

한국의 향신료 및 방향식물 자원

Resources of Spices and Aromatic Plants in Korea

지 형 준

서울대학교 천연물과학연구소

Chi, Hyung - Joon

Natural Products Research Institute, SNU

우리나라의 전통음식에 쓰여지는 양념(香辛料 Spice)으로는 채식을 위주로 하는 생활습관상 개자(芥子, Mustard), 고추(苦椒 Red Pepper), 마늘(大蒜 Garlic), 생강(生薑 Ginger), 파(葱 Welsh Onion)등이며, 육류나 어류의 요리에는 고수(胡葵 Coriander), 들깨(荳子 Perilla), 배향초(排香草 Giant Hyssop), 산초(山椒 Prickly Ash), 후추(胡椒 Black Pepper)를 썼으며 음료를 만드는데 계피(桂皮 Cinnamon)와 오미자(五味子 Schizandra)를 이용하여 왔다.

한편 근래에 이르러 외식산업의 발달로 양파(玉葱 Onion), 울금(鬱金 Tumeric)외에 서양요리에 쓰이는 여러가지 향신료가 이용되고 있다.

농림부 통계에 의하면 우리나라에서 양념으로 쓰이는 주요작물은 고추, 마늘, 생강, 파류로서 그 재배면적과 생산량이 점차 증가되고 있다. 즉 1991년도에 155,329 ha에서 1,723,503 ton이 생산되었고, 1995년도에는 11%가 늘어난 172,361 ha에서 약 30%가 늘어난 2,235,600 ton의 양념류가 재배생산된것으로 집계되었다. 이는 유량품종의 육성과 더불어 재배기술의 향상으로 보아도 좋을 것이다(Table 1).

Table 1. Planted Area and Production of Flavour Vegetables in Korea

Year	Planted area(ha)	Index	Production* (ton)	Index
1991	155,329	(100)	1,723,503	(100)
1992	164,463	(106)	2,096,887	(122)
1993	156,989	(101)	1,731,358	(100)
1994	159,883	(103)	1,622,218	(94)
1995	172,361	(111)	2,235,600	(130)

Source : Ministry of Agriculture, Forestry & Fisheries(1996)

* : Fresh weight

천연향료는 동물성향료와 식물성향료로 나누는데 주요자원은 방향성식물이다. 식물성향료는 방향이 있는 식물의 꽃, 꽃봉우리, 열매, 잎, 어린가지, 줄기 뿌리, 수지(樹脂 Resin)등에서 얻으며 그 종류는 1500종이상이지만 이중에서 향료로서 시장성이 있는 것은 100-150종 가량이다. 일반적으로 식물재료를 수증기 증류하였을 때 유출되며 냄새를 가지고 있는 식물성분을 정유(精油 Essential Oil)이라하며 상온에서 유상 또는 고체상태를 갖는다.

정유성분은 화학적으로 이소프렌 (Isoprene · C₅H₈) 을 기본으로 하며 monoterpene, sesquiterpene류의 alcohol, aldehyde, ketone, ether, ester, lactone, phenol 등의 유도체로서 천연에는 이들의 여러가지가 혼합된 상태로 존재한다.

정유성분은 다음과 같은 특성이 있다.

- 1). 방향을 갖는 액체로 선광성이 있다.
- 2). 물에는 잘 녹지 않으며 alcohol, ether, petroleum ether등에 쉽게 녹는다.
- 3). 불포화 화합물이므로 화학적으로 불안정하여 산화되거나 수산화되기 쉽고 각종 결정성 부가화합물을 만든다.

정유성분을 분리하는 데는 다음과 같은 방법이 있다.

- 1). 수증기 증류법 (Steam distillation method)
- 2). 추출법 (Extraction method)
- 3). 압착법 (Press method)
- 4). 포마드법 (Pomade method)

Table 2. List of Major Essential Oil

Essential Oil	Plant name	Family	Parts(yield %)
Anise	<i>Pimpinella anisum</i>	Umbelliferae	Fr (2.3%)
Bergamot	<i>Citrus bergamia</i>	Rutaceae	Pr (0.5%)
Camphor	<i>Cinnamomum camphor</i>	Lauraceae	Rt, Bk, Lf(2-2.5%)
Cinnamon	<i>Cinnamomum cassia</i>	Lauraceae	Bk (1-4%)
Citronella	<i>Cymbopogon nardus</i>	Gramineae	Lf (0.37-0.4%)
Clove	<i>Eugenia caryophyllata</i>	Myrtaceae	Fl (16-19%)
Geranium	<i>Pelargonium graveolens</i>	Geraniaceae	Lf (0.15-0.2%)
Ginger	<i>Zingiber officinalis</i>	Zingiberaceae	Rh (0.25-3.3%)
Jasmin	<i>Jasminum multiflorum</i>	Oleaceae	Fl (0.2-0.3%)
Eucalyptus	<i>Eucalyptus globulus</i>	Myrtaceae	Lf (0.75-1.25%)
Lavender	<i>Lavandula vera</i>	Labiatae	Fl (0.8%)
Lemon	<i>Citrus limonum</i>	Rutaceae	Pr (0.2-2%)
Lemon glass	<i>Cymbopogon citratus</i>	Gramineae	Lf (0.2-0.37%)
Orange	<i>Citrus unshiu</i>	Rutaceae	Pr (0.2-2%)
Peppermint	<i>Mentha piperata</i>	Labiatae	Lf (0.8-2.0%)
Rose	<i>Rosa damascena</i>	Rosaceae	Fl (0.025%)
Rosewood	<i>Cassia siama</i> <i>Dalbergia latifolia</i>	Leguminosae	Wd (0.7-1.2%)
Sandal wood	<i>Santalum album</i>	Santalaceae	Wd (3-4.5%)
Spearmint	<i>Mentha spicata</i>	Labiatae	Lf (0.15-0.2%)
Turpentine	<i>Pinus spp</i>	Pinaceae	Re (20%)

Bk: Bark, Fl: Flower, Fr: Fruit, Lf: leaf, Pr: Pericarp, Re: Resin, Rh: Rhizome, Rt: Root, Wd: Wood

정유성분은 국화과(Compositae), 쥐손이풀과(Geraniaceae), 벼과(Gramineae), 붓꽃과(Iridaceae), 꿀풀과(Labiatae), 녹나무과(Lauraceae), 콩과(Leguminosae), 백합과(Liliaceae), 목련과(Magnoliaceae), 정향과(Myrtaceae), 물푸레나무과(Oleaceae), 난과(Orchidaceae), 소나무과(Pinaceae), 장미과(Rosaceae), 꼭두서니과(Rubiaceae), 운향과(Rutaceae), 백단과(Santalaceae), 산형과(Umbelliferae), 생강과(Zingiberaceae)등에 주로 많이 함유되어 있다(Table 2).

우리나라에 분포된 관속식물(Vascular plant)는 4,500 종에 이르며 이중에서 약 1,000여종이 유용하게 쓰여 지고 있다. 이중에서 방향성분을 가지고 있어 향료 자원이 될 수 있는 식물은 100 여종에 이르고 있다(Table 3).

TRADITIONAL PHYLOGENETIC CLASSIFICATION

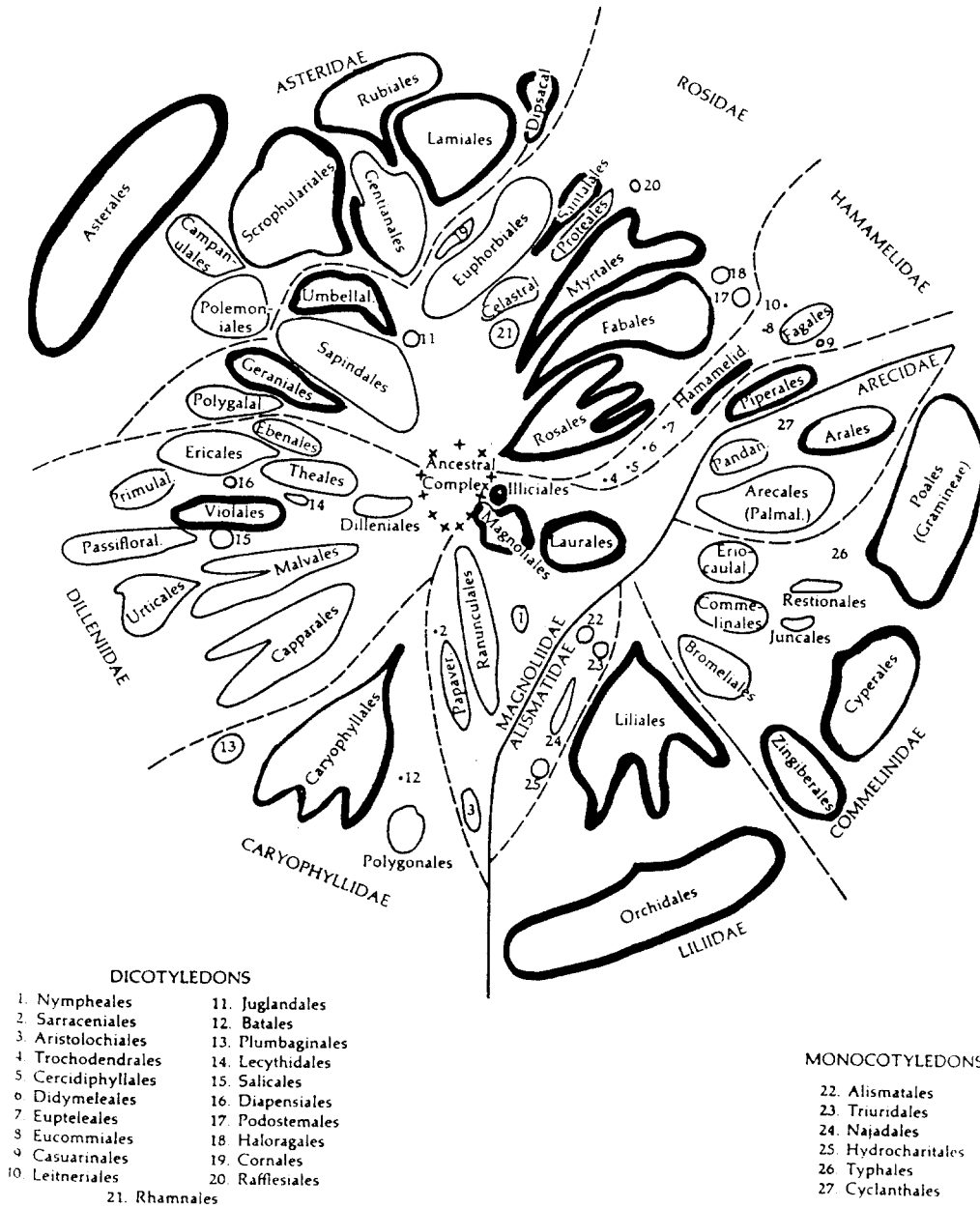


Diagram used by Stebbins (1974) to illustrate putative relationships among subclasses and orders of the angiosperms. Used by permission of Belknap Press of Harvard University.

Table 3. List of Aromatic Plant Resources in Korea

Scientific name	Common name	Vernacular name	Family
<i>Abelia coreana</i>	Korean abelia	<i>Seomdaengkangnamu</i>	Caprifoliaceae
<i>Achillea sibirica</i>	Siberian yarrow	<i>Toppool</i>	Compositae
<i>Acorus calamus</i>	Sweet flag	<i>Changpo</i>	Araceae
<i>Aerides japonicum</i>	Aerides	<i>Nadopungran</i>	Orchidaceae
<i>Agastache rugosa</i>	Giant hyssop	<i>Baechohyang</i>	Labiatae
<i>Allium cepa</i>	Onion	<i>Yangpa</i>	Liliaceae
<i>Allium fistulosum</i>	Welsh onion	<i>Pa</i>	Liliaceae
<i>Allium sativum</i>	Garlic	<i>Manul</i>	Liliaceae
<i>Allium thunbergii</i>	Wild chive	<i>Sanpuchu</i>	Liliaceae
<i>Allium tuberosum</i>	Chinese chive	<i>Puchu</i>	Liliaceae
<i>Artemisia princeps</i>	Mugwort	<i>Ssuk</i>	Compositae
<i>Aster koraiensis</i>	Korean aster	<i>Beolgaemichui</i>	Compositae
<i>Aster scaber</i>	Starwort	<i>Chamchui</i>	Compositae
<i>Aster spathulifolius</i>	Marin aster	<i>Haekook</i>	Compositae
<i>Aster tataricus</i>	Herb aster	<i>Gaemichui</i>	Compositae
<i>Brassica juncea</i>	Mustard	<i>Gaeja</i>	Cruciferae
<i>Calendula officinalis</i>	Marigold	<i>Geumjanhwa</i>	Compositae
<i>Capsicum annuum</i>	Red pepper	<i>Gochu</i>	Solanaceae
<i>Caryopteris divaricata</i>	Bluebeard	<i>Nurinnaepul</i>	Verbenaceae
<i>Caryopteris incana</i>	Blue spirea	<i>Chungkotnamu</i>	Verbenaceae
<i>Cedrela sinensis</i>	Chinese cedar	<i>Chamjuknamu</i>	Meliaceae
<i>Cercidiphyllum japonicum</i>	Katsura tree	<i>Kyesunamu</i>	Cercidiphyllaceae
<i>Chaenomeles sinensis</i>	Chinese quince	<i>Mokwanamu</i>	Rosaceae
<i>Chrysanthemum boreale</i>	Mother chrysanthemum	<i>Sankuk</i>	Compositae
<i>Chrysanthemum morifolium</i>	Edible chrysanthemum	<i>Kukhwa</i>	Compositae
<i>Chrysanthemum zawadskii</i>	Siberian chrysanthemum	<i>Kujeolcho</i>	Compositae
<i>Cinnamomum camphora</i>	Camphor tree	<i>Noknamu</i>	Lauraceae
<i>Cinnamomum japonica</i>	Japanese cinnamon	<i>Sengdalnamu</i>	Lauraceae
<i>Citrus aurantium</i>	Sour orange	<i>Kwangkyoul</i>	Rutaceae
<i>Citrus junos</i>	Juno	<i>Youjanamu</i>	Rutaceae
<i>Citrus unshiu</i>	Mandarin	<i>Kyoul</i>	Rutaceae
<i>Clerodendron trichotomum</i>	Glorybower	<i>Nurijangnamu</i>	Verbenaceae
<i>Cnidium officinale</i>	Cnidium	<i>Cheongung</i>	Umbelliferae
<i>Convallaria majalis</i>	Lily of the valley	<i>Eunbangulkkot</i>	Liliaceae
<i>Coriandrum sativum</i>	Coriander	<i>Kosu</i>	Umbelliferae
<i>Crataegus pinnatifida</i>	Hawthorn	<i>Sansa</i>	Rosaceae
<i>Cryptotaenia japonica</i>	Mitsuba	<i>Padeudeuknamul</i>	Umbelliferae
<i>Daphne genkwa</i>	Lilac daphne	<i>Patkkotnamu</i>	Thymelaeaceae
<i>Daphne odora</i>	Daphne	<i>Seohyang</i>	Thymelaeaceae
<i>Dendrobium moniliforme</i>	Dendrobium	<i>Seokgok</i>	Orchidaceae
<i>Deutzia crenata</i>	Japanese snowflower	<i>Moolchamdae</i>	Saxifragaceae

<i>Dictamnus dasycarpus</i>	Dittany	<i>Baekseon</i>	Rutaceae
<i>Elsholtzia ciliata</i>	Elsholtzia	<i>Hyangyu</i>	Labiatae
<i>Foeniculum vulgare</i>	Fennel	<i>Hoihyang</i>	Umbelliferae
<i>Fortunella japonica</i>	Kumquat	<i>Keunkam</i>	Rutaceae
<i>Gardenia jasminoides</i>	Cape jasmine	<i>ChiJa</i>	Rubiaceae
<i>Glehnia littoralis</i>	Sea cerely	<i>Gaebangpung</i>	Umbelliferae
<i>Hamamelis japonica</i>	Japanese witch-hazel	<i>Pungnyonhwa</i>	Hamamelidaceae
<i>Hosta plantaginea</i>	Fragrant plantain lily	<i>Okjamhwa</i>	Liliaceae
<i>Hyacinthus orientalis</i>	Hyacinth	<i>Hiyasins</i>	Liliaceae
<i>Illicium religiosum</i>	Japanese anise tree	<i>Butsunnamu</i>	Illiciaceae
<i>Inula helenium</i>	Yellow starwort	<i>Tomokhyang</i>	Compositae
<i>Juniperus rigida</i>	Needle juniper	<i>Noganjunamu</i>	Cupressaceae
<i>Laurus nobilis</i>	Bay laurel	<i>Wualgaesu</i>	Lauraceae
<i>Ligularia fischeri</i>	Ligularia	<i>Komchui</i>	Compositae
<i>Ligustrum japonicum</i>	Japanese privet	<i>Kwangnamu</i>	Oleaceae
<i>Lilium longiflorum</i>	Lily	<i>Baekhap</i>	Liliaceae
<i>Lindera obtusiloba</i>	Wild camphor	<i>Sengkangnamu</i>	Lauraceae
<i>Lonicera japonica</i>	Japanese honeysuckle	<i>Gumunwha</i>	Caprifoliaceae
<i>Magnolia denudata</i>	Yuran	<i>Baekmongryoun</i>	Magnoliaceae
<i>Magnolia grandiflora</i>	Evergreen magnolia	<i>Taesanamok</i>	Magnoliaceae
<i>Magnolia kobus</i>	Kobus	<i>Mokryoun</i>	Magnoliaceae
<i>Magnolia liliflora</i>	Lily magnolia	<i>Jamokryoun</i>	Magnoliaceae
<i>Magnolia obovata</i>	Japanese umbrella tree	<i>Ilbonmonkryoun</i>	Magnoliaceae
<i>Magnolia sieboldii</i>	Siebold's magnolia	<i>Hambakggotnamu</i>	Magnoliaceae
<i>Meliosma myriantha</i>	Miliosma	<i>Nadobamnamu</i>	Sabiaceae
<i>Mentha arvensis</i>	Mint	<i>Bakha</i>	Labiatae
<i>Mosla japonica</i>	Papanese mosla	<i>Kkulpul</i>	Labiatae
<i>Mosla punctulata</i>	Wild mosla	<i>Deulkaepul</i>	Labiatae
<i>Neolitsea sericea</i>	Neolitsea	<i>Chamsiknamu</i>	Lauraceae
<i>Nepeta cataria</i>	Cat mint	<i>Gaebakha</i>	Labiatae
<i>Oenanthe javanica</i>	Water dropwort	<i>Minari</i>	Umbelliferae
<i>Oenothera odorata</i>	Evening primrose	<i>Dalmajikkot</i>	Onagraceae
<i>Osmanthus fragrans</i>	Osmanthus	<i>Mokseo</i>	Oleaceae
<i>Patrinia scabiosaefolia</i>	Patrinia	<i>Matari</i>	Valerianaceae
<i>Perilla frutescens</i> var. <i>crispa</i>	Red perilla	<i>Soyoup</i>	Labiatae
<i>Perilla frutescens</i> var. <i>japonica</i>	Perilla	<i>Deulkae</i>	Labiatae
<i>Philadelphus schrenchii</i>	Mock orange	<i>Kokwangnamu</i>	Saxifragaceae
<i>Pimpinella brachycarpa</i>	Pimpinella	<i>Chamnamul</i>	Umbelliferae
<i>Pittosporum tobira</i>	Tobira	<i>Donnamu</i>	Pittosporaceae
<i>Poncirus trifoliata</i>	Trifoliae orange	<i>Taengjanamu</i>	Rutaceae
<i>Robinia pseudo-acacia</i>	Locust	<i>Akasinamu</i>	Leguminosae
<i>Rosa davurica</i>	Davuria rose	<i>Saengvolkuinamu</i>	Rosaceae
<i>Rosa multiflora</i>	Polyantha rose	<i>Chilraekkot</i>	Rosaceae
<i>Rosa rugosa</i>	Rugosa rose	<i>Haedanghwa</i>	Rosaceae
<i>Saururus chinensis</i>	Lizard's tail	<i>Sambaekcho</i>	Saururaceae

<i>Schizonepeta tenuifolia</i>	Schizonepeta	<i>Hyungkae</i>	Labiatae
<i>Spiraea prunifolia</i>	Spiraea	<i>Jopapnamu</i>	Rosaceae
<i>Spiraea salicifolia</i>	Spiraea	<i>Korijopapnamu</i>	Rosaceae
<i>Styrax japonica</i>	Snowbell	<i>Ddaejuknamu</i>	Styracaceae
<i>Symplocos chinensis</i>	Sweetleaf	<i>Norinjae</i>	Symplocaceae
<i>Syringa dilatata</i>	Lilac	<i>Susukotdari</i>	Oleaceae
<i>Syringa velutina</i>	White lilac	<i>Jeonghyangnamu</i>	Oleaceae
<i>Thymus quinquecostatus</i>	Wild thyme	<i>Baekrihyang</i>	Labiatae
<i>Tilia amurensis</i>	Amur linden	<i>Pinamu</i>	Tilliaceae
<i>Valeriana fauriei</i>	Valerian	<i>Juiojumpul</i>	Valerianaceae
<i>Verbena officinalis</i>	Holy herb	<i>Mapyouncho</i>	Verbenaceae
<i>Viburnum carlesii</i>	Viburumi	<i>Bunkkotnamu</i>	Caprifoliaceae
<i>Vitex rotundifolia</i>	Vitex	<i>Sunbiginamu</i>	Verbenaceae
<i>Wisteria floribunda</i>	Wistaria	<i>Deung</i>	Leguminosae
<i>Zanthoxylum ailanthoides</i>	Prickly ash	<i>Mokuinamu</i>	Rutaceae
<i>Zanthoxylum coreanum</i>	Prickly ash	<i>Wangchopinamu</i>	Rutaceae
<i>Zanthoxylum piperitum</i>	Prickly ash	<i>Chopinamu</i>	Rutaceae
<i>Zanthoxylum schinifolium</i>	Prickly ash	<i>Sanchonamu</i>	Rutaceae
<i>Zingiber mioga</i>	Mioga ginger	<i>Yangha</i>	Zingiberaceae
<i>Zingiber officinale</i>	Ginger	<i>Saengkang</i>	Zingiberaceae

참고문헌

- (1) Albert Y. Leung and Steven Hoster : *Encyclopedia of common Natural Ingredients, Used in Food, Drugs and Cosmetics*, Second Edition, John Willey & Sons, Inc. (1996)
- (2) Beryl Brintnall Simpson and Molly Conner Ogorzaly : *Economic Botany, Plants in our world*, McGrew-Hill, inc. (1995)
- (3) Dirk R. Walters and David J. Keil : *Vascular Plant Taxonomy*. Third Edition, Kendll/Hunt Publishing Co. (1988)
- (4) Chi,H.J. and Park S.K. : *Medicinal and Aromatic Plants in Korea (Production, Trade, Marketing, Processing and Utilization)*, 4-9 November 1996, FAO/RAP, Bangkok, Thailand
- (5) 지형준, 김현수 : *Angelica속 생약의 정유성분에 관한 연구(I ~ IV)*. 생약학회지, 19, 239(1988); 20, 13(1989); 21, 121(1990); 24, 111(1993); 24, 192(1993)