

A Clastogenic

*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

Plant	# Chemicals	Total PPM
<i>Acacia nilotica</i> Babul	1	
<i>Achillea millefolium</i> Milfoil; Yarrow	2	
<i>Aconitum napellus</i> Aconite; Bear's-Foot; Monkshood; Friar's Cap; Turk's Cap; European Aconite; Soldier's Cap; Blue Rocket; Helmet Flower; Garden Wolfsbane; Garden Monkshood; Queen's Fettle	2	
<i>Actaea dahurica</i> Xing an sheng ma; Sheng ma	1	
<i>Actaea cimicifuga</i> Foetid Bugbane; Bugbane; Sheng ma	1	
<i>Adonis vernalis</i> Spring Adonis	2	
<i>Agrimonia eupatoria</i> Sticklewort; Agrimony	2	
<i>Albizia lebeck</i> Koko; Lebbek Tree; Lebbek; Women's-Tongue Tree; Frywood; East Indian Walnut; Siris Tree	1	
<i>Allium schoenoprasum</i> Chives	1	
<i>Allium sativum</i> var. <i>sativum</i> Garlic	2	40.0
<i>Allium cepa</i> Onion; Shallot	1	
<i>Allium ampeloprasum</i> Kurrat; Elephant Garlic	2	
<i>Althaea officinalis</i> White Mallow; Marshmallow	2	
<i>Ammi majus</i> Bishop's Weed	1	6200.0
<i>Ananas comosus</i> Pineapple	1	
<i>Anethum graveolens</i> Garden Dill; Dill	3	
<i>Angelica sinensis</i> Dang Qui; Dong Quai; Dang Quai; Dong Gui; Chinese Angelica; Dang Gui	1	
<i>Angelica archangelica</i> Garden Angelica; Wild Parsnip; Angelica	3	6810.0
<i>Annona muricata</i> Soursop	1	
<i>Apium graveolens</i> Celery	3	1043.16
<i>Arachis hypogaea</i> Groundnut; Peanut	2	46.0
<i>Arctium lappa</i> Great Burdock; Gobo; Burdock	2	5000.0
<i>Arctostaphylos uva-ursi</i> Uva Ursi; Bearberry	1	
<i>Armoracia rusticana</i> Horseradish	1	
<i>Arnica montana</i> Mountain Tobacco; Leopard's-Bane	2	
<i>Artemisia dracunculus</i> Tarragon	2	
<i>Artemisia capillaris</i> Capillary Wormwood	1	
<i>Artemisia absinthium</i> Wormwood	1	
<i>Artemisia abrotanum</i> Southernwood	2	
<i>Asimina triloba</i> Pawpaw	1	
<i>Aspalathus linearis</i> Kaffree Tea; Rooibos; Red Bush Tea	1	
<i>Astragalus membranaceus</i> Huang Qi; Huang-Chi	2	
<i>Avena sativa</i> Oats	1	
<i>Balanites aegyptiacus</i> betu (India); mirobalano de Egipto (Sp.); heglik (Fr.); lalo (India); Desert Date; dattier sauvage (Fr.); Zachunbaum (Ger.); dattier du desert (Fr.); zachun (India); Soapberry Tree; hingotia (India)	1	
<i>Ballota nigra</i> Black Horehound	2	
<i>Berberis vulgaris</i> Barberry	2	
<i>Beta vulgaris</i> Beet; Garden Beet; Sugar Beet; Beetroot	2	
<i>Boehmeria nivea</i> Ramie	1	

Plant	# Chemicals	Total PPM
<i>Brassica pekinensis</i> Chinese Cabbage	1	22.0
<i>Brassica oleracea</i> var. <i>italica</i> Purple Cauliflower; Winter Broccoli; Heading Broccoli; Calabrese; Broccoli; Asparagus Broccoli; Sprouting Broccoli; Cape Broccoli	2	
<i>Brassica oleracea</i> var. <i>gemmifera</i> Brussels-Sprouts; Brussel-Sprout	1	68.0
<i>Brassica oleracea</i> var. <i>capitata</i> I. Cabbage; Red Cabbage; White Cabbage	2	154.0
<i>Brassica oleracea</i> var. <i>botrytis</i> I. Cauliflower	2	16.0
<i>Brassica nigra</i> Black Mustard	2	
<i>Calendula officinalis</i> Calendula; Pot-Marigold	2	
<i>Camellia sinensis</i> Tea	2	
<i>Capsicum frutescens</i> Hot Pepper; Red Chili; Tabasco; Cayenne; Spur Pepper; Chili	2	64.0
<i>Capsicum annuum</i> Cone Pepper; Cherry Pepper; Paprika; Bell Pepper; Green Pepper; Sweet Pepper	2	22.0
<i>Carica papaya</i> Papaya	1	
<i>Carum carvi</i> Carum; Comino de Prado (Sp.); Comino (Sp.); Kummel (Ger.); Caraway	1	
<i>Casimiroa edulis</i> Matasano; White Sapote	1	
<i>Castanea sativa</i> European Chestnut	1	
<i>Catalpa bignonioides</i> Indian bean	1	
<i>Ceiba pentandra</i> Silk-Cotton Tree; Kapok	1	
<i>Centaurea cyanus</i> Bachelor's Button; Cornflower	2	
<i>Centaurium erythraea</i> Centaury	1	
<i>Chamaemelum nobile</i> Roman Camomile; Perennial Camomile; Garden Camomile	1	
<i>Cichorium intybus</i> Chicory; Witloof; Succory	2	1534.0
<i>Cichorium endivia</i> Escarole; Endive	1	
<i>Cimicifuga dahurica</i> Sheng Ma	1	
<i>Cinchona</i> spp Quinine	1	
<i>Cinchona pubescens</i> Redbark; Quinine; Red Peruvian-Bark; Red Cinchona	2	
<i>Cinnamomum verum</i> Ceylon Cinnamon; Cinnamon	1	
<i>Cinnamomum camphora</i> Ho Leaf; Camphor	1	
<i>Citrullus lanatus</i> Watermelon	1	
<i>Citrullus colocynthis</i> Colocynth	2	
<i>Citrus sinensis</i> Orange	2	100.0
<i>Citrus paradisi</i> Grapefruit	1	102.0
<i>Citrus limon</i> Lemon	2	70.0
<i>Citrus aurantium</i> Bitter Orange; Petitgrain	1	
<i>Citrus aurantiifolia</i> Lime	1	
<i>Clematis vitalba</i> Traveler's Joy	2	
<i>Cnicus benedictus</i> Blessed Thistle	1	
<i>Coccinia grandis</i> Little Gourd; Kundree; Ivy Gourd; Kanduri; Tindora; Tindori; Pepasan	1	
<i>Coffea arabica</i> Coffee	2	180000.0
<i>Cola acuminata</i> Abata Cola	1	
<i>Coleus barbatus</i> Forskohl's Coleus	1	
<i>Conium maculatum</i> Hemlock; Fool's Parsley; Carrot Fern; Spotted Parsley; Poison Hemlock; Spotted Hemlock	2	
<i>Convallaria majalis</i> Lily-Of-The-Valley	2	

Plant	# Chemicals	Total PPM
<i>Conyza canadensis</i> Hogweed; Horseweed; Butterweed	1	
<i>Corchorus olitorius</i> Jew's Mallow; Mulukiya; Nalta Jute	1	
<i>Coriandrum sativum</i> Chinese Parsley; Cilantro; Coriander	3	640.0
<i>Corylus americana</i> American Filbert; American Hazel	1	
<i>Crataegus rhipidophylla</i> Hawthorn	2	
<i>Crataegus pentagyna</i> Hawthorn	1	
<i>Crataegus monogyna</i> Hawthorn; English Hawthorn	2	
<i>Crataegus laevigata</i> English Hawthorn; Hawthorn; Whitethorn; Woodland Hawthorn	2	
<i>Crataegus cuneata</i> Hawthorn	1	
<i>Cucumis sativus</i> Cucumber	2	
<i>Cucumis melo</i> Persian Melon; Muskmelon; Melon; Nutmeg Melon; Cantaloupe; Netted Melon	1	
<i>Cucurbita pepo</i> Pumpkin	1	
<i>Curcuma longa</i> Turmeric; Indian Saffron	1	10.0
<i>Cyamopsis tetragonoloba</i> Cluster-Bean; Guar; Siam-Bean	2	
<i>Cydonia oblonga</i> Quince	1	
<i>Cynara cardunculus</i> Artichoke	2	
<i>Datura stramonium</i> Jimsonweed	2	
<i>Daucus carota</i> Carrot	3	0.6
<i>Dictamnus albus</i> Gas Plant; Gazelotu; Akgiritotu; Burning Bush; Dittany	1	
<i>Digitalis purpurea</i> Purple Foxglove	2	
<i>Dipsacus fullonum</i>	2	
<i>Dodonaea viscosa</i> Hopwood	1	
<i>Echinacea</i> spp Echinacea; Coneflower	2	
<i>Echinacea pallida</i> Pale-Flower Echinacea; Echinacea; Pale Purple-Coneflower	1	
<i>Echinacea angustifolia</i> Narrow Leaf Purple-Coneflower; Echinacea; Narrow Leaf Echinacea	1	
<i>Elaeagnus angustifolia</i> Russian Olive; Silver Berry	2	
<i>Elettaria cardamomum</i> Cardamom	1	
<i>Eleutherococcus senticosus</i> Eleuthero Ginseng; Wu jia; Ci wu jia (Pinyin); Spiny Ginseng; Siberian Ginseng	2	
<i>Equisetum hyemale</i> Scouring Rush; Horsetail	1	
<i>Equisetum arvense</i> Horsetail; Field Horsetail	2	
<i>Eriobotrya japonica</i> Loquat	1	
<i>Erythroxylum coca</i> Coca	2	
<i>Eucalyptus globulus</i> Blue Gum; Tasmanian Bluegum; Eucalypt	2	
<i>Eucommia ulmoides</i> Du Zhong; Tu Chung; Gutta-Percha Tree	1	
<i>Euphorbia pulcherrima</i> Poinsettia	1	
<i>Euphorbia hirta</i> Queensland Asthma Herb	1	
<i>Euphrasia officinalis</i> Eyebright	1	
<i>Fagopyrum esculentum</i> Buckwheat	2	
<i>Ficus carica</i> Figuiers Commun (Fr.); Figueira (Port.); Fig; Echte Feige (Ger.); Feigenbaum (Ger.); Fico (Ital.); Higuera Comun (Sp.); Higo (Sp.)	2	14200.0
<i>Foeniculum vulgare</i> Fennel	3	
<i>Fragaria</i> spp Strawberry	2	68.0

Plant	# Chemicals	Total PPM
<i>Gaultheria procumbens</i> Wintergrun (Ger.); Wintergreen; Mountain Tea; Creeping Wintergreen; Teaberry; Checkerberry	1	
<i>Gentiana lutea</i> Gentian; Yellow Gentian	1	
<i>Glechoma hederacea</i> Alehoof	2	
<i>Glehnia littoralis</i> Bei Sha Shen	1	
<i>Glycine max</i> Soybean	2	8.0
<i>Glycyrrhiza glabra</i> Smooth Licorice; Commom Licorice; Licorice; Licorice-Root	1	
<i>Harpagophytum procumbens</i> Devil's Claw; Grapple Plant	2	
<i>Hedera helix</i> Ivy	1	
<i>Helianthus annuus</i> Girasol; Sunflower	2	59608.0
<i>Helichrysum angustifolium</i> Everlasting; Immortelle	1	
<i>Heraclium laciniatum</i> Lacinate Cow-parsnip	1	
<i>Hordeum vulgare</i> Barleygrass; Barley	2	
<i>Houttuynia cordata</i> Fishwort; Dokudami; Yu Xing Cao	1	
<i>Humulus lupulus</i> Hops	2	
<i>Hydrastis canadensis</i> Goldenseal	1	
<i>Hyoscyamus niger</i> Henbane	1	
<i>Hypericum perforatum</i> Hypericum; Goatweed; Klamath Weed; Common St. Johnswort; St. John's-wort	2	
<i>Hyssopus officinalis</i> Hyssop	1	
<i>Ilex paraguariensis</i> Paraguay Tea; Mate; South American Holly	1	
<i>Inonotus obliquus</i>	1	
<i>Ipomoea purga</i> Jalap	1	80000.0
<i>Ipomoea batatas</i> Sweet Potato	2	
<i>Juglans regia</i> English Walnut	2	
<i>Juglans nigra</i> Black Walnut	1	
<i>Juniperus communis</i> Common Juniper; Juniper	2	
<i>Kalanchoe pinnata</i> Siempre Viva; Air Plant	1	
<i>Lactuca sativa</i> Lettuce	1	
<i>Laurus nobilis</i> Bay Laurel; Laurel; Grecian Laurel; Bayleaf; Bay; Sweet Bay	1	
<i>Levisticum officinale</i> Lovage	2	
<i>Ligustrum japonicum</i> Ligustri Fructus; Japanese Privet	1	
<i>Limonia acidissima</i> Manzana De Elefante; Elephant Apple; Wood-Apple	1	
<i>Linum usitatissimum</i> Flax; Linseed	1	
<i>Lonicera japonica</i> Japanese Honeysuckle	1	
<i>Lycopersicon esculentum</i> Tomato	2	48.0
<i>Lycopodium clavatum</i> Antler Herb; Clubmoss	1	
<i>Lycopus virginicus</i> Bugle	2	
<i>Lycopus europeus</i> European Bugle	2	
<i>Lythrum salicaria</i> Purple Loosestrife	1	
<i>Magnolia officinalis</i> Hou Pu; Chinese Magnolia; Magnolia-Bark	1	
<i>Magnolia kobus</i> Xin-Yi; Hsin-I	1	
<i>Mahonia repens</i> Oregon Barberry; Oregon Grape; Creeping Barberry; Oregon Grape-Holly	1	
<i>Malus domestica</i> Apple	2	2540.0

Plant	# Chemicals	Total PPM
<i>Maranta arundinacea</i> Arrowroot; Bermuda Arrowroot	1	
<i>Marrubium vulgare</i> White Horehound; Horehound	2	
<i>Matricaria recutita</i> Wild Camomile; Annual Camomile; German Camomile	2	
<i>Medicago sativa</i> Alfalfa; Lucerne	1	
<i>Melia azedarach</i> Chinaberry	1	
<i>Melilotus officinalis</i> Yellow Sweetclover	1	
<i>Melissa officinalis</i> Lemonbalm; Bee Balm; Balm; Melissa	2	
<i>Mentha x rotundifolia</i> Applemint	1	
<i>Mentha x piperita</i> Peppermint	2	
<i>Menyanthes trifoliata</i> Bog Myrtle; Marsh Clover; Water Trefoil; Marsh Trefoil; Bogbean; Buckbean	2	
<i>Moringa oleifera</i> Moringa; Drumstick Tree; Horseradish Tree; Benzolive Tree; West Indian Ben; Jacinto (Sp.); Ben Nut	1	
<i>Morus alba</i> White Mulberry; Sang-Pai-Pi	2	
<i>Murraya koenigii</i> Indian Curry Tree; Curry Leaf Tree; Curry Leaf	1	
<i>Myristica fragrans</i> Nutmeg; Muskatnussbaum (Ger.); nogal moscado (Sp.); nuez moscada (Sp.); Mace	1	
<i>Nicotiana tabacum</i> Tobacco	2	
<i>Ocimum basilicum</i> Sweet Basil; Basil; Cuban Basil	1	38100.0
<i>Oenothera biennis</i> Evening-Primrose	1	
<i>Olea europaea</i> Olive	1	
<i>Origanum vulgare</i> Wild Oregano; Oregano; Pot Marjoram; Wild Marjoram; Common Turkish Oregano; European Oregano	2	14120.0
<i>Origanum majorana</i> Marjoram; Sweet Marjoram	2	
<i>Panax ginseng</i> Oriental Ginseng; Korean Ginseng; Ginseng; Chinese Ginseng	1	
<i>Papaver somniferum</i> Opium Poppy; Poppyseed Poppy	1	
<i>Pastinaca sativa</i> Parsnip	1	7600.0
<i>Perilla frutescens</i> Perilla	1	
<i>Persea americana</i> Avocado	2	
<i>Petroselinum crispum</i> Parsley	3	4000.0
<i>Peucedanum ostruthium</i> Masterwort	2	
<i>Phaseolus vulgaris</i> String Bean; Popping Bean; Dwarf Bean; Garden Bean; Wax Bean; French Bean; Black Bean; Haricot Bean; Flageolet Bean; Green Bean; Navy Bean; Haricot; Snap Bean; Haricot Vert; Field Bean; Kidney Bean; Pop Bean	1	
<i>Phoenix dactylifera</i> Date Palm	1	
<i>Physalis peruviana</i> Ground Cherry; Cape Gooseberry	1	
<i>Pimpinella anisum</i> Sweet Cumin; Anise	3	
<i>Pinus sylvestris</i> Scotch Pine	2	
<i>Piper nigrum</i> White Pepper; Black Pepper; Pepper	1	
<i>Pisum sativum</i> Pea	1	
<i>Plantago major</i> Common Plantain	2	
<i>Pluchea carolinensis</i> Santa maria; Pito sico	1	
<i>Polypodium vulgare</i> Common Polypody; Sweet Fern	1	
<i>Portulaca oleracea</i> Purslane; Verdolaga	1	
<i>Prunus spinosa</i> Blackthorn; Sloe	1	
<i>Prunus serotina</i> Black Cherry; Wild Cherry	1	
<i>Prunus persica</i> Peach	2	
<i>Prunus laurocerasus</i> Cherry Laurel	1	

Plant	# Chemicals	Total PPM
<i>Prunus dulcis</i> Almond	1	
<i>Prunus domestica</i> Plum	2	
<i>Prunus cerasus</i> Sour Cherry	2	
<i>Prunus armeniaca</i> Apricot	2	
<i>Pteridium aquilinum</i> Bracken Fern; Bracken	1	
<i>Punica granatum</i> Granatapfelstrauch (Ger.); Granatapfelbaum (Ger.); Granado (Sp.); Pomegranate; Romanzeiro (Port.); Grenadier (Fr.); Mangrano (Sp.); Zakuro (Jap.)	2	
<i>Pyrus communis</i> Pear	1	39400.0
<i>Raphanus sativus</i> Radish	1	182.0
<i>Rheum rhabarbarum</i> Rhubarb	1	16.0
<i>Rheum officinale</i> Chinese Rhubarb	1	
<i>Rhododendron ponticum</i> Pontic Alpenrose	2	
<i>Ribes uva-crispa</i> Gooseberry	1	
<i>Ribes nigrum</i> Black Currant	2	
<i>Ricinus communis</i> Castorbean	1	
<i>Rosa damascena</i> Damask Rose	1	30000.0
<i>Rosa canina</i> Dogbrier; Rose; Dog Rose	1	
<i>Rosmarinus officinalis</i> Rosemary	2	
<i>Rubus phoenicolasius</i> Wineberry; Wine Raspberry; Japanese Wineberry	1	
<i>Rubus idaeus</i> Red Raspberry; Raspberry	1	
<i>Rubus fruticosus</i> Blackberry	1	
<i>Ruta graveolens</i> Rue	1	
<i>Salvia</i> sp. Chia	1	
<i>Salvia officinalis</i> Sage	2	
<i>Sambucus simpsonii</i> Simpson's elderberry	2	
<i>Sambucus nigra</i> Elder; Black Elder; European Elderberry; European Alder; European Elder	2	
<i>Sanguisorba minor</i> Small Burnet	1	
<i>Santolina chamaecyparissus</i> Lavender Cotton	1	
<i>Satureja montana</i> Savory; Winter Savory	2	
<i>Scopolia carniolica</i> Scopolia	2	
<i>Senna obtusifolia</i> Sicklepod	2	
<i>Sesamum indicum</i> Benneseed; Ajonjoli (Sp.); Sesamo (Sp.); Beni; Sesame	2	
<i>Skimmia arborescens</i> Skimmia	1	
<i>Solanum tuberosum</i> Potato	2	5701.0
<i>Solanum torvum</i> Susumba; Wild Eggplant	2	
<i>Solanum melongena</i> Eggplant; Aubergine	2	
<i>Solidago virgaurea</i> European Goldenrod; Woundwort	2	
<i>Solidago gigantea</i> Early Goldenrod	1	
<i>Sophora japonica</i> Japanese Pagoda Tree	1	
<i>Sorbus aucubaria</i> Rowan Berry	2	
<i>Spartium junceum</i> Genet; Spanish Broom; Weaver's Broom	1	
<i>Spinacia oleracea</i> Spinach	2	

Plant	# Chemicals	Total PPM
<i>Stachys officinalis</i> Betony; Bishop's-Wort; Wood Betony; Purple Betony	2	10000.0
<i>Stachytarpheta jamaicensis</i> Brazilian Tea	1	
<i>Stellaria media</i> Common Chickweed; Chickweed	2	
<i>Strychnos nux-vomica</i> Strychnine; Nux-Vomica	1	
<i>Symphytum officinale</i> Comfrey	2	
<i>Tabebuia impetiginosa</i> Pau d'arco; Taheebo	1	
<i>Tabebuia heptaphylla</i> Pau D'Arco	1	
<i>Tagetes patula</i> French Marigold	1	
<i>Tanacetum vulgare</i> Tansy	2	
<i>Taraxacum officinale</i> Dandelion	2	
<i>Taxus baccata</i> Common Yew	1	
<i>Tecoma stans</i> Yellow Elder	2	
<i>Teucrium scorodonia</i> Germander; Wood Germander	1	
<i>Teucrium scordium</i> Water Germander	1	
<i>Teucrium chamaedrys</i> Wall Germander	2	400.0
<i>Theobroma cacao</i> Cacao	2	
<i>Thymus vulgaris</i> Garden Thyme; Thyme; Common Thyme	2	33800.0
<i>Thymus serpyllum</i> Creeping Thyme	1	12400.0
<i>Tilia</i> sp. Lime; Basswood; Linden	2	
<i>Trifolium pratense</i> Peavine Clover; Red Clover; Purple Clover; Cowgrass	2	
<i>Triticum aestivum</i> Wheat	2	18.0
<i>Tropaeolum majus</i> Nasturtium	1	
<i>Uncaria tomentosa</i> Cat's Claw; Garabato Amarillo; Una de Gato	1	
<i>Uncaria guianensis</i> Ungunagi; Cat's Claw; Garabato Colorado; Tambor Huasca; Una de Gato	1	
<i>Urtica dioica</i> European Nettle; Stinging Nettle	2	
<i>Vaccinium vitis-idaea</i> Cowberry; Lingen; Lingonberry	1	
<i>Vaccinium myrtillus</i> Bilberry; Whortleberry; Dwarf Bilberry	2	
<i>Vaccinium macrocarpon</i> Large Cranberry; Cranberry; American Cranberry	1	
<i>Vaccinium corymbosum</i> Blueberry	2	6000.0
<i>Valeriana officinalis</i> Garden-Heliotrope; Valerian; Common Valerian	2	
<i>Verbena officinalis</i> Vervain	1	20000.0
<i>Viburnum prunifolium</i> Black Haw	1	
<i>Viburnum opulus</i> Snowballbush; Guelder Rose; Crampbark; European Cranberry Bush	2	
<i>Vicia faba</i> Broadbean; Habas; Faba Bean	1	
<i>Viscum album</i> European Mistletoe	1	
<i>Vitis vinifera</i> Parra (Sp.); Vid (Sp.); Vigne Vinifere (Fr.); Weinrebe (Ger.); Grape; Grapevine; Wine Grape; European Grape	2	
<i>Withania somnifera</i> Ashwagandha	1	
<i>Zea mays</i> Corn	2	1.4
<i>Zingiber officinale</i> Ginger	2	