		<i>Stipa ehrenbergiana</i> Trin.&Rupr.	-	2, 6	H	VI08	4258	-
179		* <i>Triticum aestivum</i> L.	buğday	1, 3, 5	H	I01	3245	-
					A	III		
					D	V05		

180		<i>*Zea mays</i> L.	mısır	5, 6	G, D	II01		-
					G	I05, V08		
					D	V02, V08		
					H	VI06		
181	POLYGONACEAE	<i>Polygonum convolvulus</i> L.	yeme şarımşavı/ şarımşak	2	E	I01	4138	-
182		<i>Polygonum arenastrum</i> Bor.	kara madımak	2, 5, 6	E	I01	3422	-
183		<i>Polygonum cognatum</i> Meisn.	madımak	1, 2, 3, 4	E	I01	3424	-
184		<i>Rumex acetosella</i> L.	eğşi kulak/eşkicük	2	E	I01,II01	4259	-
185		<i>Rumex angustifolius</i> Campd. ssp. <i>angustifolius</i>	efelik/efelek	1, 2, 3, 4, 6	E	I01	4156	-
186		<i>Rumex patientia</i> L.	efelik/efelek	1, 2, 3, 4, 6	E	I01	3387	-
187		<i>Rumex scutatus</i> L.	kuzu kulağı/eşkicük/ ekşimik	2, 3, 4	E	I01,II01	3401	-
188	PORTULACACEAE	<i>Portulaca oleracea</i> L. ssp. <i>oleracea</i>	pirpirim/ semiz otu	1, 5, 6	E	I01	4263	-
189	PRIMULACEAE	<i>Cyclamen coum</i> Mill. var. <i>coum</i>	ağurşak/ağşak/ kızıl avşak	4, 6	Ca	II01	4261	-
190	PUNICACEAE	<i>*Punica granatum</i> L.	nar	6	F	II01		-
					G	I01		
191	RANUNCULACEAE	<i>Adonis aestivalis</i> L. ssp. <i>aestivalis</i>	arap saçı	2	A	V04	3392	-
192		<i>Adonis flammea</i> Jacq.	arap saçı	1	E	I01	3451-A	-
193		<i>Nigella arvensis</i> var. <i>glauca</i>	çörek otu	1, 6	H	I01	4269	-
194		<i>Ranunculus arvensis</i> L.	sarı pıtrak	2, 3, 4, 6	A	II01	3402	-
195	RHAMNACEAE	<i>Paliurus spinachristi</i> Mill.	çaltı dikenli	1, 5, 6	G	II01, VI16, V08	4268	-
196		<i>*Zizyphus jujuba</i> Mill.	innap	6	G	I01, II01		-
					F	VII05		
197	ROSACEAE	<i>Amygdalus communis</i> L.	badem/çağla	2, 3, 5, 6	G,H	I05	4271	-
198		<i>*Cerasus avium</i>	kiraz	5, 6	G	I01		-
					G	II01		
199		<i>Cerasus mahaleb</i> (L.) Mill. var. <i>mahaleb</i>	endülüs/mahle p	2, 3, 6	G	II01	4272	-
200		<i>Cerasus prostrata</i> (Lab.) Ser. var. <i>prostrata</i>	davşan elması	3, 4, 6	G	I01	3300	-
201		<i>Crataegus monogyna</i> Jacq. ssp. <i>monogyna</i>	yemişen	1, 2, 5, 6	G	I01	4280	-
202		<i>Crataegus orientalis</i> Pall. ex M. Bieb var. <i>orientalis</i>	aluç	2, 3	G	I01, II01	3262	-
					G, D	I02		
203		<i>*Cydonia oblonga</i> Mill.	ayva/ hayva	4, 5, 6	F	I01		-
					G	I01		
					E	IO2,		

						V01		
					E,H	II01		
					D	V05		
204		* <i>Malus communis</i> H.J. Lam	Amsya elması/ misket/Amasya misketi	4, 5, 6	G	I01		-
					G, H	II01		
					D	V08		
205		<i>Malus sylvestris</i> Mill. ssp. <i>orientalis</i> var. <i>orientalis</i> (A. Uglitzkich) Browicz	acuk/ piç elma/ yabani elma	2, 3	G	I01, II02	4262	-
206		* <i>Persica vulgaris</i> Mill.	şeftali	6	G	I01		-
					E	II02		
207		<i>Prunus divaricata</i> Ledeb. ssp. <i>ursina</i> (Kotschy) Browicz	çalkı otu/ çiturdak	1	D	V04	3332	-
208		<i>Pyracantha coccinea</i> Roem.	ebembükü	1, 3	G	I01	4281	-
209		<i>Pyrus amygdaliformis</i> var. <i>lanceolata</i> Diap.	çördük	1, 2	G	I01	4270	-
210		* <i>Pyrus communis</i> L. ssp. <i>communis</i>	armut	5	D	V08		-
					G	I01		
211		<i>Pyrus elaeagnifolia</i> Pall. ssp. <i>elaeagnifolia</i>	ahlat	1, 2	G	I01, II01	4282	-
212		<i>Rosa canina</i> L.	kuşburnu/ yabani gül	1, 2, 5, 6	F	I01	4273	-
					G	I01, I02, II01		
213		<i>Rosa foetida</i> J. Herrm.	sarı kuşburnu	5	F	I01	3314	Ir.-Tur. El.
214		<i>Rubus canescens</i> DC. var. <i>canescens</i>	karamuk/ kızamık/ böğürtlen	1, 2, 5	G	I01	4279	-
					B, D	II01		
215		<i>Rubus sanctus</i> Schreb.	karamuk/ kızamık/ böğürtlen	1, 2, 5	G	I01	4274	-
					B, D	II01		
216		* <i>Sorbus domestica</i> L.	üvez	1, 6	G	I01		Euro.- Sib. El.
					E, G	II01		
217	RUBIACEAE	<i>Galium spurium</i> L. ssp. <i>spurium</i>	yapışkan ot/ boya otu/ boya çili	3, 4, 5, 6	A	V01	3410	Euro.- Sib. El.
218		<i>Galium verum</i> L. ssp. <i>verum</i>	boya otu	4, 5, 6	A	V01	3305	-
219	RUTACEAE	<i>Ruta montana</i> (L.) L.	hava otu/ humma otu	6	A	II01	4120	-
					F	V08		
220	SALICACEAE	<i>Salix alba</i> L.	söğüt	6	E	II01	4283	Euro.- Sib. El.
					D	VII09, V05, V08, V03		
221	SCROPHULARIACEAE	<i>Veronica polita</i> Fr.	İlgancık/ urgancık/ çüce bağrsağı	2, 5, 6	E	I01	3288	-
222	SIMAROUBACEAE	<i>Ailanthus altissima</i> (Mill.) Swingle	mundar ağaç	5, 6	A	VII06	4278	-
					D	V05		
223	SOLANACEAE	<i>Hyoscyamus niger</i> L.	diş otu	4, 6	G, H	II01	4277	-
224		<i>Lycium</i>	ak çalu/ mor	1, 5	G	I01	3318	End./ Ir.- Tur.

		<i>anatolicum</i> A. Baytop&R.B. Mill.	tiken					El.
225		* <i>Solanum melongena</i> L.	badılcın/ patlıcan	4, 5, 6	G	I01, II01		-
226		<i>Solanum nigrum</i> L. ssp. <i>nigrum</i>	it üzümü	5	A	VII09	4106	-
227		* <i>Solanum tuberosum</i> L.	patates	4, 5, 6	Ca	I01, II01		-
228	STYRACACEAE	* <i>Styrax officinalis</i> L.	tespîh ağacı	6	H	V06		-
229	THEACEAE	▲ <i>Camellia sinensis</i> (L.) O. Kuntze	çay	6	E	II01		-
230	TILIACEAE	<i>Tilia rubra</i> (DC.) ssp. <i>caucasica</i> (Rupr.) V. Engl.	ihlamur	2, 4, 6	F	I02, II01	4284	Euxine El.
231	ULMACEAE	<i>Celtis caucasica</i> Willd.	daum ağacı/ doğum ağacı	1, 5, 6	G	I01	3275	-
					G, D	V07		
					D	V05		
232		<i>Ulmus minor</i> Mill. ssp. <i>minor</i>	kara ağaç	5, 6	D	V04, V08	4275	-
233	URTICACEAE	<i>Urtica dioica</i> L.	ısrıgan/ dalağan	1, 2, 3, 4, 5, 6	E	I01	3388	Euro.- Sib. El
					E,H	II01		
234	VITACEAE	* <i>Vitis sylvestris</i> Gmelin	asma/ devek/ bağ/ üzüm	1, 2, 6	G	I01		-
					E	I01		
					Ib	VI06		
235	ZYGOPHYLLACEAE	<i>Peganum harmala</i> L.	üzerlik otu/ yüzerlik otu/ güzellik otu	5, 6	H	II01, V07	4276	-
					A	VI06		
236		<i>Tribulus terrestris</i> L.	çoban çökerten	6	A	II01	4285	-
237	APIACEAE	• <i>Scandix iberica</i> M. Bieb.	çubuk otu				3419	-
238	ASTERACEAE	• <i>Arctium minus</i> (Hill) Bernh. ssp. <i>pubens</i> (Bab.) A'renes	kaba döşşeği				3417	Euro.- Sib. El
239		• <i>Centaurea iberica</i> Trev. ex Sprengel	eşek dikenini/ kara diken				3385	-
240		• <i>Centaurea solstitialis</i> L. ssp. <i>solstitialis</i>	alagöz dikenini				4294	-
241		• <i>Xanthium spinosum</i> L.	sarı diken				3449	-
242		• <i>Xanthium strumarium</i> L. ssp. <i>strumarium</i>	domuz pıtırağı				4295	-
243	BRASSICACEAE	• <i>Cardaria draba</i> (L.) Desv. ssp. <i>draba</i>	eşek teresi				3341	-
244		• <i>Sisymbrium orientale</i> L.	namzan				3322	-
245	CARYOPHYLLACEAE	• <i>Vaccaria pyramidata</i> Medik. var. <i>grandiflora</i> (Fisch. ex DC.) Cullen	gıcır				4114-A	-
246	CUSCUTACEAE	• <i>Cuscuta</i> sp.	İlembeç/ verem otu				4291	...
247	FABACEAE	• <i>Coronilla scorpioides</i> (L.) Koch	ikçil otu				4135	-
248		• <i>Glycyrrhiza glabra</i> L. var.	biyan				4287	-

		<i>glandulifera</i> (Waldst. Et Kit.) Boiss.						
249		• <i>Medicago varia</i> Martyn	sarı yonca/ kayışkıran				4149	-
250		• <i>Melilotus</i> <i>officinalis</i> (L.) Desr.	ikçil otu				4155	-
251		• <i>Trifolium</i> <i>pratense</i> L. var. <i>pratense</i>	ikçil otu				4148	-
252	PAPAVERACEAE	• <i>Glaucium</i> <i>grandiflorum</i> Boiss. et Huet var. <i>grandiflorum</i>	lale				3432	-
253	POACEAE	• <i>Bromus</i> <i>tectorum</i> L.	pisik otu				4127	-
254	PRIMULACEAE	• <i>Anagallis</i> <i>arvensis</i> L. var. <i>caerulea</i> (L.) Gouan	dağ irehanı				4137	-
255	RANUNCULACEAE	• <i>Consolida</i> <i>orientalis</i> (Gay) Schröd.	gelin çiçeği				4288-A	-
256	RESEDACEAE	• <i>Reseda</i> <i>lutea</i> L. var. <i>lutea</i>	eşek turpu				3329	-
257	SOLANACEAE	• <i>Datura</i> <i>stramonium</i> L.	eşek kestanesi				4286	-

Note: “•”: Those who have local names but not used, “\*”: Cultural plants, “▲”: Plants who are not grown in the study field but used. All the plants that are not marked with “\*” and “▲” (Including those marked with “•”) are natural plants / This is the list for the places plants are found: 1: Bağlarüstü village (Moramil), 2: Yassıçal town (Ebemi), 3: Vermiş village, 4: Ziyaret town, 5: Boğaköy village, 6: Amasya (Center).

According to the results of ethnobotany field research above mentioned, 127 of the plants were found in the study field are used as food. 34 of these are cultural plants. 7 of the plants used as food are endemic. 3 of these are geofyte (*Crocus ancyrensis*, *Iris galatica* and *Iris histrioides*). *Crocus ancyrensis* has been consumed as raw bulbs and *Iris galatica* and *Iris histrioides* have been consumed as raw bulbs and petals. In the case of another endemic species (*Wiedemannia orientalis*) the nectars under the petals have been consumed. The fruits of *Lycium anatolicum* is consumed by local people and *Sideritis dichotoma* is used as tea. *Satureja wiedemanniana* is used as spices. The most commonly used plant as food is called “pancar” and sold in the markets in the months of September-October and March-April. Some of these plants are consumed by itself and some of them are mixed and consumed that way. Local people consume shoots and leaves of 59 plants, roots of 2 plant, bulbs of 8 plants, fruits and seeds of 42 plants, flowers of 11 plants. 7 of the plants are used as tea, 9 of them are used as spice, 8 of them are used for appetizers, 7 of them are used as gum and 1 of them is used as starter. In the field, two mushrooms are used as food.

Amasya is an important place since the first akrobazin and the first surgery book was written here (Alpınar, 1979). It was observed that 93 of the plants in the study field are used for alternative medication. Of these, 65 were natural and 28 were agricultural plants. 4 of the plants used for medical purposes are endemic. These are *Heracleum platytaenium* (in the case of sunshock, the leaves of the plant are boiled in the water and this water is used for bath), *Satureja wiedemanniana* (it is used as tea for cold), *Sideritis dichotoma* (it is uses as tea for cold), *Euphorbia cardiophylla* (it is used for verruca). Most of the plants used for folk medicine is used as tea, sometimes they are used as creme (for instance, *Echium italicum*). In the study regions (in Bağlarüstü, Boğaköy and Vermiş villages; Ziyaret and

Yassıçal towns; Amasya Center), the examples of the plants which cure the diseases can be also given as follows:

Hemorrhoid: *Ficus carica* ssp. *carica*, *Malva sylvestris*, *Achillea biebersteinii*, *Cupressus sempervirens*, *Solanum melongena*, *Teucrium polium*, *Paliurus spina-christi* etc.

Inflammation: *Petroselinum crispum*, *Sorbus domestica*, *Plantago major* ssp. *major* .

Nephritis: *Hypericum perforatum*, *Helichrysum plicatum* ssp. *plicatum*, *Equisetum ramosissimum*, *Petroselinum crispum*, *Zea mays*.

Cholesterol: *Juglans regia*, *Fumaria officinalis*, *Malus communis*, *Urtica dioica*, *Tribulus terrestris*.

Heart disease: *Crataegus orientalis* var. *orientalis*, *Melissa officinalis* ssp. *officinalis*, *Berberis vulgaris*, *Tribulus terrestris* (çoban çökerten), *Pistacia terebinthus* ssp. *palaestina*, *Allium sativum*.

Cold and cough: *Cydonia oblonga*, *Sideritis dichotoma*, *Satureja wiedemanniana*, *Taraxacum officinale*, *Rumex scutatus*.

Gastritis and gastric ulser: *Convolvulus arvensis*, *Hypericum perforatum*, *Momardica charantia*.

Diarrhea: *Pyrus elaeagnifolia* ssp. *elaeagnifolia*, *Rosa canina*, *Solanum tuberosum* (patates), *Sorbus domestica*.



Constipation: *Malva sp.*, *Hibiscus esculentus*, *Cassia angustifolia*.  
 Intestinal parasite: *Cucurbita pepo*, *Beta vulgaris* prov. *altissima* .  
 Diabetes mellitus: *Punica granatum*, *Zizphus jujuba*, *Urtica dioica*, *Helianthus tuberosus*, *Juniperus oxycedrus* ssp. *oxycedrus*, *Taraxacum officinale*, *Pinus sp.*  
 Cancer: *Urtica dioica*, *Epilobium angustifolium* (especially for prostrate cancer), *Momardica charantia* (especially for intestine cancer).  
 Sinusitis: *Ecballium elaterium*.

Besides these, in the study areas the plants whose parts are used for different purposes are found among both natural and wild plants. The examples can be given below:

*Achillea biebersteini* (kesik otu): Against hemorrhoid, urethra inflammation and gynecological diseases; as antiseptic.  
*Alcea pallida* (fatmagül): For respiratory system diseases (bronchitis, asthma) and coughing; against sunstroke and tonsillit.  
*Carduus nutans* (peygamber düğmesi): Against hemorrhoid and diarrhea  
*Plantago major* ssp. *major* (bağ yaprağı): For development of furuncles; vasodilator; regulating nerve system; to prevent inflammation.  
*Peganum harmala* (üzerlik, güzellik): For hemorrhoid and varix; as making sleppy.  
*Ecballium elaterium* (yabani kavun): For treating sinusitis and jaundice; against rheumatism.  
*Urtica dioica* (ısrırgan): For preventing calcify of articulation, lumbago and hernia; against coughing; decreasing cholesterol and diabetes; for treating urethra inflammation; against coming out of hair and eczema.  
*Crataegus orientalis* var. *orientalis* (aluç): Against to calcify, rheumatism and arteriosclerosis.  
*Juniperus oxycedrus* ssp. *oxycedrus* (ardıç): Against diabetes, tuberculosis and stomach diseases.  
*Matricaria chamomilla* var. *recutita* (koyun gözü): Losing weight; pain killer; preventing coming out of hair.  
*Teucrium polium* (harman otu): Against hemorrhoid; as a pain killer.  
*Thymus sipyleus* ssp. *rosulans* (kekik otu): Against abdominal ache and catching cold.  
*Malus communis* (misket: Amasya elması): For preventing coughing; treating burnt place caused by hot water. Its vinegar used for losing weight and vasodilator.  
*Cupressus sempervirens* (selvi): Against hemorrhoid and aphtha.  
*Ficus carica* ssp. *carica* (incir) : Against hemorrhoid and verruca.  
*Linum bienne* (sağrek): For development of furuncles; against swollen place and spraining.  
*Allium cepa* (soğan): For development of furuncles; against colding.  
*Allium sativum* (sarımsak): Tension regulator; decreasing cholesterol; treating ear inflammation and ache; against bronchitis.  
*Juglans regia* (ceviz): Against eczema; preventing of coming out of hair; decreasing cholesterol.  
*Sorbus domestica* (üvez): Against diarrhea, urethra inflammation and renal stone.  
*Petroselinum crispum* (madeniş): Against urethra inflammation; for losing weight; preventing abdominal ache; diurethic.  
*Brassica oleracea* var. *oleracea* (kelem): For development of furuncles; against bronchitis.  
*Tilia rubra* ssp. *caucasica* (ihlamur): For preventing to cold; against tooth inflammation.  
*Momardica charantia* (kudret narı): For stomach ulcer, colon cancer, sunburne and rheumatism.  
*Cerasus avium* (kiraz): As a sedative and pain killer; preventing urethra inflammation; for losing weight.

It was determined that in Amasya 12 plants are used as fuel. 4 of these are cultural plants. *Quercus pubescens* and *Quercus cerris* var. *cerris* are called “pelit” and used as fuel. This is at the top of the list of the plants used as fuel. Of the fuel plants, *Carpinus orientalis* ssp. *orientalis* and *Carpinus betulus* are called “meşe” (*Fagus orientalis* is not grown in the study area but it is also called by local people as “gürgen”). Furthermore; the inner shells of hazelnut and walnut are used as igniter. Other igniters in the field are from various pine trees (“karaçam, sarıçam, kızılçam, fıstık çamı”) and especially their parts that consist of gums such as stems (“çıra”), cones and leaves. In addition to these, pine woods are used as fuel. Other than these trees, wheat, barley and sunflower are used as fuel after their seeds are taken.

It was determined that 16 plants are used for animal feeding. Four of these, namely *Avena sativa*, *Secale cereale* var. *cereale*, *Hordeum vulgare*, and *Vicia anatolica* are cultural plants. The uses of thorny plants *Acantholimon acerosum* var. *acerosum*, *Astragalus pseudocaspius* and *Astragalus angustifolius* ssp. *pungens* are quite interesting. Of these three plants, the thorns are burned when they are fresh or dry. Then, the plant is crushed and mixed with straw and is given to animals. It is stated by the local people that these plants are quite oily. Leaves of *Lactuca serriola* are given to baby goose the plant is called “baby goose plant”. Other than these, *Avena fatua* var. *fatua*, *Vicia cracca* ssp. *stenophylla*, *Hordeum murinum* ssp. *glaucum*, *Caucalis platycarpus*, *Turgenia latifolia*, *Medicago minima* var. *minima* and *Medicago sativa* ssp. *sativa* are used animal food in the study area.

Among the handicrafts that are made by using plants paint, mat and basket, brom, woodwork (toys and musical instrument), beads, charm against the evil eye, various handhold and souvenirs can be counted. 60 plants are used for this purpose and 17 of them are cultural plants. 3 of these plants (*Heracleum platytaenium*, *Anchusa leptophylla* ssp. *incana*, *Muscari bourgaei*) are endemic.

Other than these basic uses of the plants there are some social and singular usages in the study area. Some of these are *Peganum harmala*, *Vitis sylvestris* and *Zea mays* (to make incense against evil eye), *Silene alba* ssp. *ericalyca*, *Leontice leontopetalum* ssp. *leontopetalum* and *Coluta cilicica* (children use for play), *Bifora radians* and *Ailanthus altissima* (known with its odor), *Elaeagnus angustifolia*, *Lonicera etrusca* var. *etrusca* and *Zizyphus jujuba* (liked with their aroma). Another interesting thing determined in the study field is that “*Salvia* sp.” known as “adaçayı” in Turkish (Karabacak et al., 2009) and used to obtain tea is used for different purposes with a name “ellik otu” to handle agricultural equipment.

#### 4. Conclusions and discussion

The tables summarizing the results of the evaluated field study were provided (Table 4, 5, 6).

Table 4. Data related to the results of the study

Number of specimens	350
Number of identified species	257
Number of useful species	236
Number of species that are not used but names are determined	21
Number of endemics	12

Table 5. Number of usages of the species in various categories

Categories	Native species	Cultivars	Total
Edible	93	34	127
Medicinals	65	28	93
Fuel	8	4	12
Fodder	12	4	16
Handicrafts	43	17	60
Others	41	8	49
Plants whose usages were not determined	21	-	21

Table 6. Categorization of food plants according to how they are used

	Native species	Cultivars	Total
Root	1	1	1
Bulb	6	2	8
Leaves and shoots	51	8	59
Fruits and seeds	29	13	42
Mushrooms	1	1	2
Flowers	10	1	11
Tea plants	6	1	7
Spices	7	2	9
Appetizers	5	3	8
Gum	7	-	7
Starter	1	-	1

407 recipes were collected in the evaluated study that conducted in the forementioned field. Of the 257 plants determined, 211 were natural and 46 were cultural. Although there are overlaps among the plants used for medical and food purposes, there are two class mushrooms, 1 class lichens, and 87 class seedy plants totaling to 257 takson, it was determined that 127 plants are used for food, 93 for medicine, 12 for fuel, 16 for animal food, 60 for handicrafts, and 49 for various purposes. The names of the 21 plants which are named in the region but are not used were added to the end of main inventory list. Of the 257 plants, 12 (4.66 %) are endemic to Turkey. All of the endemic plants used in the

study are in “LR (Ic)” danger category (LR-Lower risk, Ic-Least concern) (Ekim et al., 2000). That is to say, the endemic plants in the region don't need protection and they are not endangered species.

The earliest study carried out in Amasya region is by Alpınar in 1979 (Alpınar, 1979). This study was conducted in Akdağ and its surrounding villages and in Amasya Center. In this study, the local usage of 36 plants and 60 plants with local names specific to Amasya were determined. There is also another study by Fujita et al. which covers Middle Black Sea including Amasya and Western Black Sea region too (Fujita et al., 1995). In this study, plants collected from Amasya center (Amasya Castle, Beldağ and Yuvaköy villages) and Taşova town (Destek) were evaluated with the help of local people. Another study done in Amasya is by Ezer and Mumcu-Arısan (Ezer and Mumcu-Arısan, 2006). Researchers in this study determined that in Merzifon (Amasya) 35 plant and 4 animal species and 1 inorganic and 3 animal resources are used for medical purposes. Another study done in Amasya region was carried out by Cansaran et al. This study was done in Ovabaşı, Akpınar, Güllüce and Köşeler villages (Gümüştacıköy/Amasya) (Cansaran et al., 2007a) and with the evaluation of 170 plant samples it was determined that 59 of them are used for food, 14 for medicine, 6 for fuel, 7 for animal food, 20 for handicrafts and 18 for various purposes. In addition to these, 136 recipes for various plants were collected.

Traditional plant knowledge can change within the time. However, ethnobotanic studies are important in terms of reflecting the culture of the regions. There have been only five ethnobotanic studies (including this evaluated study) in Amasya so far and three of them are only for medical usages (Alpınar, 1979; Ezer and Mumcu-Arısan, 2006; Fujita et al., 1995). There are common plants used for the same purpose in these studies (For example, *Ecballium elaterium* (L.) A. Rich. is used against sinusite, *Urtica dioica* L. is used for stomach problems, *Plantago major* L. subsp. *major* / is used against abscess). In addition to this, in three studies the medical usages of different plants or different medical usages of the same plants were seen. In two other studies carried out in Amasya, not only medical usages but also other usages of plants were examined (Cansaran and Kaya, 2006; Cansaran et al., 2007a). In both of these studies, using plants as foods were commonly observed. This situation signifies that local people consume them as food. In both studies, medical usage comes right after the usage of the plants as food.

As a result, in Turkey where there is an abundant variety in terms of plants and one third of the plants are endemic, carrying out ethnobotanic studies and determining the local cultures are extremely important. Recording how local people use the plants, preparing an inventory and offering for the use of masses are extremely important both for us and for the generation to come. With this study, the ethnobotanic wealth of a certain region in Amasya which is in Middle Black Sea Region (Turkey) is determined.

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