

TAXONOMIC INDEX

A

- Abutilon theophrasti* Medicus, 210
Acalypha ostryifolia Riddell, 210
Acanthospermum hispidum DC., 210
Acaridae: Acarinae, 119
Acremonium persicinum, 163
Acremonium salmoneum, 163
Adoretus spp., 107
Aeschynomene americana L., 360
Aeschynomeneae, 1, 14
Agrobacterium rhizogenes (Riker, Banfield, Wright, Keitt and Sagan) Conn, 83, 190
Agrobacterium spp., 83, 84, 188-190, 288
Agrobacterium tumefaciens, 83, 145, 175, 189, 190
Agrotis subterranea (Fabricius), 101
Alternaria cassia Jurair and Khan, 220
Amaranthus hybridus L., 210
Amaranthus palmeri S. Wats., 210
Amaranthus retroflexus L., 210
Amaranthus spp., 210, 223, 226, 228, 230, 232
Ambinervosae (section), 18, 23
Ambrosia artemisiifolia L., 210
Amsacta spp., 101, 102
Anagrus armatus (Ashmead), 123
Anagrus epos Girault, 123
Anagrus nigriventris Girault, 123
Anisolabis annulipes (Lucas), 108
Anoda cristata (L.) Schlecht., 210
Anomala spp., 107
Anticarsia gemmatalis Hübner 101
Apanteles spp., 115
Aphelopus spp., 123
Aphidius colemani, 136
Aphis craccivora Koch, 44, 121, 125, 129-134, 136, 137, 143
Approaerema modicella Deventer, 100, 101, 129-134
Arabidopsis, 78
Arachis (section), 6, 18, 19, 21, 22, 29, 31-36, 38, 40, 42-46, 129, 136, 144
Arachis appressipila Krapov. and W.C. Gregory, 20, 106, 131
Arachis archeri Krapov. and W.C. Gregory, 19
Arachis batizocoi Krapov. and W.C. Gregory, 6, 19, 30, 32-36, 39, 42, 46, 123, 129
Arachis xbatizogaea Krapov. and Fern., 106
Arachis benensis Krapov. and W.C. Gregory, 19
Arachis benthamii Handro, 19, 22
Arachis brevipetiolata Krapov. and W.C. Gregory, 19
Arachis burchellii Krapov. and W.C. Gregory, 19
Arachis burkartii Handro, 20, 28, 132, 143
Arachis capibarensis Krapov. and W.C. Gregory, 19
Arachis cardenasii Krapov. and W.C. Gregory, 5, 19, 33, 36, 37, 42, 46, 69, 129
Arachis chacoensis Krapov. and W.C. Gregory nom. nud. (now *A. diogoi*), 36, 37, 39, 42, 45, 46, 106, 123, 128, 129, 137, 143
Arachis chiquitana Krapov., W.C. Gregory and C.E. Simpson, 20, 132
Arachis correntina (Burkart) Krapov. and W.C. Gregory, 5, 19, 36, 123, 129, 130
Arachis cruziana Krapov., W.C. Gregory and C.E. Simpson, 19
Arachis cryptopotamica Krapov. and W.C. Gregory, 19
Arachis dardani Krapov. and W.C. Gregory, 20, 23, 131
Arachis decora Krapov., W.C. Gregory and Valls, 19
Arachis diogoi Hoehne, 19, 36, 37, 39, 42, 45, 46, 106, 123, 128, 129, 137, 143
Arachis douradiana Krapov. and W.C. Gregory, 19
Arachis duranensis Krapov. and W.C. Gregory, 19, 30, 33, 34, 36, 123, 129, 137
Arachis giacomettii Krapov., W.C. Gregory, Valls and C.E. Simpson, 20
Arachis glabrata Benth., 14, 23, 40, 47, 123, 128, 132, 133, 137, 143
Arachis glabrata var. *glabrata* Benth., 20
Arachis glabrata var. *hagenbeckii* Benth.

- (Harms ex. Kuntze), 20, 133
Arachis glandulifera Stalker, 5, 19, 32, 34, 39
Arachis gracilis Krapov. and W.C. Gregory, 19
Arachis guaranitica Chodat and Hassl., 20, 23, 30, 31
Arachis hatschbachii Krapov. and W.C. Gregory, 19
Arachis helodes Martius ex Krapov. and Rigoni, 19
Arachis hermannii Krapov. and W.C. Gregory, 19, 130
Arachis herzogii Krapov., W.C. Gregory and C.E. Simpson, 19
Arachis hoehnei Krapov. and W.C. Gregory, 19, 129
Arachis hypogaea subsp. *fastigiata*, 1, 2, 8-10, 15-17, 32, 37, 38, 42, 61, 63, 316, 334, 361, 533
Arachis hypogaea subsp. *hypogaea*, 1, 9, 10, 15-17, 32, 38, 42, 61, 316, 334, 361, 533
Arachis hypogaea var. *aequatoriana*, 2, 9, 16, 17, 32
Arachis hypogaea var. *hirsuta*, 1, 2, 9, 16, 17, 25, 32
Arachis hypogaea var. *peruviana*, 2, 9, 15-17, 32
Arachis hypogaea var. *vulgaris*, 2, 9, 16, 17, 32, 36, 37, 42, 61, 334, 533
Arachis ipaensis Krapov. and W.C. Gregory, 19, 36
Arachis kempff-mercadoi Krapov., W.C. Gregory and C.E. Simpson, 19, 106, 129
Arachis kretschmeri Krapov. and W.C. Gregory, 20, 132
Arachis kuhlmannii Krapov. and W.C. Gregory, 19, 130
Arachis lignosa (Chodat and Hassl.) Krapov. and W.C. Gregory, 132
Arachis lutescens Krapov. and Rigoni, 19
Arachis macedoi Krapov. and W.C. Gregory, 20, 123, 131
Arachis magna Krapov., W.C. Gregory and C.E. Simpson, 15, 19
Arachis major Krapov. and W.C. Gregory, 19, 130, 131
Arachis marginata Gardner, 20, 30, 131
Arachis martii Handro, 19
Arachis matiensis Krapov., W.C. Gregory and C.E. Simpson, 20
Arachis microsperma Krapov., W.C. Gregory and Valls, 19
Arachis monticola Krapov. and Rigoni, 15, 19, 36, 37, 39, 40, 42-44, 55, 123, 130
Arachis oteroi Krapov. and W.C. Gregory, 19
Arachis palustris Krapov., W.C. Gregory and Valls, 19
Arachis paraguariensis Chod. et. Hassl., 35, 81, 106, 123, 131
Arachis paraguariensis ssp. *capibarensis* Krapov. and W.C. Gregory, 19
Arachis paraguariensis ssp. *paraguariensis* Chodat and Hassl., 19
Arachis pietrarrellii Krapov. and W.C. Gregory, 20
Arachis pintoii Krapov. and W.C. Gregory, 2, 14, 19, 26, 28, 47
Arachis praecox Krapov., W.C. Gregory and Valls, 19, 39
Arachis prostrata Benth., 20, 22, 28
Arachis pseudovillosa (Chodat and Hassl.) Krapov. and W.C. Gregory, 20, 133
Arachis pusilla Benth., 6, 20, 23, 45, 123
Arachis repens Handro, 14, 19, 22, 47, 123, 130, 136, 137
Arachis retusa Krapov., W.C. Gregory and Valls, 20
Arachis rigonii Krapov. and W.C. Gregory, 20, 23, 35, 123, 132
Arachis setinervosa Krapov. and W.C. Gregory, 20
Arachis simpsonii Krapov. and W.C. Gregory, 19
Arachis spegazzinii W.C. Gregory and M.P. Gregory nom. nud. (now *A. duranensis*), 33
Arachis stenophylla Krapov. and W.C. Gregory, 19, 106, 131
Arachis stenosperma Krapov. and W.C. Gregory, 14, 19, 33, 46, 123, 130
Arachis subcoriacea Krapov. and W.C. Gregory, 20
Arachis sylvestris (A. Chev.) A. Chev., 20
Arachis trinitensis Krapov. and W.C. Gregory, 19
Arachis triseminata Krapov. and W.C. Gregory, 7, 20, 23, 45, 134

- Arachis tuberosa* Bong. ex Benth., 20, 30, 31
Arachis valida Krapov. and W.C. Gregory, 19, 34, 130
Arachis vallsii Krapov. and W.C. Gregory, 20, 132
Arachis villosa Benth., 19, 26, 36, 106, 123, 130, 137, 143
Arachis villosulicarpa Hoehne, 14, 20, 47, 81, 131, 136
Arachis williamsii Krapov. and W.C. Gregory, 19
Araneida, 104
Archytas marmoratus (Townsend), 104
Arthrobacterium spp., 162
Aspergillus flavus (Link), 8, 109, 111, 172, 390, 430, 456-458, 460-462, 465, 466, 515, 524
Aspergillus nidulans, 172
Aspergillus niger van Tieghem, 9
Aspergillus parasiticus Speare, 111, 456, 460, 461, 463, 464
Aspergillus spp., 42, 45, 181, 457
Aureobacterium spp., 162
Autographa californica (Speyer), 146
Azorhizobium caulinodans, 289, 290

B

- Bacillus cereus*, 162
Bacillus popilliae var. *holotrichiae* Milner, 108
Bacillus radicumicola, 287
Bacillus spp., 166, 171, 172
Bacillus subtilis, 171
Bacillus thuringiensis Burliner, 84, 96, 104, 108, 112, 114, 120, 145-147, 162, 182, 520
Bacillus thuringiensis subsp. *kurstaki*, 147
Bactra verutana Zeller, 220
Beauveria bassiana (Bal.) Vuillemin, 104, 108
Beauveria spp., 104, 108, 114, 115
Belonolaimus longicaudatus Rau, 176
Bemisia argentifolii Bellows and Perring, 121, 137
Bemisia tabaci (Gennadius), 121, 125, 137-139
Brachiaria platyphylla (Griseb.) Nash., 210

- Bracon gelechiae* Ashmead, 115
Bradyrhizobium elkanii, 289, 290
Bradyrhizobium japonicum, 289, 290
Bradyrhizobium spp., 9, 24, 287, 289-297, 326, 395
Brassica juncea L., 79
Brassica napus L., 169
Brumoides suturalis Fab., 136

C

- Caesalpinoideae**, 287
Cajanus cajan (L.) Millsp., 288
Caliothrips indicus (Bagnall), 121, 123
Calosoma spp., 104
Campoletis spp., 104
Campsis radicans (L.) Seem. ex Bureau, 210
Campsomeris callaris (Fab.), 108
Canavalia ensiformis, 288
Capnodium spp., 138
Carayonocoris spp., 127
Cardiochiles nigriceps (Vierick), 104
Cassia fasciculata Michx., 360
Cassia obtusifolia L., 375
Cassia occidentalis L., 210
Caulorrhizae (section), 18, 19, 21, 22, 43, 44, 130
Cenchrus spp., 210
Cercospora arachidicola Hori, 42, 43, 46, 162-164, 172, 358, 420
Cercospora kikuchii, 172
Cercosporidium personatum (Berk. et Curt.) Deighton, 10, 41, 43, 46, 56, 163-165, 420
Chalarus latifrons Hardy, 123
Cheilomenes vicina Mulsant, 127
Chelonus elasmopalpi McComb, 114, 115
Chelonus insularis (Cresson), 104
Chenopodium album L., 210
Chrysopa carnea Steph., 136
Chrysopa spp., 104
Chrysoperla spp., 104
Cicer arietinum L. Gram., 288
Clavibacter spp., 162
Coccinella septempunctata Fab., 136

- Cochliobolus sativus* (Ito and Kuribayashi) Drechs. ex Dastur, 161, 164
- Coleomegilla maculata* (DeGreer), 104
- Coleoptera**, 104, 120, 145, 146
- Colletotrichum truncatum* (Schw.) Andrus and Moore, 220
- Coniothyrium minitans*, 168
- Conoderus* spp., 107, 108
- Cotesia marginiventris* (Cresson), 104
- Crossopalpus* spp., 123
- Croton glandulosus* Mvell. Arg., 210
- Crysopa* spp., 127
- Cucumis anguria* L., 161, 210
- Curtobacterium* spp., 162
- Curvularia bannonii* Morgan-Jones, 220
- Cyamopsis tetragonolobus* (L.) Taub., 288
- Cyclotelus rufiventris* (Loew), 115
- Cylindrocladium crotalariae* (Loos) Bell and Sobers, 169, 368
- Cynodon dactylon* (L.) Pers., 210
- Cyperus esculentus* L., 210
- Cyperus rotundus* L., 210
- Cyperus* spp., 210
- D**
- Dactyloctenium aegyptium* (L.) Wild, 210
- Darlucra filum*, 163
- Datura stramonium* L., 210
- Dermaptera**, 104
- Desmodium tortuosum* (S.W.) D.C., 210, 375
- Diabrotica undecimpunctata howardi* Barber, 107, 108, 119, 120, 368
- Dicyma pulvinata*, 163-165
- Didymella arachidicola*, 43, 46
- Digitaria ciliaris* (Retz.) Koel., 210
- Digitaria sanguinalis* (L.) Scop., 210
- Digitaria* spp., 210, 225, 235
- Diplura: Japygidae**, 119
- Diptera**, 104, 145
- Dorylus orientalis* Westwood, 107, 108
- Duboscqia penetrans*, 177
- E**
- Eclipta alba* L., 210
- Elasmolomus sordidus* Fabricius, 121
- Elasmopalpus lignosellus* (Zeller), 44, 106, 108, 115, 129-134, 460
- Eleusine indica* (L.) Gaertn., 210
- Empoasca dolichi* Paoli, 121
- Empoasca fabae* Harris, 44, 46, 121, 123, 129-134, 358
- Empoasca facialis* Jacobi, 121
- Empoasca kerri* Pruthi, 121, 123
- Empoasca ricei*, 10
- Empoasca* spp., 123
- Encarsia nigricephala* Dozier, 139
- Encarsia pergrandiella* Howard, 139
- Enterobacter cloacae*, 163
- Enterobacter* spp., 172
- Entomophthora* spp., 104
- Erectoides* (section), 18, 19, 22, 29, 32-35, 40, 43, 44, 130, 136
- Eretocerus californicus* Howard, 139
- Erwinia herbicola*, 162
- Erwinia* spp., 162
- Escherichia coli*, 172
- Eucelatoria bryani* Sabrosky, 104
- Eudarlucra caricis*, 163
- Eulepida mashona* Arrow, 108
- Eulepida* spp., 107
- Eulophidae**, 128
- Euphorbia heterophylla* L., 210
- Euphorbia humistrata* Engelm. ex Gray, 210
- Euphorbia* spp., 210
- Euphysothrips minozzii* Bagnall, 164
- Extranervosae* (section), 18, 19, 22, 30, 32, 33, 43, 44, 131, 136
- F**
- Fabaceae**, 14
- Flavimonas* spp., 162
- Fragaria chilosensis* (L.) Duch., 135
- Fragaria virginiana* Duch, 135
- Frankia* spp., 175
- Frankliniella fusca* (Hinds), 44, 46, 121, 123, 125-127, 129-134, 214, 358
- Frankliniella occidentalis* (Pergande), 121, 125-127
- Frankliniella schultzei* (Trybom), 44, 121, 125, 126, 128
- Franklinothrips* spp., 127

G

- Geocoris punctipes* (Say), 104, 114
Geocoris spp., 114, 115, 127
Geron aridus Painter, 114, 115
Gliocladium spp., 166, 169, 170, 174
Gliocladium virens, 167, 168, 170, 172
Glycine max (L.) Merr., 59, 96, 169, 288, 356
Glycine spp., 164
Gossypium hirsutum L., 96, 170, 356

H

- Helianthus* spp., 168
Helicoverpa armigera Hübner, 101
Helicoverpa spp., 44, 96, 104, 105, 142
Helicoverpa zea Boddie, 44, 46, 95, 101, 104, 105, 129-134, 358
Heliothis virescens (F.), 145, 147
Heliothis zea (Boddie), 46
Hemerobius spp., 127
Hemiptera, 104
Heteranthes (section), 18, 20-22, 43, 44, 131
Hilda patruelis Stal, 107, 108
Hippodamia convergens Guérin-Méneville, 104, 136
Hyalodendron spp., 163
Hymenoptera, 104

I

- Illidops terrestris* Wharton, 114, 115
Invreia deceptor Grissel and Schauff, 114, 115
Ipomoea batatas (L.) Lam., 220
Ipomoea hederacea (L.) Jacq., 210
Ipomoea hederacea var. *integriuscula* Gray, 210
Ipomoea lacunosa L., 210
Ipomoea purpurea (L.) Roth, 210
Ipomoea spp., 222, 223, 230-233, 235
Ishiodon aegypticus Weid., 127

J

- Jacquemontia tamnifolia* (L.) Griseb., 210

L

- Labidura riparia* (Pallas), 104, 113, 115
Lachnosterna consanguinea Blanchard, 108
Lachnosterna serrata Fabricius, 108
Lachnosterna spp., 106, 107
Lactuca sativa L., 168
Lasius spp., 119
Leguminosae, 1, 287
Lens culinaris Medik., 288
Lepidoptera, 100, 106, 108, 145, 146, 520
Lespesia spp., 104
Linum usitatissimum L., 161
Litolinga acuta (Adams), 115
Lupinus spp., 288
Lycopersicon esculentum Mill., 167, 145

M

- Macrocentrus* spp., 115
Macroposthonia ornata (Raski) de Grisse and Loof, 176
Meloidogyne arenaria (Neal) Chitwood, 43, 45, 46, 56, 176, 179, 180, 358, 359
Meloidogyne hapla Chitwood, 43, 176
Meloidogyne spp., 181
Menochilus sexmaculatus (Fab.), 136
Mentha piperita L., 135
Metarrhizium anisopliae var. *anisopliae* Met. and Sorok, 108
Methylobacterium spp., 162
Microtermes spp., 106, 108, 109
Mimosoideae, 287
Mollugo verticillata L., 210
Mymaridae, 128

N

- Nabis* spp., 104
Natoxas spp., 104
Nematoconus spp., 182
Neocosmospora spp., 181
Neozygites floridana (Weiser and Muma), 135
Neuroptera, 104
Neurospora crassa, 172
Nicotiana tabacum L., 145, 174

Noctuidae, 101

- Nomuraea rileyi* (Farlow) Samson, 104
Nosema heliothidis Lutz and Splendor,
 104

O

- Odontotermes* spp., 106, 108, 109, 460
Oepidoptera, 101
Orgilus elasmopalpi Muesenbeck, 114, 115
Orgilus nitidus Muesenbeck, 115
Orius insidiosus (Say), 104, 136
Orius maxidentex Ghauri, 127
Orius tantillus (Motsch.), 127
Orrina phyllobia (Thorne) Brzesk., 220
Orthoptera, 146

P

- Paecilomyces lilacinus*, 180
Panicum dichotomiflorum Mich., 210
Panicum texanum Buckl., 210
Papilionoideae, 287
Paracentrobia subflava (Girault), 123
Paragus spp., 136
Parasponia spp., 287
Paspalum notatum Flugge, 360
Passiflora incarnata L., 210
Pasteuria nishizawae, 179, 181
Pasteuria penetrans, 177-181
Pasteuria spp., 177, 179, 181
Pasteuria thornei, 179
Penicillium islandicum, 163
Penicillium spp., 181, 457
Peridontopyge spp., 107, 108
Phaseolus aureus Roxb., 288
Phaseolus spp., 164
Phaseolus vulgaris L., 166, 291
Pheidole spp., 119
Philophaga viridicolis LeConte, 115
Pisum sativum L., 189, 288, 291
Pisum spp., 164
Plodia interpunctella (Hübner), 147
Pluetella xylostella (L.), 147
Polygonum pennsylvanicum L., 210
Portulaca oleracea L., 210
Pratylenchus brachyurus (Godfrey), 176,

358

- Pristomerus spinator* (Fabricius), 114, 115
Procumbentes (section), 18, 20, 21, 23, 29,
 33, 44, 131
Prorhizomatosae (series), 20, 23, 132
Psallus spp., 128
Pseudocercospora nigricans (Cooke)
 Deighton, 220
Pseudomonas cepacia, 162
Pseudomonas fluorescens, 173
Pseudomonas putida, 161
Pseudomonas spp., 162, 172
Psyllaephagus pulvinatus, 136
Puccinia arachidis Speng., 41, 43, 46, 163,
 164
Puccinia canaliculata (Schw.) Lagerh., 220
Puccinia recondita f. sp. *tritici*, 162
Pyemotes tritici, 182
Pythium myriotylum Drechs., 355, 358,
 371, 389
Pythium ultimum, 163

R

- Raphanus sativus* L., 161
Rhizobiaceae, 288
Rhizobium ciceri, 289, 290
Rhizobium etli, 289, 290
Rhizobium fredii, 289, 290
Rhizobium galegae, 289, 290
Rhizobium huakuii, 289, 290
Rhizobium leguminosarum, 289, 290
Rhizobium leguminosarum bv. *phaseoli*,
 290
Rhizobium leguminosarum bv. *trifolii*, 290
Rhizobium leguminosarum bv. *viciae*, 290
Rhizobium loti, 289, 290
Rhizobium meliloti, 289, 290
Rhizobium phaseoli, 289
Rhizobium spp., 286, 287, 289, 290, 291,
 294-296
Rhizobium trifolii, 289
Rhizobium tropici, 289, 290
Rhizoctonia solani Kuhn, 9, 165, 170, 171,
 354, 355, 366, 389, 429
Rhizomatosae (section), 6, 18, 20, 21, 23,
 28, 29, 31-35, 43-47, 132, 136
Richardia scabra L., 210
Ricinus communis L., 360

S

- Saccromyces cerevisiae*, 172
Scarabidae, 107
Scelionidae, 128
Schizonycha spp., 107
Scirtothrips dorsalis Hood, 44, 121, 123, 125
Sclerotinia minor Jagger, 8, 42, 165, 167-170, 172, 217, 370, 429
Sclerotinia sclerotiorum (Lib.), 217
Sclerotium rolfsii Sacc., 46, 110, 165-168, 170, 172, 217, 219, 354, 366, 368
Scolia aureipennis Lep., 108
Secale cereale L., 161
Seinura spp., 182
Senna obtusifolia (L.) Irwin & Barneby, 210
Sesamum indicum L., 360
Setaria spp., 210
Sida spinosa L., 210
Sinorhizobium fredii, 289
Solanum carolinense L., 210
Solanum dimidiatum Raf., 210
Solanum elaeagnifolium Cav., 210
Solanum tuberosum L., 167
Solenopsis invicta Buren, 104, 115
Sorghum bicolor (L.) Moench, 355
Sorghum halepense (L.) Pers., 210
Sphenoptera indica (Guer.), 108, 129-134
Spodoptera exigua (Hübner), 101
Spodoptera frugiperda (J.E. Smith), 44, 101, 105, 129-134
Spodoptera littoralis (Boisduval), 101
Spodoptera litura (Fabricius), 44, 101, 105, 106, 129-134, 141
Spodoptera spp., 102
Sporidesmium sclerotivorum, 168
Sporidesmium spp., 166, 174
Stegasta bosqueella (Chambers), 100, 101
Stomatomyia floridensis Townsend, 114, 115
Stylosanthinae, 1, 14
Syrphus spp., 136

T

- Talaromyces flavus*, 163, 167, 168
Talaromyces spp., 174
Tetranychus tumidellus Prichard & Baker,

- 44, 136
Tetranychus urtica Koch, 44, 121, 122, 128-136, 214
Thielaviopsis basicola (Berk. and Br.) Ferr., 164
Thrips palmi Karny, 121, 125, 126
Trichoderma hamatum, 170
Trichoderma harzianum, 163, 166-168, 170-172
Trichoderma reesei, 172, 173
Trichoderma spp., 162, 163, 166, 167, 169, 170, 174
Trichoderma viride Pers. ex Fr., 166, 170, 172
Trichogramma spp., 104
Trichomattidae, 128
Trierectoides (section), 9, 20, 22, 23, 31-33
Trifolium spp., 127
Triseminatae (section), 18, 20, 22, 23, 33, 43, 44, 134
Triticum aestivum L, 179
Tuberculina costaricana, 163
Tyrophagus putrescentia Schrank, 119

U

- Ulmaceae**, 287

V

- Verticillium chlamydosporium*, 181
Verticillium dahliae Kleb., 163
Verticillium lecanii, 163
Vicia faba L., 288
Vigna sinensis (L.) Savi., 288
Vicia spp., 179
Vigna unguiculata L., 146
Vigna spp., 164

X

- Xanthium pennsylvanicum* Wallr., 210
Xanthomonas spp., 162, 172
Xanthium strumarium L, 74, 210

Z

- Zea mays* L., 15, 79, 96, 355

SUBJECT INDEX

A

- 'A' genome, 34, 36
- abiotic:** factor, 112-114, 120; process, 255; stress, 55, 56, 71, 73, 74, 140, 164
- AC 263,222**, 215, 236
- acephate (Orthene)**, 127, 271
- acetophenone**, 532
- acid catalysis**, 256
- acid hydrolysis**, 539
- acids**, amino (see amino acids); arachidic, 544; ascorbic, 545; behenic, 544; benzoic, 256; 1-caffeoyl-4-deoxyquinic, 106; caffeoylquinic, 106; carboxy, 253, 276; carboxylic, 539; chlorogenic, 106; cyclopiazonic, 457; eicosenoic, 544; fulvic, 250; gibberellic (see gibberellic acid); gluconic, 163; helium, 539; humic, 250; hydroxy, 253; indoleacetic (IAA), 82, 175; lignoceric, 544; linoleic (see linoleic acid); α -naphthaleneacetic, 82; nucleic, 185-187, 546; oleic (see oleic acid); organic, 251; phenoxyalkanoic, 256; phosphoric, 253; picolinic, 256; stearic, 78, 544; sulfur amino, 532; sulfuric, 292; tricarboxylic, 289
- acifluorfen (Blazer)**, 214, 215, 221, 229, 230, 233, 235-237, 269, 270, 277
- acreage:** constraint, 433; production, 554-561
- actinomycete**, 169
- adaxial surface**, 8, 10, 123
- additive effect** (genetic), 58
- advisories:** groundwater contamination, 246; leafspot, 278, 279, 430, 441; production, 420
- aerobes**, 286
- aflatest method**, 489
- aflatoxin**, 42, 457-470; acceptance levels, 491-493, 495, 497; AOAC extraction method, 485, 488, 494; BF extraction method, 485, 488; calcium supply effects, 390; contamination levels, 446; crop rotation effects, 424; early warning systems, 470; expert systems data, 437, 440, 442, 448, 460; forecasting, 460; history and definition, 456, 457; irrigation effects, 345, 459, 460; national guidelines, 491, 492; pest effects resulting from, 109, 145, 460; postharvest advances, 465-469; postharvest processing management, 467-469; postharvest sampling procedures, 475-498; postharvest segregation of contaminated lots, 465, 466; postharvest storage, 466-467, 510; preharvest advances in elimination, 457-465; preharvest biological control, 460, 461; preharvest contamination factors, 456-460, 469; preharvest genetic resistance, 461-465; resistance screening, 45, 461-465; sampling, 475-480; soil temperature effects, 427, 428; trade effects, 565, 571, 572
- AG-1**, 170
- AG-2**, 170
- AG-4**, 170, 171
- AgraTech 127 (AT 127)**, 62, 363, 367, 430
- AgraTech VC-1 (AT VC-1)**, 363, 370, 431
- agroecosystem**, 98, 140, 194
- agronomy**, 316
- AH-7983**, 137
- AH-8048**, 137
- air:** forced, batch pilot plant roaster, 543; overspace (see warehouses)
- air column**, 467
- air flow:** in curing, 449, 450; in precleaning equipment, 522; in warehouses, 467, 505-507, 510, 516-520, 523, 524
- air humidity** (ambient), 449, 450, 518, 519
- air temperature:** expert systems data, 423, 450; heat stress-related, 331; pesticide movement effects, 252; warehouse, 518, 519
- alachlor (Lasso)**, 215, 221, 225-228, 233-235, 237, 246, 269, 274, 275, 277
- albinism**, 63
- alcohols**, 250, 532, 536; benzyl, 530; sugar, 538
- aldehydes**, 250, 532, 536
- aldicarb (Temik)**, 118, 127, 177, 245, 246, 271, 273, 277

- aldol condensation**, 546
- alfalfa**, 146, 288, 407
- alfalfa looper**, 146
- alginate**, 166, 167, 170
- alkaline salts**, 326
- alkaloidal pyrazine compound**, 541
- allelochemical**, 207
- allergenicity**, 60
- allergens**, 60
- allopolyploid**, 36
- allotetraploid**, 35, 58
- aluminum**: anhydrous silicate, 166; in pesticide leaching, 249-251; toxicity, 292, 315, 397
- amaranth, sandhill**, 224, 225
- Amaranthus* species**, 223, 226, 228, 230, 233
- American jointvetch**, 360
- amide**, 249, 253, 277
- amines**, 546
- amino acids**: ammonia-metabolized, 163; bacterial-produced protein content, 145; boron deficiency effects, 402, 404; cowpea trypsin-produced, 146; flavonoid content, 541, 546; mite toxin content, 182; nucleophilic displacement-related, 540; peanut protein content, 60; roasting effects, 61, 539; seed content affected by rhizobial strains, 294; seed maturity/size variations, 535, 538; sulfur-containing, 401, 532
- aminolysis**, 540
- α -amino nitrogen**, 537, 541, 543, 546
- aminosulfonyl**, 277
- ammonia**: aflatoxin control related, 469; amino acid deamination byproduct, 163; antibiosis product, 161; nitrogen-related, 286; toxic compound, 174
- ammonium**: acetate, 398; fertilizer, 405; sulfate, 400
- amphiploid**, 34, 36, 38
- amylase**, 146
- anabolism**, 286
- anaerobes**, 286
- anaerobic**, 287
- analysis** (of peanut volatiles), 530-532
- anatomy**: enzyme, 183; leaf, 10; peanut, 2-8
- Andru 93**, 62, 73, 76, 363, 366
- aneuploid**, 57, 58
- anilides**, 249, 253
- anion exchange**, 401
- annual peanut species**: evolution, 31-38; germplasm maintenance, 29, 30; parental comparisons in breeding, 38; stigma morphology comparisons, 4, 5; taxonomic descriptions, 22, 23
- anoda, spurred**, 210, 222-225, 228, 230, 231, 233, 234, 236
- antagonism**: biological, 161-163, 165, 166-171, 173, 174, 177, 182; herbicide mixtures, 230
- antagonistic effect** (from phosphorus application on zinc uptake), 408
- anther**, 4, 58, 65, 79-81, 145
- anther culture**, 80
- anthesis**, 2, 4, 6
- antibiosis**, 105, 118, 136, 137, 161, 163, 173
- antibiotic**, 161-163, 172-174; resistance, 289
- antibodies**, 185, 186, 192, 193
- antioxidants**, 544, 545; endogenous nonenzymatic, 544
- ants**, 105, 108, 109, 113, 119; fire, 105, 113; oriental army, 107, 108
- AOAC Method**, see aflatoxin
- aphids**, 121, 125, 136, 137, 142; groundnut hopper, 107, 108, 121, 136, 137, 143
- aquifer**, 97
- arachin**, 60, 538, 541
- Arbrook**, 47
- Arctiid larvae**, 102
- area harvested**, 534-561
- Argentine**, 39, 569
- armyworm**, 142; African, 101; beet, 101; fall, 101, 105, 128, 141-143
- aroma**: compositional change, 59; cultivar comparisons, 364; roasting effects, 61; a sensory category, 529, 530
- aromagram**, 532, 544
- arsenic**, 253
- arthropods**: beneficial, 97, 98, 103, 113, 118, 135; intracellular feeding pests, 120-140; soil-inhabiting pests, 101, 106-120, 141, 143
- ascovirus**, 104
- aspergillosis**, 461

Aspergillus crown rot, 430
 asset, fixed, 434
 atmospheric pressure, 249
 atrazine, 246, 247, 253, 255, 256
 attractant (of insects), 112, 141
 AU-PNUTS, 441, 442
 Auramine O, 5
 autopoloid, 38
 autotrophs, 286
 autoxidation, 536, 544, 545
 auxins, 38, 82

B

'B' genome, 36
 backcross, 39, 62, 67
 bacteria: antibiotic-producing, 162;
 biocontrol use, 104, 108, 171-173, 177;
 chitinolytic, 165; gram-negative, 171;
 nitrogen fixers, 286-288, 290, 294, 296,
 297, 325; population change, 162, 181;
 physiology, 161; in soils, 114, 145, 169;
 spore-forming, 171; temperature
 comparisons on growth, 179; in
 transgenic plants, 182; see also *Bacillus*
 species
 bacteroid, 291
 baculoviruses, 96, 145, 146
 bahiagrass, 360
 barley yellow dwarf virus, see viruses
 (types)
 Basse, 62
 bats, 109
 beans, 166, 167, 170, 171, 189, 287, 288,
 291; faba, 288, 291, 297; jack, 288
 beetles: carabids, 105, 108, 119; jewell,
 108, 143; lady, 105
 beggarweed, Florida, 209-214, 216-218,
 220, 222-228, 230, 231, 233, 234, 236,
 367, 375, 393
 belt screens, 467, 506, 513-515, 521
 belt separator, 468
 belt velocity, 508, 509
 benfenin (Balan), 215, 221, 222, 225, 269,
 270, 274, 275
 benomyl (Benlate), 135, 161, 166, 173,
 271
 bentazon (Basagran), 215, 221, 223, 229-
 231, 233-235, 237, 269, 270, 277
 bentonite clay, 469
 benzaldehyde, 530
 benzenecetaldehyde, 540, 541
 benzenes, substituted, 532
 benzofurans, 532
 benzylaminopurine (BAP), 79, 82
 bermudagrass: common, 210, 221, 225,
 229, 235; species, 229, 236
 betazon+acifluorfen (Storm), 269
 BF method, see aflatoxin
 biannual peanut species, 23
 bicarbonate, 326
 bins, 434, 449, 501, 503, 504; design, 504;
 grain, 434; metal, 501, 503
 biochemical: change, 500; reaction, 547
 biochemistry process, 533
 biocontrol agents: in insect control, 160,
 161, 165, 167, 170, 173-175; in weed
 control, 237
 biological: degradation, 255, 256; process,
 536
 biological control management:
 diseases, 160-194; insects, 95-147;
 mycotoxins, 460, 461, 470; weeds, 219,
 220
 biological nitrogen fixation, see nitrogen
 (fixation)
 biomass production, 214, 333, 336, 341
 biomolecule oxidation, 545
 biopesticide, 170
 biorational control, 139
 biosynthesis, 161, 162, 174, 175
 biosystematics, 34, 35
 biotechnology: for diseases, 172-176,
 181-185; for insects, 95, 96; for viruses,
 185-194; see also culture and transfor-
 mation
 biotic: factor, 120; process, 255; stress, 55,
 56, 71, 74, 140
 bipyridyl, 256
 birds, 108, 109, 500, 506, 516, 524
 bivalent, 34-37, 58
 BL-8, 211
 BL-10, 211
 blanching, 61, 62, 76, 366-368, 456, 468,
 470
 blight, southern, 166-168, 217, 354, 358,
 360, 373
 bollworm, Old World, 101
 Bonga, 109

Borax, 402, 403
borer, lesser cornstalk, 106-119, 142, 143, 146, 430, 439, 460
boron: application, 401-404; deficiency, 401-403; fertilization, 402, 403; nutrition, 404; pod uptake of, 327; stress, 334; toxicity, 403, 404
bradyrhizobia, 9, 24, 287, 289-297
bran (as a biocontrol culturing agent), 166, 167
branching pattern, 1, 6, 9, 15, 66, 77, 364
breeding: nurseries, 65, 71, 74; procedures/methods, 61-70
bristly starbur, 210-212, 223-226, 230, 231, 233, 234
browning polymers, 539
Bt-toxin, 96 (see also *Bacillus thuringiensis*)
bucket configuration, 509
bud necrosis (BNV), see viruses (types)
bugs, 121, 127; anthocoreid, 127; big-eyed, 105, 127; lygaeid, 121, 123
bulk handling, 524
bunch-type peanuts, 328, 371, 374
buprestid, 108
burgherkin, 210, 225, 228
 γ -**butyrolactone**, 530
buying points, 465, 466, 476, 478, 481, 500, 515

C

calcium: biological nitrogen fixation influence, 292; deficiency, 384-386, 388, 389, 391; drought effects, 331, 442, efficiency; 387-389; fertility needs, 383-394, 398-400, 406, 409, 444; mite damage relations, 136; nutritional stress effects, 334; physiological effects, 325, 327, 328; seed content, 369
calcium carbonate, 393, 397, 405
calcium oxide, 292
calcium sulfate, 391
calcium:boron ratio, 403
calcium:magnesium ratio, 386
calcium:zinc ratio, 401, 409
calibration, 304, 426, 440
calmodulin, 175
calyx, 2-4, 23, 145

CaMV 35S (promoter), 83, 184
canopy, crop: fungicide application effects, 165; insect relations, 100-103, 114, 124, 138, 373; pod yield influence, 70, 72, 316, 337, 346; temperature effects, 113, 135, 429, 458
canopy, weed: expert system data, 423, 439, 440, 444; herbicide effects, 214; light attenuation, 209, 211; N_2 fixation influence, 326; pesticide application relations, 267, 268; photosynthesis relations, 341; radiation use efficiency effects, 322; resource capture effects, 319-321; respiration influence, 324; row spacing associations, 216, 374-376; transpiration relations, 310; varietal differences, 366; water effects, 315; weed cultivation associations, 217, 223
cantharid larvae, 119
capillary movement, 253, 326
caramelization, 539
carbamates, 249, 256, 277
carbaryl (Sevin), 271
carbofuran (Furadan), 118, 271, 277
carbohydrates: biological nitrogen fixation-related, 286, 288, 289; industrial standard, 62; insect damage effects, 111, 124, 136; mutational changes, 77; organic matter content, 250; peanut seed contents, 8, 54, 60; pod filling requirements, 330; quality associations, 532, 535, 538, 539, 541, 543, 546, 547; respiration effects, 308; roasting reactions, 61; stress effects, 122, 546; turnover, 538
carbon: from amino acids, 163; CO_2 uptake, 100; competition for, 161; curing effects, 538; gibberellic acid effects, 314; nitrogen fixation affects, 326; nutrient supply associations, 329, 330; nutritional stress effects, 334; organic matter content, 250; pesticide weight:soil organic carbon ratio, 267; phenology effects, 318, 319, 331; plant growth effects, 323-325; water transpiration associations, 302
carbon atom, 539
carbon dioxide, 539, 543; atmospheric (effects on plant), 321

- carbon disulfide**, 532, 541
carbon exchange rate (as affected by insects), 100
carbonyl compounds, 546
carbonyls, 539, 540, 545, 546
carbonyl sulfide, 532
carboxin (Vitavax), 271
carcinogen, 456
carotenoids, 536, 545
carpetweed, 210
carphophore, 6
carriers, refrigerated, 524
castorbean, 360
caterpillars: hairy, 101; tobacco, 101, 143; velvetbean, 101, 105
cation exchange capacity, 249, 400
catwalk, 504, 507, 508, 517
caustic reagents, 537
cDNA, see DNA
cell division, 39
cellulase, 173
center of diversity, 15, 16, 23, 34
center of origin, 15, 17, 18, 21, 22
centromere, 33
certified seed, see seed (certified)
chalaza, 5
chemical composition: cultivar comparisons, 369; in peanuts, 40; quality associations, 533; rhizobial strain affects, 294
chemicals: control, 144, 160, 169, 216; decomposition, 255; movement, 251, 253, 256-258, 261; nonionic, 248; organic, 245, 248, 252; organophosphorus, 117; residue, 437, 442; skip-row culture needs, 376; subsidy program reductions, 570; spills, 257; testing, 465, 466; trade influences, 571, 572
chiasmata frequency, 35
chickpea, 288
Chico, 309
chitin, 162, 165
chitinase, 84, 162, 164, 174, 182, 183
chloramben, 215, 221, 230
chlorimuron (Classic), 209, 215, 222, 226, 227, 234, 269
chlorinated aliphatics, 256
chlorinated hydrocarbons, 277
chlorine, 404; deficiency, 404; toxicity, 404
chloroacetamide, 225, 226
chlorophyll, 5, 66, 67, 77, 122, 321, 326, 400, 404
chloroplast, 36
chloroprotham, 256
chlorosis: from calcium deficiency, 389; from insects, 122; from iron deficiency, 326, 334, 400, 405, 406; from toxicities, 403, 404, 407-409
chlorothalonil (Bravo), 168, 214, 272
chlorthrifos (Lorsban), 111, 117, 118, 271, 272
chlorsulfuron, 256
chromatographic profiling, 536
chromatography quantification, thin layer, 488
chromophore formation, 539
chromosomes: in *Arachis*, 32-35, 37, 39, 46, 57; antibiotic synthesis requirements, 174; doubling, 78; hybridomas instability, 193; pairing, 33, 35, 36; symbiotic gene location, 289; see also bivalent
chrysoptid, 136
chymotrypsin, 146
CIELAB L*, 534
citron melon, 225
classification: *A. hypogaea*, 15-17, 32, 361-362, 367, 370, 371; sections, 19-23, 32; species, 17-23
clay content, 119, 250, 255, 261, 432
CLER method, 529
clethodim, 215, 236
clover, 288
clump virus, see viruses (types)
CO₂ uptake, see carbon
coccinellids, 127, 136
cocklebur: common, 210, 211, 214, 216, 223-225, 230, 231; species, 220, 233
coffee senna, 210, 223-225, 228, 230, 231, 233, 234
colchicine, 37, 78
coleopteran, 108
collagen, 182
collagenase, 182, 183
collections, see germplasm
colloidal matter, 399
color sorting, 456, 467, 468, 470
color values, 534, 543
colorimetric, 403, 537

- COMAX**, 141, 419
- combining**: date, 424; effect on flavor, 533; effect on harvest loss, 213; loose-shelled seeds, 467
- combining ability** (genetic), 59, 63, 69, 123, 295, 296
- Comet**, 61, 62, 362, 363, 370-372
- competition**: biological control influence, 161, 173; biological nitrogen fixation strains, 294; interplant, 74, 75; markets, 567, 570; row spacing effects, 216; weed, 55; weed/crop effects from herbicides, 209, 214
- component line**, 71, 72, 75, 371
- compositional change**, 547
- computer**: programs, 444, 449; technology, 419
- conarachin**, 60, 543
- condensation**: in farmers stock warehouses, 506, 507, 516-519; in roasting, 539, 546; storage effects on aflatoxin, 466, 467; in transporting shelled peanuts, 524;
- conjugated dienes**, 546
- conjugation**, 255
- consumer**: acceptance, 61, 533; risk, 491-493, 497, 498
- consumption of peanut products**: candy, 366, 370; confectionery, 59, 341, 366; domestic, 573; fried, 572; oil and meal, 563, 565; peanut butter, 61, 362, 364, 370, 469, 532, 572-574; peanut flour, 547; peanut meal, 456, 538, 539; peanut milk, 547; peanut oil, 59, 523, 529, 538, 544, 564-566, 576; peanut paste, 487, 534, 537, 538, 548; snack food, 54, 59, 61
- contaminants**, 237, 571
- contamination**: fungal, 449; groundwater, 237, 245-278, 522; preharvest, 456, 460, 469 (see also aflatoxin)
- convection**: current, 517, 518; flow, 519
- conveyor**, 477, 501, 504, 506-511, 525; belt, 477, 525
- Coomassie blue**, 5
- copper**: 401, 402, 404-406, 545; chloride, 404; deficiency, 404
- copperleaf, hophornbeam**, 210, 224, 225, 228
- corduroy**, 10
- core collection**, 41, 42, 57, 465
- corn**, 45, 46, 95, 96, 100, 103, 105, 107, 108, 119, 120, 123, 128, 135, 141, 142, 146, 216, 224, 355, 356, 359, 360, 398, 429, 435, 436, 489; field, 220; sweet, 220
- corolla**, 3, 22, 23, 57, 145
- cortex**, 110, 188, 291
- cost effective**, 358, 376, 419, 451
- costs**: fixed, 434, 443; due to weeds, 207
- cotton**, 96-98, 137, 141, 145, 170, 216, 220, 224, 236, 356, 359, 360, 398, 404, 419
- cottonseed**, 489
- cotyledon**, 8, 80-82, 145, 188, 189, 402
- cotyledonary stage**, 39, 78
- cowpea**, 146, 185, 287, 288, 291-293, 295, 296, 325, 384, 547
- cowpea mild mottle**, see viruses (types)
- crabgrass**: large, 209, 210, 212, 214, 224, 229, 230, 236; southern, 210, 236; species, 209, 210, 224, 225, 229, 230
- CROPGRO**, 341-343, 347
- crop**: injury, 223, 253, 432; management, 421-432; oil, 229, 230; physiology, 140, 302, 303, 338; stands, 35, 75, 357, 373, 444; value, 355, 376; yield, 207, 354, 359, 360, 433
- cropping systems**, 359-361
- crop rotation**: as a cropping system, 359-361; disease relations, 165; expert system data, 422, 424, 432-435, 439-441, 444, 446; liming relations, 392; nematode relations, 176, 177; quality relations, 424; yield relations, 425
- cross-compatibility**, 35, 38
- crosses**, see hybrids
- cross-incompatibility**, 38
- cross-pollination**, 4, 29, 64, 71
- croton**: species, 225; tropic, 210, 222, 224, 225, 228, 231, 233, 235, 236; woolly, 225
- crowfootgrass**, 210, 225
- crownbeard**, 225
- crownrot seedling disease**, 439
- crushed peanut**, 564, 565
- cucumber**, 161, 170
- cucumber mosaic virus**, see viruses (types)
- cultivar**: 55-437 (cultivar), 334; development, 54, 57, 61-76; improvement, 34, 41, 42, 46, 54, 55, 76; release, 71, 75, 76, 363-371; selection,

216, 217
cultivator, rolling, 355
cultural practices, 215-220, 354-361;
 expert system data, 440, 443-445;
 limiting pests, 126, 135, 176; reducing
 weeds, 215
culture: anther, 58, 79, 80; embryo, 78,
 79; media, 8, 79, 82; ovary, 79, 80;
 protoplast, 80, 81; suspension, 80, 81;
 tissue, 80-83
curing: air-roasted, 540; bulk, 533; high
 temperature, 529, 535-537; improper,
 536; process, 450, 533, 536, 545; quality
 effects, 536-538; slow, 536; temperature,
 536, 537
curly-leaf, 58
cutworm, granulate, 101
cyanobacteria, 286
Cylindrocladium black rot (CBR), 42,
 43, 46, 169, 170, 363, 368, 395, 429
cyprus, 405
cytokinin, 38, 82
cytological analyses, 35-37, 40
cytoplasmic effects, 38, 63, 64
cytosol, 193

D

2,4-D, 82, 256
2,4-DB (Butyrac), 200, 209, 215, 221,
 223, 230, 231, 233-235, 269, 270
D-galactose, 163
D-glucose, 163
damping-off, 167, 170
data bases, 24, 41, 57, 142, 246, 421-432,
 444, 445
day length, 30, 38
debt repayment, 434
debt:asset ratio, 444
decadienals, 546
decarboxylation, 256
decumbent, 22, 23, 366, 368
defoliation: detection, 142; from insects/
 diseases, 77, 100-103, 105, 106, 336,
 373; nitrogen fixation effects, 292;
 physiological effects, 100, 101, 313, 336;
 yield effects, 102, 103, 106
defoliators, 100-103, 105
degradative process, 536
dehalogenation, 255, 256
dehiscence, 65
demethylation, 255
**densitometric quantification tech-
 nique**, 488
density separator, 521
depreciation, 434
detoxification, 469
diacylglycerols, 544
diallel crosses, 63, 64, 68, 70, 295
diazanone (Spectracide), 271
dibromide, 177, 245
dibromochloropropane (DBCP), 177
1,3-dichloropropene (Telone II), 177,
 273
**1,3-dichloropropene+chloropicrin
 (Telone C-17)**, 273
dichlorvos, 520
dicot, 191
2,5-diethylpyrazine, 538
diethylsulfide, 532, 541
digging: date, 369, 377, 378; loss, 427, 440
***Digitaria* species**, 225, 236
dimethyldisulfide, 532, 541
dimethylethylpyrazine, 538, 540
dimethylpyrazine, 538, 540, 541
dinitroanilines, 221, 222, 225, 226, 228,
 235, 256
dinitrogen, 287, 296
dinitrogenase, 286, 287
dinoseb, 215, 221, 222, 228, 235, 237, 239
diphenylethers, 235, 256
diploid, 31-36, 38-40, 46, 143
Diplura larvae, 119
disaccharide, 289
disease: advisory use, 430, 439, 444, 445;
 antibiotic use, 162, 163; biological/
 biotechnological control and advances,
 160-194, 219-220; cultural practice
 relations, 358-360, 377, 378, 388, 389;
 foliar, 164, 165; fungal pathogens, 135,
 160-176, 220; germplasm exchange
 relations, 26, 31; leaf anatomy relations,
 10; molecular biology use, 172-176, 181-
 188; mycoparasite use, 163, 164;
 parasitism on diseases, 163, 164, 166-
 171, 173, 174; pest/nematode relations,
 105, 112, 117, 120, 121, 176-184;
 planting date relations, 372, 373;
 pressure, 448; resistance, 8, 11, 41-46,

- 56, 164, 336; resistant cultivars, 363, 365, 366, 369-371; resource capture relations, 336; seeding rate and plant spacing relations, 373; soilborne, 429; soil-borne fungal pathogens, 165-172; suppressive soil relations, 180, 181; transformation and regeneration use, 188-194; turkey X, 456; viral, 125, 136, 138, 184-194; weed relations, 213, 214, 217-219; see also individual diseases and viruses (types)
- disk bedder**, 355
- dissipation** (chemical pathways), 252, 253, 255
- dissociated hydroxyl function**, 540
- disulfoton (Di-Syston)**, 271
- diurnal variation**, 307
- diversity**: *Arachis*, 11, 14; center of, 15, 16, 23, 34; in defoliator enemies, 103; genetic, 63; herbicide reduction, 95; increasing among cultivars, 62, 363, 367; recurrent selection incorporation, 68; resistance in germplasm collections, 465; in rhizobial groupings, 288; seed, 24; within lines, 72
- Dixie Giant**, 14, 62
- Dixie Spanish**, 119
- DNA**: base ratio (rhizobial studies), 288; binding proteins (nuclear), 183; cDNA, 186; chloroplast studies, 36; HIV-1 proviral, 193; hybridization (rhizobial), 288, 293; introduction, 83; markers, 38, 83, 84; *Pasteuria* isolate differences, 181; PCRs, 36, 137, 175, 186, 187; probes, 186; RAPD analyses, 33, 37, 175; recombinant, 96, 144-146, 465, 470; replicating segments, 186; RFLPs, 33, 35-37, 57; rhizobial and *Agrobacterium* composition similarities, 288; transcapsidation of challenge virus, 191; transformation, 83, 84, 188, 190; vectors, 83, 84; viruses, 146
- DNases**, 184
- dolomite**, 393, 394 (see also liming)
- domestication**, 32, 35-37
- dormancy**, 30, 32, 37, 39, 361; breaking, 67; inheritance studies, 64; quality associations, 500
- double roofing**, see warehouses
- DRASTIC**, 258, 259
- drought**: aflatoxin effects, 457-459; biological control relations, 460; biomass effects, 332, 340; breeding decision effects, 338; cultivar response, 330, 339; flavor relations, 528, 545-547; floral growth effects, 315, 332, 340; fungal treatment effects during, 171; genetic variation, 333; insect relations, 107, 116, 460; nutrient stress associations, 331-334, 385, 387; paraheliotropism effects, 309, 321, 331, 332; photosynthesis effects, 124, 332, 333; preharvest contamination relations, 457-460, 462-465; radiation use efficiency effects, 322, 331, 333; root effects, 324, 329, 330, 340; simulation modelling use, 140, 302, 331, 333, 337-347, 419-451; soil temperature measurements to detect, 427, 429; soil type relationships, 431; specific leaf weight effects, 341, 343; stress, 322, 324, 331-333, 431, 457, 459, 469; temperature stress associations, 333, 334, 339; tolerance, 55, 56, 74, 322, 333, 334, 338, 339, 464; water use efficiency effects, 342; yield effects, 332, 561, 567
- dry matter**: accumulation, 397, 407; air curing effect on decomposition, 449; assimilated from defoliation, 336; calcium:zinc ratio as a tool for predicting yield, 409; chlorine effect on production, 404; conversion of radiation to, 321; conversion of resource capture to, 319; manganese effect on accumulation, 407; nutrients found in peanut leaf, 392; production, 70, 404
- drying**: costs, 450; facilities, 449, 450; operation, 449; postharvest, 59; time, 449; trailer, 511, 512
- dryland peanut production**, 442
- DRYNUT**, 420, 422-424, 442-445, 449, 451
- dwarfism**, 66, 67, 68

E

- Early Bunch**, 72, 105, 365, 366, 386
- early generation selection**, 65, 72, 395
- Early Runner**, 118, 119, 329, 364, 367

- earwigs**, 105, 108, 113, 114; ring-legged, 108; striped, 113, 114
- earworm, corn**, 45, 46, 95, 100-102, 105, 123, 141, 276, 358
- EC 36892**, 136, 137
- eclipta**, 210, 223-225, 228, 230, 233, 236
- economic**: loss, 121, 187, 207, 208, 443; returns, 217, 235, 420-422, 436-438, 440, 442; risk, 442; value, 359
- ecosystem**, 95, 98, 172
- ectoparasitic**, 177, 184
- edaphic conditions**: insects, 107; pesticide movement, 250
- edible peanut**, 461, 467, 565, 570, 571, 573-576
- edible quality**, 61, 421, 449
- EG4961**, 120
- ejectors** (for sorting), 522
- electron donors**, 539, 546
- electronic sorting**, 522
- elm**, 287
- embryo**: axes, 82, 83; cotyledonary stage, 39, 78; culture, 78, 79; development, 38, 39, 79; formation, 80, 81; globular stage, 4, 38, 39, 79; heart stage, 39, 78; hybrid, 39, 78, 79; proembryo stage, 5, 6; recovery, 39; rescue, 38, 40, 78; sac, 5, 6, 79; somatic, 81-83, 188; zygotic, 82, 190
- embryogenesis**, 80, 82, 83
- embryogenic cultures**, 80-84, 190
- encapsulation**, 79
- encyrtid**, 136
- endodermis**, 291
- endoparasite**, 176, 182, 184
- endophyte**, 114
- endosperm**, 5, 311
- δ -**endotoxin**, 96, 145, 146
- energy consumption**, 449, 522
- entomology**, 95, 96, 140, 142-144, 420, 436
- environmental conditions**: affecting insects/pests, 118, 135, 460; affecting interspecific hybrid production, 38; affecting nitrogen fixation, 293; affecting weed management decisions, 209, 212, 220; cultural practice interactions, 354; fungicide spray application effects, 430; simulation model use, 303, 372, 430, 444, 448
- environmental effect**, 303, 311, 318
- environmental factors**: biological nitrogen fixation effects, 292; crop development effects, 311, 312; flavor effects, 533; growth relations, 81, 316; modifying for pests, 97; phenology effects, 317; respiration relations, 308; simulation modelling, 31
- environmental impacts**, 160, 238, 423, 426, 437, 522
- environmental pollution**, 97, 140
- environmental quality**, 96, 97
- environmental stress**, 293, 334, 372
- environmental variation**, 68, 534
- enzyme**: from antagonists, 162; in antibiosis, 161; bacteria-produced, 172; biocontrol agents, 174; biological degradation effects, 256; biological nitrogen fixation dependence, 286, 287; increasing cellular metabolism, 162; chlorothalonil production, 168; digestive, 146; ELISA, 185; gene cloning use, 173; glutamate oxaloacetate transaminase patterns, 64; herbicide target site, 237; in oxidizing membrane and storage lipids, 545; mycoparasitic ability involvement, 163; organic matter component, 250; pesticide alteration, 255; in photosynthesis, 309; transgenics design use, 183
- epicotyl**, 8
- epidemiology**, 126, 161, 165, 336
- epidermis**, 8, 100, 102, 123, 188
- epigaeic**, 107
- EPTC**, 215
- esfenvalerate (Assana)**, 271
- esters**, 250, 256
- ethalfuralin (Sonalan)**, 215, 222, 225, 269, 270, 274, 275
- ethanol**, 534, 541
- ethoprop (Mocap)**, 177, 271, 272, 277
- ethrel**, 67
- 2-ethyl-3,6-dimethylpyrazine**, 538
- ethylene**, 39, 177, 245
- ethylene dibromide (EDB)**, 177
- 2-ethyl-5-methylpyrazine**, 538
- ethylpyrazine**, 538
- etiology**, 389
- eukaryotic**, 290
- European Community (EC) policy**, 136, 564, 566, 567, 569, 571

evapotranspiration, 114, 254, 344
evolution: *A. hypogaea*, 14-17, 32, 35-38;
 genomes, 35, 36; polyploidy, 143;
 species, 17-23, 31-35
exchange rate, 571
EXNUT, 420, 422-424, 437-443, 449, 451
exocarp, 109
expert systems (ES), 419-450; DRYNUT,
 442-445; EXNUT, 437-442; HARV-
 PRO, 448-444; MNUT, 445-448;
 PECMAN, 449-450; PNTPLAN, 432-
 435; TILNUT, 435-437; see also indi-
 vidual listings
explants, 79-82, 84, 188-190
exploration, see germplasm
exporting countries, 565-569
exports, 25, 563, 565-568, 572, 575
external closed inlet device (ECID),
 532
eyespot, see viruses (types)

F

F230, 367
F334, 367, 370
F8143B, 211
faba bean, see beans (faba)
Faizpur 1-5, 137
fallow, 179, 376, 422
fan capacity, 516
farmers stock peanuts: aflatoxin testing,
 465, 466, 468, 478-483, 486, 487, 494,
 497; cultivar comparisons, 365; grades,
 428; handling equipment, 507-521;
 import levels, 573, 575; refrigeration of
 shelled stock, 523, 524; research needs,
 525; shelling advances, 521-522;
 simulation model predictions, 446-448,
 450; warehouse insect control, 519-521;
 warehouse storage, 500-507
fat, saturated, 78
fatty acids: composition, 46, 59, 64, 67,
 78, 294, 377; free, 544, 545; long-chain,
 78; oleic:linoleic, 366; profile, 545;
 unsaturated, 545, 546
fenamiphos (Nemacur), 177, 273, 277
fenoxaprop (Bugle), 215, 221, 229, 236,
 269, 270, 274, 275
fensulfothion, 272

fertility practices, 383-410, 445
fertilization, nutrition: expert system,
 440; peanut needs, 383-410; protein
 effects, 547
fertilization, reproductive: barriers to
 cross-compatibility, 38; embryo
 development effects, 38, 39; fruiting
 effects, 6; postfertilization changes in
 peanut, 6; time in species crosses, 4;
 time starch grains disappearance, 5;
 triggering ovular tissue degeneration, 6
fertilizer: biological nitrogen fixation
 comparisons, 286; expert system data,
 141, 444; peanut recommendations, 359,
 383-410; producing country policies,
 570; state law on application practices,
 248
flame ionization, 532
flavor: acceptance, 538; aftertaste, 529;
 analyses, 529-533; baking characteristic,
 547; burnt, 539; compositional change,
 59-61; compounds affecting, 539, 540,
 543-547; cultivar comparisons, 62, 364,
 367, 368, 371; curing effects, 449, 450,
 536-538; degree of roast, 532, 540;
 evaluation, 529; fruity attribute, 529,
 534, 537; handling and composition
 comparisons, 533-547; marketing
 advances, 528-548; maturity effects, 535,
 536; moisture effects, 538, 539; new
 product comparisons, 547, 548; off-
 flavor, 437, 442, 528, 532, 536-547;
 profile, 529, 531, 538, 369; quality, 528-
 548; roasted peanut, 528-546; storage
 effects, 500, 523-538; sweet attribute,
 533; volatiles, 532
flax, 161
floral axes, 3, 9, 10, 16
Florigiant, 17, 61, 62, 71, 72, 118-120,
 190, 330, 362, 367-370, 373-376, 386,
 430, 534
Florigraze, 47, 133
Florispan, 364, 365
Florunner, 17, 39, 61, 62, 71, 72, 110, 118,
 119, 128, 139, 140, 190, 216, 332, 342,
 343, 346, 362-367, 371-373, 375, 376,
 386-390, 395, 404, 430, 462, 464, 505,
 531, 534, 535, 537, 540, 543-545, 547
flower, 1-5
flowering: drought effects, 332, 372; in

- fastigiata* types, 361; genetic variance effects, 73; nutrient effects, 315, 393, 397, 402, 409; photoperiod effects, 314, 315; related to pests and diseases, 102, 103, 126, 128, 112; related to *in vitro* culture, 80; related to maturity, 73, 535; related to morphological change, 77; related to pod setting, 316; temperature effects, 306, 313, 437; in wild species, 30, 31
- fly, 123; tachinid, 105, 119
- foliar applications:** nutrients, 395, 397, 404, 408, 409; pesticides, 267, 268, 276
- foliar feeding insects,** see insects
- foliar injury,** 214, 223, 231
- foliar pathogens,** see pathogens
- fonofos (Dyfonate),** 117, 271, 272
- food use, domestic,** 563 (see also consumption of peanut products)
- forage uses of peanut species,** 2, 47
- forecasting with pheromones,** 141, 142
- foreign material,** 479, 481, 483; aflatoxin effects, 467, 475; expert system data, 437, 442; farmers stock peanut associations, 500; removal of with ejectors, 522; sampling size criteria in shelling plants, 521; soil affects, 354, 432; THRUS weighing associations, 515; warehouse design influence, 506
- formaldehyde,** 469
- formalin,** 180
- fossil fuels,** 401
- foxtail,** 210
- freeze damage,** 535, 537
- fructose,** 538, 539, 547
- fruit initiation,** 424, 426, 439, 440, 443, 445
- fruiting:** period, 427, 429, 437, 438, 443; zone, 385, 439
- fumigants,** 177, 249, 268, 274, 277, 520
- fumigation,** 165, 167, 169, 170, 506
- funding, private sector,** 456
- fungal contamination,** see contamination
- fungal pathogens,** see pathogens
- fungal species,** 457
- fungi:** aflatoxin-producing, 42, 457, 461, 468, 479; biocontrol regulators, 104, 108, 111, 119, 135, 136, 162, 165-172, 177, 180, 220; chemical control, 167; entomophagous, 114; growth, 168, 458; parasitism of, 163; invasion, 457, 458; producing toxins, 456; *Rhizoctonia*, 170; resistance, 84; seed stage development effects, 458, 469; soil-borne (affecting quality and yield), 176
- fungicide applications,** 164, 167, 214, 402, 420, 430, 440, 442
- fungicides,** 126, 135, 164, 166, 168, 171, 220, 233, 271, 276, 277, 400, 401, 404, 430, 440, 442
- furans,** 532
- furovirus,** 188

G

- GA 207,** 14
- β -galactosidase,** 175
- galling,** 176, 180
- Camasina,** 119
- gas chromatography,** 530, 532, 540; volatiles, 532
- gas composition,** 538
- gas environments,** 543
- gases:** inert, 540; propane, 450; sweep, 540
- GBPRS-15,** 137
- gel-strength,** 546
- gene:** cloning, 174, 187, 188; effects, 58, 63, 68; isolation, 57; pool, 40, 47; transfer, 82, 84, 96
- General Agreement on Tariffs and Trade (GATT) Trade Agreements,** 238, 572-576
- genetic:** base, 60, 62, 63, 69; diversity, 24, 34, 63, 72, 363, 365, 367; drift, 25; effects, 315, 395; engineering, 140, 144-147, 174, 175; gain, 76, 77; manipulation, 60, 172, 293; mixtures, 71, 72; variability, 33, 34, 54, 55, 57-61, 68-75, 77, 82, 123, 301, 315, 332, 333, 339, 461, 465; vulnerability, 14
- genotype x environment interaction,** 66, 70-75
- genotype specificity,** 81, 295, 296
- geocarposphere,** 114, 172, 426, 428-430, 437, 438, 446, 460
- geographic:** classification of markets, 555; distribution of species, 21-26

- Georgia Browne**, 62, 128, 363, 366
Georgia Red, 363, 371
Georgia Runner, 62, 363, 365, 366, 430
geotropism, 6, 79
germination: related to fungi, 135, 162, 168, 177, 182; seed, 8, 9, 25, 30, 31, 39, 61, 67, 73, 74, 126, 163, 217-219, 306-308, 313, 314, 317, 318, 357, 372, 383, 384, 386, 387, 389, 400, 407, 423, 424, 427, 428, 442-444, 446, 448, 449, 500
germplasm: collections, 18, 23-31, 34, 41, 45, 55, 56, 465; enhancement, 54-84; evaluation, 40-47; exchange, 25-27, 30, 31; exploration, 23-26, 28, 55; maintenance, 14, 25, 27, 29-31, 40, 56, 57; nurseries, 28, 29; preservation, 25; releases, 42, 45, 46; resources, 14-47; see also core collection
gibberellic acid, 38, 309, 314
gibbsite, 251
Giemsa C, 33
GK-3, 386, 390, 430
GK 7, 362, 363, 367, 388, 430
GK-53, 136
glass capillary column, 532
GLEAMS, 257
 β -glucan, 163
glucanase, 84, 162, 164, 174, 182
glucose, 163, 538, 539, 543, 547
 β -glucuronidase, 83, 188
glutamate oxaloacetate transaminase, 64
GOES, 142
goethite, 251
Goldin I, 365
goosegrass, 209, 210, 220, 224, 225
GP-NC 343, 105, 109, 120, 123, 136, 140
grade: analysis, 480; factor, 360, 475, 478, 480-484; sample, 483; standard, 480
grading milled samples, 483
grain legume, 81, 291, 297
grain sorghum, 355, 356, 359, 360, 398
graminicides, 219, 221, 229, 230, 235, 236
grass crops, 359, 360
grasses: 376; annual, 209, 213, 221, 225, 226, 228, 229, 235, 274; perennial, 221, 229
gravity deck design, 521
gravity separation, 521
gravity table, 467, 468
green gram, 288
green/mosaic, see viruses (types)
GRIN, 41, 57
gross return, 214, 355, 371, 374
groundnut rosette, see viruses (types)
groundwater: advisories, 246; contamination/pollution, 237, 245-278, 522; protection, 246-248, 253, 275, 278; quality, 245
growth: analysis, 77, 296, 302, 335, 337, 338; habit, 9, 15, 31, 35, 37, 55, 72, 184, 224, 295, 361, 364, 366-371, 374, 376; rate, 288, 303, 306, 307, 318-320, 325, 330, 375, 427; regulator, 79, 82, 171, 175, 189; stages, 311
grubs, white, 106-108
guar, 288, 384
gynophore, 6, 79, 110, 311, 385, 387, 390, 391, 426
gypsum, 327, 385, 386, 388-390, 392, 393, 399, 400, 444
- ## H
- haploid**, 58, 79, 80
harvest: cost, 208; date, 73, 369, 372, 377, 378, 444; dormancy effects, 39; equipment, 213; germplasm preservation, 25, 31; of hybrids, 29; index, 66, 330, 341, 343; loss, 207, 213, 432, 437, 442; mutation effects, 35, 73; pod effects, 7, 312, 364; related to insects and diseases, 95, 107, 109, 112, 127, 168, 214, 217, 373; related to maturity, 70, 311; related to run-off water, 253; related to seed composition, 59, 60; related to vegetative characteristics, 37, 70; related to weeds, 209, 212, 234; season, 450; soil effects, 219, 275; tillage effects, 219; time relations to planting, 67
harvesting efficiency, 207, 211, 213, 219
HARVPRO, 420, 422-424, 448, 449, 451
hay yield, 405
head-space volatiles, 536, 537
health advisory, see advisories
health problem, 456
heat: transfer, 524; treatment, 543
hedonic score, 538

- hematite**, 251
hemibiotroph, 168
hepatotoxicity, 469
2-heptanone, 538
heptadienals, 546
HERB, 444
herbicide application time: at cracking, 222, 226, 228, 229, 235, 236, 269, 270, 276; layby, 269, 270; post-directed, 267; postemergence, 207, 209, 214, 217, 219, 222, 227-236, 255, 274-277; post-over-top, 267; postplant-incorporated, 221; pre-emergence, 217, 222, 226, 228, 229, 231, 233, 236, 255, 267, 269, 270, 274, 276; preplant, 221; preplant incorporated, 217, 222, 226, 227, 229, 231, 235, 267, 269, 270, 274, 276, 431
herbicide/pesticide half-life, 249, 259, 268, 277
herbicides: biological control comparisons, 219, 220; C-labelled, 234; computer software use, 274, 275, 439, 440, 444; contact, 223; cultivar selection, 216, 217; cultivation/rotation effects, 217, 359; development, 237; economics, 308, 234, 235; environmental effects, 235-238, 246; foliar-applied, 230-233; injury, 124, 214, 432, 439; insect interactions, 214; registrations, 221-233, 235; row spacing effects, 216; selection, 238, 444; soil-applied, 224-230, 267; soil movement, 253, 269, 270; tank mixes, 276, 277; technical descriptions, 215; tillage effects, 218, 219, 358; time comparisons, 209, 373; treatment, 209, 274; type comparisons, 276, 277; warehouse use, 521; see also chemicals
herbivore, 100, 143
heritability: broad-sense, 73, 533; high, 65, 67; low, 65, 70
heteroatomic compounds, 541
heterochromatic, 33
heterocycles, 532, 539, 544
heterocyclic condensation, 539
heterosis, 63
heterotrophs, 286
hexanal, 538, 546
hexaploid, 37, 39
hexose, 289
high performance liquid chromatography (HPLC), 187, 488, 489
"hollow heart", 401
holoprotein, 193
homology, 34, 145
homozygous, 64, 67, 68, 79
honeydew, 138
hormone, 38, 40
hornworm, tobacco, 146
horsenettle: Carolina, 210; robust, 210; species, 210-212, 216, 224, 225
host plant resistance, see resistance and plant resistance
hull scrape, 73, 377, 442, 449, 535, 547
humic acid, see acid
humic matter, 259-261, 264
humidity, 25, 38, 135, 226, 440, 449, 463, 464, 515, 523, 538, 540, 543, 546
humus, 250
Hunter L, 540
hybridization, 46, 69; artificial, 55, 56, 64, 65, 67, 69, 78; barriers, 38-40; interspecific, 2, 4, 36-40, 78; Northern, 190; somatic, 80; Southern, 84, 189, 190
hybrids: complex, 69; interspecific, 4, 34, 36-40, 42, 45, 57, 69; intra-specific, 8, 35, 63, 66-68
hydraulic lift, 570
hydrocolloid matrix, 544
hydrogen: 250; bonding, 249; boron, 401, 402; cyanide, 161; peroxide, 163, 174; sulfide, 532
hydrolysis, 255, 256
hydrolytic: reaction, 539; stabilization, 546
hydroperoxide, 546
hydrous oxides, 249-253
hygromycin, 189
hypanthium, 2, 3, 6, 32
hypersensitive response, 182
hypocotyl, 8, 9, 23, 32, 83, 109, 110, 113, 190

I

- IAA**, see acids
ICG 7758, 105
ICG 8322, 105
ICG 9219, 105
ICGS 11, 128

- ICGS 44**, 128
ICGS 86031, 128
ICGS 86707, 329
ICGV 86029, 128
ICGV 86030, 136
ICGV 86031, 105
imazethapyr (Pursuit), 215, 222, 225, 226, 228, 229, 233, 234, 236, 237, 269
imidazoles, nonvolatile polyhydroxy substituted, 539
imidazolinones, 222, 225, 228, 236
imine bridging, 546
immunoassays, 488, 489
immunoglobulin, 193
impatiens necrotic spot, see viruses (types)
import: policies, 571, 572; quota, 571, 572, 575
importers, 566
imports, 447, 565-567, 570, 571, 573-575
income: disposable, 447; farm, 359, 572
index selection, 69, 70
industry standard, 364, 367, 368, 534
inflorescence, 2, 3, 32, 316
inheritance, 57-59, 63, 64, 67, 73, 74; paternal, 64
inoculation, 125, 146, 185, 189, 287, 290, 291, 293, 295, 395, 461, 463
inoculum, 42, 161, 165-170, 172, 191, 291, 394
inositol, 538
in ovulo, 78, 79
insecticides: granular, 117, 118; pyrethroid, cyfluthen (Tempo), 521; systemic, 276
insecticides/miticides: applications, 96, 97, 111, 112, 117, 118, 124, 127, 135, 138, 271-273, 276, 277, 460; cost, 144; in groundwater, 245, 246; insect resistance to, 146, 147; restrictions, 519-521
insectivorous vertebrates, 109
insects: aflatoxin contamination effects, 460; biological control, 95-147, 164; computer models/databases, 140-143, 443, 445; cultivar resistance comparisons, 365, 370, 371; defoliation effects, 77, 100, 105, 336; drought interactions, 469; foliar-feeding, 99-106; genetic engineering, 84, 144-147, 182, 191; germplasm exchange effects, 25, 26; intracellular feeders, 120-140; management and changes, 96-100; migratory, 140, 142; parasites, 104, 115, 119, 120, 128, 136, 139; pathogens, 104, 120; pesticide breakdown effects, 255, 267; phytophagous, 144; predictors, 104, 105, 108, 113, 115, 119, 120, 127, 128, 136, 164; resistance studies, 2, 10, 40, 44-47, 58, 105, 106, 129-134, 143, 144, 336; soil-inhabiting, 106-120, storage/handling relationships, 466, 500, 505, 507, 516-521, 523, 524; tillage effects, 358; vectors, 125-127; weed interrelations, 207, 214, 219, 220
in-shell peanuts, 480, 483, 486, 487, 494, 522, 573, 574
Integrated Pest Management (IPM), see pests (management)
intercropping, 55, 74, 75, 126
interest payment, 434
intermating, 69
interspecific crossing, see hybridization
intersubspecific cross, 63, 66, 67
intrasow, 74, 373, 374; competition, 74
intrasubspecific cross, see hybrids
introgression, 36, 40, 55, 79, 533
in vitro culture: anthers, 79, 80; embryos, 39, 40, 78, 79; fungi, 9; general, 78-83; lab screening, 160, 162, 166, 169, 171, 461-463; nucleic acid synthesis, 186; ovules, 6; parasite, 181; protoplasts, 81; toxin production, 173; virus RNA cleavage, 193
in vivo, 38, 166, 171, 173, 194
iodine value, 366, 369, 371, 377, 538
ionization, 248, 262, 532
iprodione (Rovral), 272
iron: 60, 161, 173, 174, 249, 251, 287, 325, 326, 334, 397, 401, 404-406, 545; acetate, 405; chelate, 405, 406; chlorosis (see also chlorosis); 326, 405, 406; deficiency, 400, 405-407; efficiency, 406; ferrous, 406; polyflavonoid, 405; stress, 405; sulfide, 405
irrigation: pattern, 459; strategy, 437, 439, 442; subsurface, 463; system, 326, 361, 434, 437, 439, 440, 443, 459
2-isobutyl-3-methylpyrazine, 538
isodiametric cells, 8
isoflavonoid, 137

isomerization, 255
isothiocyanate, 169
isozyme, 33, 36-38, 57

J

jassids, groundnut, 121, 143
Jenkins Jumbo, 365, 367
jimsonweed, 210, 233
johnsongrass: 210, 221, 224, 225, 229;
 rhizome, 229, 230, 236; seedling, 236

K

Kadiri 3, 321
kanamycin, 83, 189
kaolinite, 250
karyotype, 32, 37
keel, 3
kernels: damaged, 481-483; extra large (ELK), 363, 365, 366, 368-370, 377, 378, 482, 483; fancy size, 365, 368-370, 376; jumbo, 363, 366, 424, 428, 448, 537; loose shelled (LSK), 475, 479, 481, 483, 484, 500, 510, 511, 513; No. 1, 366, 369, 448, 488, 537; other kernels (OK), 375, 481-483; sound mature (SMK), 73, 74, 360, 364, 366, 369, 370, 372, 375, 377, 378, 386, 388, 393, 404, 424, 428, 441, 481-483; sound splits (SS), 424, 428, 441, 481-483; sound whole, 522; splits, 424, 448-450, 482, 483, 511, 513, 522
ketal, 539
kinetin, 82
Kodiak, 171
krinkle leaf, 10, 58, 365

L

lacewings, 127
lactofen, 215, 236
lambsquarters, common, 210, 222, 224-226, 228, 230, 231, 233, 236
landplaster, 423 (see also gypsum)
LANDSAT, 142
landscape development with peanut species, 47

large-seeded cultivars, 16, 226, 341, 361, 367-370, 372, 378, 386-388, 390
leaching: nutrient, 391, 393, 396, 401, 404, 431, 432; pesticide, 227, 248-255, 259-275
leaf area, 70, 100, 102, 106, 124, 292, 296, 304, 320, 321, 326, 336, 339-341, 343, 375
leaf growth, 74, 220, 233, 234, 336, 337, 409
leafhoppers, 10, 45, 46, 120-123, 142, 143, 358; potato, 45, 121-123, 143, 358
leaf injury, 122
leafminers, groundnut, 100-103, 105, 106, 143
leaf spot, 65, 66, 69, 74, 75, 77, 78, 165, 166, 168, 336, 365, 373, 377, 407, 422, 430, 440, 441, 444; early, 42, 164, 165, 358, 420; late, 10, 41, 45, 46, 56, 57, 69, 164, 336, 420; management, 444
leaf spot control advisories, see advisories
leaf weight, 102, 292, 333, 336, 341
lectin, 146
leghemoglobin, 287
lentil, 288
lepidopterous insects, 100-106
lesser cornstalk borer, see borer
lettuce, 168
lexicon attributes, 530
liberalization, 576
light: capture, 320-322; ultraviolet, 255
lignins, 250
limestone, 391-393
liming, 393, 394, 399, 403, 407, 409, 410, 423, 440
linkage, 33, 57, 69, 294
linoleic acid, 8, 59, 67, 363, 365, 366, 368, 369, 544, 545
lipid bodies, 8
lipid oxidation, 538
lipids, 8, 59, 294, 538, 543-545
lipoxygenase activity, 543, 545, 546
loader, front end, 506, 509-511
loading equipment, 506
losses: in income, 207; in quality, 208; in yield, 208
luciferase, 175
lupines, 288
luteovirus, see viruses (types)

M

M 13, 105

magnesium: 383, 386, 389, 392-394, 399, 400, 406; deficiency, 393, 400; fertilization, 399; requirement, 394, 406

magnesium sulfate, 399

Maillard reactions, 532, 539, 541, 542, 546, 547

Makulu Red, 330

malathion, 271, 520

management strategy for production, 431, 441, 468

management systems, 99, 420, 421, 424, 450, 456

mancozeb (Dithane-M45), 272

mandarin, 188

manganese: 249, 251, 292, 401, 402, 406; application, 407; deficiency, 406, 407; level, 405-407; toxicity, 407

manganese sulfate, 406

manganese:iron ratio, 407

Marc I, 62, 73, 76, 363, 365, 366, 430

marker genes, 33, 38, 57, 84, 125 (see also DNA)

market: access, 572, 573; price, 214, 423, 569; share, 566-568; trends, 566; value, 345, 378

market types: botanical associations, 17; general, 14, 41, 61, 62, 361-363, 388, 533, 534, 543, 547; runners, 68, 73, 351, 356, 361-367, 388, 402, 537; spanish, 357, 361-363, 370, 371; stability, 71, 72; valencias, 73, 361-363, 371; virginias, 68, 76; 361-363, 367-370

marketing, 99, 420, 422-424, 445, 446, 448, 451, 465, 475, 476, 528, 571, 576; decision, 445; quota, 575; year, 573

markets for peanuts, 554-576

mass selection, 65, 66

maternal effect, 63, 64

maturity: early maturing types, 32, 55, 75, 363, 365, 368-370; of embryos, 39; general, 67, 72, 73; estimating, 72, 73, 377, 378, 423, 424, 535-537; inheritance, 73; late maturing types, 32, 365, 368; optimizing, 437, 439, 440; physiological associations, 55, 343, 543; sorting classes,

467, 468, 535, 536

maypop passionflower, 210, 225

McCubbin (cultivar), 321

meat content, 66, 377

mechanical damage, 500, 511

Mehlich 1, 386-391, 393, 394, 396-400, 406, 409, 410

Mehlich 3, 396, 398-400

meiosis, 34, 35

meristem, 6, 79, 183, 291

mesocarp, 111, 119, 377

mesophyll, 102, 122, 324

mesostigmatid mite, 120

metabolites, 162, 173, 174, 227, 248, 254-257, 456, 536, 538

metham sodium (Vapam), 167, 169, 177, 272, 273

meter, electronic (for volatile concentrations), 537

methanethiol, 532, 541

methanol, 541

methionine, 60, 408, 541

methomyl (Lannate), 271

2-methoxy-3-isopropylpyrazine, 530

methyl bromide, 29, 167, 170, 520

methyl isothiocyanate + 1,3-dichloropropene (Vorlex), 272, 273

methylbutanal, 540, 541

methylbutanol, 541

β -methyl-D-glucoside, 163

methylethylpyrazine, 541

2-methylfurfural, 538

methylpropanal, 536, 540, 541

methylpyrazine, 541

N-methylpyrrole, 540, 541

metolachlor (Dual), 215, 221, 225-228, 230, 237, 246, 269, 274, 275, 277

mice, 182

microarthropod, 103

microbial: control, 120; ecology, 161, 171, 172; growth, 162, 256, 500

microfauna, 256

microflora, 161, 162, 165, 256, 291, 462, 463; antagonistic, 463

miconutrient, 400, 401-410, 545

microorganisms, 119, 160-162, 164, 171, 172, 174, 175, 177, 207, 255

microprojectile bombardment, 83, 84, 190

microsporidia, 104, 114, 115

- microsporogenesis**, 4
microsymbiont, 291, 293
mill outturn, 368
millet, 323
milling, 368, 421, 449, 479, 480, 500, 546
millipedes, 107, 108
mineral: composition, 60; nutrition, 312, 318, 383
mirid, 128
mites, 103, 119, 120, 122, 128, 135, 136, 182; acarid, 119; spider, 136, 214, 276, 430; twospotted spider, 121, 122, 128, 135, 143
miticides, see insecticides
mitosis, 80
MNUT, 420, 422-424, 443, 445-449, 451
modelling, 301-347; applications of physiology, 337-347; discrete events, 316, 317; growth distribution, 330, 331; multiple factors, 317, 318; populations, 318, 319
moisture: accumulation, 466, 507; conditions, 393, 458, 460; content, 256, 432, 449, 450, 482, 500, 515, 518, 523, 525, 537, 538, 543, 544; excess, 467, 500, 506, 515; level, 378, 536
molasses, 166, 529
mold, 515, 518, 523, 524, 529; growth, 467; sooty, 138; see also whitemold
moldboard plowing, 218, 354, 355, 357, 393
molecular: biology, 161, 172, 176, 181, 182, 185, 188, 194; markers, 33, 38, 57, 84, 175; probes, 181; studies, 33, 36-38, 47, 55, 60, 161, 172-177, 181-183, 185, 188, 194, 249, 290, 291; weight, 538, 546
molybdenum, 286, 292, 401, 402, 407, 408
monoacylglycerols, 544
monocot, 191
monoculture, 95, 169, 171
monosaccharide, 289
montmorillonite, 250
morningglory: entireleaf, 210; ivyleaf, 210, 224, 225; pitted, 210, 220, 224, 225; smallflower, 210, 220, 223-225, 228, 230-234, 236; species, 220, 222-225, 230, 231, 233, 234, 236; tall, 210
morphogenetic type, 82
morphological change, 77, 290
morphological traits, 33, 35, 37, 40, 41, 69
morphology: embryo, 83; plant, 2, 4, 6, 33, 77, 296, 364; nematode, 179; nodule, 291
moth, 101, 102, 105, 112, 116, 118, 141, 142; diamondback, 147; Indian meal, 147; larvae, 520; migratory, 142
mottle, 10 [see also viruses (types)]
multiline, 72
multiple cropping, 55, 372
multivalent, 36, 37
mung, 288
Murashige and Skoog media, 79
mutagenesis, 77, 172-174
mutation, 10, 35, 37, 47, 58, 65, 77, 78, 173, 192, 294, 365
mycoparasite, 163, 164
mycophagous amoebae, 164
mycotoxins, 456, 457 (see also aflatoxin)
- N**
- NAA**, see acids
nabids, 105
naptalam, 215, 228, 230, 237
Natal Common, 316
NC 2, 368, 430, 543
NC 4, 39, 430
NC 5, 367, 369
NC 6, 45, 105, 120, 123, 431
NC 7, 211, 362, 363, 367-370, 376, 386, 431, 505, 534
NC 8C, 42, 363, 368, 431
NC 9, 363, 368-370, 431
NC 10C, 42, 363, 368
NC92, 294, 297, 326
NC Ac 302, 136
NC Ac 342, 105
NC Ac 469, 136
NC Ac 827, 136
NC Ac 10033, 109
NC Ac 17090, 313
NC Ac 17347, 136
NC Ac 17367, 136
NC Ac 2214(8), 137
NC Ac 2214, 123, 137
NC Ac 2230, 123

NC Ac 2232, 109
NC Ac 2242, 109
NC Ac 2243, 109
NC Ac 3139, 368
NC Ac 17213, 369
NC-VII, 363, 368-370, 431
necrosis, 122, 182, 404, 405, 407, 409 [see also viruses (types)]
nematicides, 176, 177, 245, 271, 273, 276, 277, 434
nematodes, 45, 46, 56, 119, 176-184, 219, 321, 358-360, 434, 436, 443-445; cyst, 179; juvenile, 360; lesion, 176, 177, 179, 358; parasitic, 119, 176, 177, 181, 220; predatory, 177; ring, 176, 177, 184; root-knot, 45, 56, 176-181, 183, 184, 358-360; sting, 176, 177, 184
neomycin phosphotransferase, 83
neonate, 106
net loss, 207, 235
net returns, 217-219, 235, 358, 359, 374, 433-435, 442
net value, 74, 374
New Mexico Valencia A, 17
niacin, 60
nightshade, silverleaf, 210, 212, 220
nitrates, 247, 248
nitrification inhibitor, 405
nitrogen: computer data base studies, 341; deficiency, 394, 395, 408; disease suppression effects, 169; fertilization, 394, 405; fixation, 9, 46, 74, 106, 286-297, 325, 326, 328, 329, 331, 337, 338, 341, 395, 405, 407, 408; herbicides, 277; as a nutrient, 161, 331, 383, 394, 395, 401, 407, 408; pod yield effects, 70; as a pollutant, 247, 248, 253; produced in peanuts, 47, 321, 402; in roasting, 539, 541, 543; in soil organic matter, 250; water use efficiency associations, 331-334
nitrogen:sulfur ratio, 401
nitrogenase activity, 286, 292-296, 395
nodulation, 9, 287, 290-297, 325, 384, 408
nonadditive effect (genetic), 58
nonanal, 530, 546
2-nonanone, 538
nondrought stress, 464

nonfumigant, 177
nonnodulating, 395
nonoccluded baculovirus, 146
nontoxigenic strain, 460, 461
norflurazon, 215, 222, 225
North American Free Trade Agreement (NAFTA), 572, 573-575
Northern analyses, see hybridization
no-tillage, see tillage
nucleocapsid, 84, 125, 192
nucleophilic displacement, 539, 540
nurse cell, 79, 81
nutrient: imbalance, 401; partitioning, 328-331; stress, 309, 321, 331, 334; uptake, 161, 171, 322, 325-328, 339
nutsedge: purple, 210, 220, 221, 222, 228, 229, 233; species, 220, 221, 224, 225, 228, 234; yellow, 210, 220-226, 228-230, 233, 234
nymph, red-eyed, 140

O

oats, 171, 404
2-octanone, 538
3-octen-2-one, 538
odor quality, 532
oil, 308, 328, 364-366, 395, 398, 532, 539, 545; composition, 60, 536, 544; content, 8, 14, 54, 57, 58, 59, 62, 78, 371, 377, 402, 543, 544; pressed cold, 545; quality, 363, 366, 368, 545; raw, 544; seed, 566, 571; stock, 428, 448, 467; value, 543
oilseed, 571
Okrun, 190, 357, 358, 363, 364, 430
oleic acid, 8, 47, 59, 67, 365, 366, 544
oleic:linoleic acid ratio, 363, 365, 368, 369, 544, 545
olfactory attribute, 530, 532, 544, 546
oligonucleotide, 186
oligosaccharides, 540
organic acid, see acid
organic carbon, 250, 256, 267 (see also carbon)
organic manure, 394
organic matter, 250, 253, 258-261, 264-266, 276
organic volatiles, 537
organoarsenicals, 256

organochlorine, 117
organogenesis, 80, 82
organogenic, 81, 83, 84
organophosphate, 277
osmotic pressure, 79
osmotin-like, 84
outcrossing, 4, 25, 30, 34, 58, 65
outturn class, 446-448
ovarian cavity, 4
ovary, 2-4, 6, 79, 311; culture, 79
ovule, 3, 6
oxamyl, 177
oxidases, 255
oxidation, 251, 255, 256, 543-545, 547
oxidative: damage, 545; process, 546, 547; stability, 59, 538, 544
oxides, 249, 251-253
oxygen, 250, 287, 523, 536, 538, 539, 543, 545, 546
oxymyl, 118
ozone, 545

P

pachytene, 33
palmer Amaranth, 210, 224, 228
palmitic, 59, 544
panicum: fall, 209, 210, 212, 224, 225; Texas, 210, 216, 218, 223-226, 228, 230, 231, 236
papillae, 4, 5
paraheliotropism, 309, 321, 322
paraquat (Starfire), 135, 209, 214, 215, 222, 223, 227, 228, 230, 231, 233-235, 237, 269, 270
parasites: of diseases, 163, 164, 166-171, 173, 174, 176; facultative, 461; of insects, 104, 113, 115, 119, 120, 128, 136, 139; hymenopterous, 105; of nematodes, 177-180
parasitoids, 108, 123, 139
parenchyma, 8, 122
parenchymatous tissue, 6
partitioning: assimilate effects, 324; chemical, 249; diseases/pests associations, 336; drought associations, 331-334, 339, 340; pesticide vapors, 254; photoperiod associations, 334, 335; photosynthate, 72, 76, 77, 101, 292; pod yield and initiation effects, 302, 316, 340, 341; respiration associations, 308; between shoot and fruit, 330; simulat-ing model control, 311, 330; variations, 303, 309, 323, 329, 330, 346
partridgepea, 360
passport data, 40, 41
patent, 291
pathogenicity, 179
pathogens, 26, 96, 97, 121, 140, 188, 207, 213, 219, 220, 465; foliar, 302, 336; fungal foliar, 41, 42, 46, 160-165; of humans, 461; of insects, 104, 105, 114, 115, 135; of nematodes, 177-184, 194; soil-borne, 165-176
PCNB (Terraclor), 166, 168, 272
PCNB+metalaxyl (Ridomil PC), 272
PCR, see DNA
peas, 189, 190, 288, 291
peanut chemistry, 533
peanut mottle (PMV), see viruses (types)
peanut stripe (PStV), see viruses (types)
peanut stunt, see viruses (types)
peanutworm, rednecked, 100, 101
Pearl Early Runner, 329
PECMAN, 420, 422-424, 449-451
pedigree selection, 64-69, 73
peg: abortion studies, 39; botanical descriptions, 6, 7, 14, 15, 22, 23, 32; culturing tips, 79; elongation, 3, 7, 39; expert system use, 426; foliage-feeders/nematode effects, 99, 100, 102, 103, 106, 109, 111, 126, 170, 176, 177, 180, 184; fumigation effects, 30; from greenhouse-grown species, 30; growth hormone effects, 38; growth stage descriptions, 311; nutrient effects, 292, 385, 386, 391-393, 409, 444; phenology effects, 306, 314; related to biocontrol measures, 166; related to chemical applications, 117-119, 224; related to collection expeditions, 28, 37; related to defoliation, 103; stress effects, 332, 372; tillage effects, 219, 356
pegging zone, 292, 386, 391-393, 444
pendimethalin (Prowl), 215, 221, 222, 225, 269, 274, 275
penetrometer rod, 426
pentachloronitrobenzene, 166
pentane:acetone, 541

- pentaploid**, 39
- pentose**, 289
- 2-pentylfuran**, 538
- peppermint**, 135
- peptides**, 61, 146, 182-184, 187, 546, 547
- percolation**, 261
- perennials**: grasses, 209, 221, 229; peanuts, 4, 22, 23, 29, 31, 32, 38, 47; weeds, 212, 217, 220
- periderm**, 110, 111
- peroxidase**, 84, 164, 545
- peroxide**, 543, 544
- peroxyl radicals**, 545
- Peruvian runner type (var. *hirsuta*)**, 1, 2, 9, 16, 17, 25, 32
- pesticides**: adsorption, 250, 253; alteration, 255; behavior and fate, 248-257; biological control comparisons, 144, 147, 172, 173, 423, 461; chemistry, 251, 258; computer data base use, 422, 424, 438, 440, 442; as contaminants, 54, 97, 236, 245-278; contaminant evaluation, 259-275; controlling mites, 135; controlling whiteflies, 139; degradation, 117, 245, 255, 256, 261; environmental variable effects, 117; in groundwater, 245-278; leaching, 262-274; longevity, 249, 252-255, 259; management, 96-99; minimizing threats to groundwater, 278; mobility, 251-275; from nutrients, 404; preplant, 442; reducing with effective water, 438; regulation, 246, 248, 252; soil type effects, 275, 276, 432; trade effects, 572; transformation, 255; types used, 276, 277
- pesticide root zone model (PRZM)**, 257
- pests**: biological control, 95, 96, 105-109, 164; categorization, 99, 101, 106-109, 113, 121, 125; computer model use, 140-143, 421, 427, 429, 430, 436, 437, 439, 440, 446; control, 274, 275, 347, 359, 424, 427; cultivar resistance comparisons, 370; genetic engineering use, 144, 182; germplasm collection and preservation effects, 24, 25; high temperature, 430, 439; low temperature, 440; management (IPM), 84, 96-99, 106, 114, 140, 141, 147, 245, 278, 422, 576; pheromone use, 105; problem, 98, 183, 268, 278, 360, 427, 439, 440; resistance studies, 2, 11, 40, 45, 46, 54, 55, 62, 68-70, 75, 76, 143, 144, 183, 334; resource capture associations, 336; rotation effects, 278; tillage effects, 358; see also insects
- petiolute**, 81
- pH**: in acid hydrolysis dilutions, 539; high, 326, 401, 406, 408; in pesticide solutions, 250; see also soil pH
- phagostimulant**, 112
- o-phenanthroline**, 406
- phenol compounds**, 256, 532, 539
- phenology**, 301, 304, 306, 308, 310-319, 328, 330-332, 431
- phenotypic trait**, 57, 72, 73
- phenoxyalkanoic**, 256
- phenylcarbamates**, 256
- phenylureas**, 256
- pheromone**, 96, 99, 105, 116, 120, 140-142; trap, 105, 120, 141, 142
- phloem**, 106, 110, 122, 123, 137, 138, 385
- phorate (Thimet)**, 118, 127, 271
- phosphate**, 74, 289
- phosphate-potassium fertilizer**, 394
- phosphine**, 520
- phosphogypsum**, 392
- phospholipids**, 544, 546
- phosphorus**, 60, 292, 315, 383, 395-397, 400, 408; available, 396, 408; concentration, 401; deficiency, 396, 397; fertilizer, 396, 405, 408
- photodecomposition**, 255
- photoperiod**, 73, 74, 304, 306, 311-314, 318, 334, 335
- photosynthate**: flow, 106, 110; partitioning, 72, 76, 77, 101, 216, 292, 331, 332; removal (by insects), 120, 124, 125, 138
- photosynthesis**: disease/insect associations, 122, 336; process of, 305, 308, 309; products from, 286, 328; rate, 321, 329, 341-344; stress associations, 322, 326; tissue, 100, 102
- phylloplane**, 175
- physiological maturity**, see maturity
- physiological models**, 302-305
- physiological traits**, 55, 75
- phytoalexin**, 164, 457-459, 469, 470
- phytosanitary**: measures, 572; regulation, 56

- phytotoxicity**, 160
- picloram**, 82
- picolinic acid**, see acid
- pigeon pea**, 288, 384
- pigweed**: redroot, 210; smooth, 209, 210, 212; species, 210, 220, 224-226, 228; tumble, 225
- plant**: competition, 74; density, 126, 374; descriptors, 2, 11, 40; growth factors, 305-316; height, 37, 66, 102; illustrations, 1, 3, 5, 10; immunization, 161, 164; introduction, 37, 42, 56, 57, 128; nutrition, 383; population, 30, 316, 345, 346, 373, 444; regeneration, 80-84, 96; resistance to diseases, 43, 45, 46, 160, 161, 463; resistance to insects, 44, 45, 95, 105, 106, 108, 109, 118-120, 123, 128-134, 137, 139, 140, 143, 144, 146, 182, stress, 107, 142, 331-337, 440, 445; type, 41, 63, 66, 74, 363, 367, 368; weight, 122, 395
- planting**: conventional row, 375, 376; date, 127, 345, 346, 371-373, 427, 440, 444; density, 343, 346; depth, 423; in-furrow, 67, 127; interrow, 374-377; single row, 338, 376; skip-row, 376; twin row, 216, 374-376
- plant pathogen**, see pathogens
- plasma**, 403
- ploidy level**, 38, 78
- plow layer**, 259, 261, 355, 431, 432
- plowpan**, 442
- PNTPLAN**, 420, 422-424, 432-436, 443, 444, 451
- PNUTGRO**, 213, 304, 308, 311, 318, 320, 323, 330, 331, 335, 339-341, 344-346
- pod**: carbon effects on, 319; cleaner, 467; constriction, 7, 371; damage, 109, 118, 120, 145, 358, 366; density, 467; development, 6, 77, 110, 128, 177, 313, 315, 341, 356, 385, 391, 469; fill, 77, 102, 103, 292; initiation, 102, 312, 316, 318, 319, 325, 331; loss, 344, 347; maturity, 73, 103, 347, 423, 449, 457; rot, 174, 358, 371, 384, 389, 390, 429, 448; size, 66, 327, 328, 365, 521; sorting, 467; uniform, 54, 365, 367; variation, 17; weight, 70, 508
- pod yield**: analytic model use, 303; bradyrhizobial effects, 297; combining ability effects, 63; component line comparisons, 72; cultivar comparisons, 365, 371; early generation testing, 65; gene effect comparisons, 58; genetic studies, 70, 71, 76; growing period comparisons, 372; harvest index estimate use, 330; intercropping effects, 74; irrigation effects, 344; leafhopper effects, 122; leaf weight effects, 343; market grade measurements, 71; mass selection use, 66; nutrient effects, 387, 388, 397, 403-405; partitioning effects, 302, 330, 332, 333, 340; planting effects, 345; row spacing effects, 346; seed spacing effects, 374; selection for, 68-70; stress effects, 75, 332, 333; tillage system effects, 354-357; transpiration effects, 342
- poinsettia**, 137, 210-213, 228, 236
- policy restrictions on production and trade**, 572
- pollen**: culture, 80; grain, 4, 5; tube, 38
- polyclonal**, 185, 186
- polyhydroxycarbonyl compound**, 539
- polymer**, 182, 539
- polymerase chain reaction (PCR)**, see DNA
- polymeric matrix**, 546
- polymerization**, 539
- polymorphisms**, 33, 57
- polypeptide**, 146, 182, 193, 541, 546, 547
- polyploid**, 18, 31-39, 42, 58, 143, 189
- polysaccharides**, 540, 546
- population density**, 105, 179, 180, 320
- potassium**: 383, 386, 389, 397-400, 403; application, 398, 399; availability, 395, 397, 398; fertilization, 397-399; leaf, 399; recommendation, 398
- potassium:calcium ratio**, 399
- potato**, 45, 121-123, 143, 146, 167, 170, 510, 511, 513, 525
- potato leafroll virus**, see viruses (types)
- potyvirus**, 187
- precipitation**, 116, 252, 253, 261, 460
- precleaning**, 521; equipment, 506, 522
- predation**, 114, 117, 161, 163, 164, 174
- predators**, 104, 105, 113, 115, 119, 120, 127, 128, 136, 164
- presizing**, 521
- price**: farm, 575; prediction, 445-448;

- selling, 433, 434, 443; support, 55, 238, 484, 570-573; see also support price
- prickly sida**, 222-225, 228, 230, 231, 233, 234, 236
- primordia**, 8, 22, 80, 315
- principle, annual**, 434
- procaryote**, 286
- processing**, 467, 507
- processor's risk**, 491, 492, 497
- procyanidin**, 137
- product**: quality, 500, 528-548; safety, 420
- production**: change, 569; cost, 97, 144, 356, 433, 443, 570, 575, 576; countries, 557, 559, 561, 570; efficiency, 355; increase, 554, 559; management, 420, 431, 436, 450; maximum, 433; pattern, 576; policy, 570; practice, 24, 97, 216, 218, 219, 354, 369, 443; quota, 570, 572, 574; statistics, 554-561; surplus, 572
- proembryo**, 5, 6, 79
- prokaryotic**, 290
- prolonged heating**, 539
- prometryn**, 253
- Pronto**, 362, 370, 372, 375, 430
- propanethiol**, 532, 541
- propargite (Comite)**, 271
- property rights** (protecting cultivar ownership), 27
- prostrate growth**, 32
- protease**, 184; inhibitor, 146, 164
- protectant**, 164
- protein**: antioxidant effects, 546; binding the siderophore in bacteria, 161; biochemical transformation from partitioning, 328; cellular metabolism effect, 182; cellular nutrient uptake role, 174, 175; characterizing for biocontrol, 145, 146; composition studies, 543, 546, 547; cross-linking, 547; cultivar differences, 366, 369, 371; curing effects, 538; degradation, 547; genes, 83, 84, 145, 146, 192; genetic differences, 60; genetic engineering use, 183, 184, 191-193; iron-containing, 286, 545; limitation effect on carbon assimilates, 329; maturity and harvesting effects, 535, 541; mutational (induced) effects, 77; nitrogenase content, 286; nutrient effects on, 395, 398, 402, 404, 408; in parenchyma, 8; in peanut products, 54; plant immunization effects, 164, 182-184; produced from *B. thuringiensis*, 120; raw and roasting comparisons, 541; respiration effects on production, 308; seed storage, 33, 36, 38, 60, 183, 547; soil organic matter content, 250; species comparisons and variation, 46, 47, 59, 60, 62; stress effects, 546, 547; temperature effects, 308; toxins, 120, 182-184; virus group division studies, 125, 185, 187, 190
- proteinaceous component**, 541
- proteinase-inhibitor**, 96
- proteolysis**, 547
- protoplasts**, 80, 81, 84
- PSRS model**, 274
- puckered leaf**, 58
- pulley revolution**, 508
- pulley, head**, 508, 509
- purchase weight**, 525
- pure line, genetic**, 66, 71, 72, 74
- purlins**, 518, 519
- purslane**: 224; common, 210; horse, 233
- pusley, Florida**, 210, 224-226, 228
- pyranones**, 532
- Pyrax**, 166
- pyrazines**, 539-541, 544
- pyrethrins**, 520
- pyridate**, 214, 215, 222, 223, 230, 233
- pyrolytic treatment**, 539
- pythium pod rot**, 42, 363

Q

- quality**, 519, 524, 571; assurance, 475, 484, 571; control, 491; evaluation, 427, 446, 448, 529; factor, 62, 374, 510, 519, 524, 535; flavor, 60, 528-548; loss, 500, 507; moisture effects, 449; nutrient effects, 404; oil effects, 59; optimum, 450; reduction by foreign material, 224; reduction by nematodes, 176; temperature effects, 428, 523
- quantitatively inherited trait**, 68
- quarantine**, 25, 26, 30, 31, 139, 215
- quercetin diglycocide**, 106
- quiescence**, 79
- quota, domestic**, 574

quota loan value (QLV), 482
quota peanut, 567, 570, 574

R

- radiation flux**, 310, 320
radiation use efficiency (RUE), 309, 321, 322, 338
radicle, 8, 189
radish, 161
raffinose, 538, 540, 547
ragweed, common, 210, 222, 224-226, 228, 230, 231, 233, 235, 236
rainfall: expert system use, 422, 423, 426, 430, 437-440, 446; insect effects, 107, 109, 116, 118, 126, 143; nutrient leaching effects, 393; peanut tolerance to, 385; pH effects, 326; planting season effects, 372; production effects, 547; related to pesticides in groundwater, 249, 254, 255, 257; related to specific leaf weight, 341, 342; simulation modelling, 341-344, 346; skip-row studies, 376; yield and value effects, 378
rancidity, 500, 532, 545, 546
randomly amplified DNA (RAPD), see DNA
rapeseed, 169, 554, 564, 566
recessive gene, 47, 59, 67
reciprocal cross, 63, 64
recombinant DNA, see DNA
recombination, 57, 68, 192
recurrent selection, 64, 65, 68, 69
reductones, 538, 539, 546
refrigeration system, 524
regeneration: leaf, 336; from tissue culture, 80-84, 96, 188, 189, 194
regression, 71
relative humidity, see humidity
repository, 25, 29, 55
reproductive: axes, 1, 16, 361; development, 2-8, 14, 30, 77, 166, 216, 323, 330, 384; efficiency, 30, 76
residual control, 112, 222, 223, 226, 227, 229, 230, 233, 234
resistances: to diseases, 8, 11, 41-46, 56, 164, 336; genetically engineered, 83, 84, 144-147, 183, 184; hypersensitive response, 182; induced, 164; to insects, 2, 10, 40, 44-47, 58, 105, 106, 129-134, 143, 144, 336; to viruses, 43, 45, 136, 366
respiration, anaerobic, 536
respiration rate, 308, 323, 324, 329, 330, 524
restriction fragment length polymorphism (RFLP), see DNA
reticulation, 7, 9, 15, 16, 371
retroaldol reaction, 539, 546
rhizobacteria, 171
rhizobia, 286-297, 325, 394, 395; cultivar-strain interaction, 296, 297; inoculation, 291; legume symbiosis, general, 287-290; strain selection, 293-295
Rhizoctonia fungi, 170
Rhizoctonia limb rot, 358
rhizomes, 18, 23, 30-32, 47, 217
rhizosphere, 166, 172, 173, 175
riboflavin, 60
ribose, 538
ribosome, 84
ribozyme, 192-194
rice, 224, 225, 334; jungle, 224, 225
ringspot, see viruses (types)
RMP 12, 109, 137
RMP 40, 109
RMP 91, 137
RNA, 185-187, 191-193, 288
RNase, 184
roasting, 60-62, 538-541, 543, 547; process, 539; time, 543
Robut 33-1, 128, 297, 316, 331
rodent, 109, 505, 506, 521, 523, 524; infestation, 500
root: damage, 107, 292; fibrous, 31, 32, 213; growth, 427; penetration, 442; rot, 169, 170, 171, 354; tuberous, 18, 30-32; zone irrigation, 463
rooting: depth, 399; zone, 261, 399, 401
rootworm, 108, 119, 141; southern corn, 45, 107, 108, 119, 120, 123, 141, 142, 146, 368, 429
rosette, see viruses (types)
rosette assistor virus (luteovirus), see viruses (types)
rosette satellite virus, see viruses (types)
rot: limb, 358, 366, 448; *Rhizoctonia* limb, 358; stem, 42, 217, 366, 368
rotation crops, 169, 215, 359, 360, 394,

- 396, 424, 425
Rotterdam market price, 569
Rovral, 168, 272
row: crops, 96, 97, 355, 360; narrow, 114, 216, 346, 374-376; pattern, 376; spacing, 216, 267, 345, 346, 364, 374-376, 423, 444; see also planting
royalties, 27, 67, 70, 76
runner-type peanuts: belt screen differences, 515; botanical comparisons among types, 4, 9, 15, 16, 138, 328, 361; breeding program use, 61, 62, 72, 73, 77; bulk density comparisons, 505; cultivar comparisons, 364-369; export system use, 430; flavor comparisons, 533, 534, 537; grading factors, 481; market use comparisons, 480; maturity and harvest date comparisons, 377, 378; nutritional study use, 386-390, 392-394, 396, 398-400, 402, 404; oil content variations, 543, planting date comparisons, 372, 373; planting system comparisons, 356-358; production comparisons, 362, 364, 569; row spacing comparisons, 374, 376; seed size/weight comparisons, 508; weed control research use, 212, 222
rust, 10, 41, 45, 46, 165, 220, 336
rye, 161, 179, 180, 357, 404
- ## S
- S-862**, 128
sample: comminution, 492, 497; grade factors, 480-484; preparation, 186, 475, 484, 486, 493; selection, 475-480
sampler: cross-cut, 477, 478; pneumatic, 478
sampling: for aflatoxin, 484-498; equipment, 477, 479, 480; error reduction, 489-491; errors, 465, 466, 484; farmers stock peanuts, 478, 479; for grade factors, 473-484; in-shell peanuts, 480; milled peanuts, 479, 480; plan, 491, 494-497; variability, 480, 484, 486-489, 490
sandbur, 210, 224, 225
saprophyte, 161, 166, 461
scarab, 107
scarification, 109
Schiff base, 539
scission reactions, 538
sclerenchyma, 123
Sclerotinia: blight, 8, 42, 165, 167-169, 217, 362, 363, 370, 371, 373, 377, 378; wilt, 168
scolid parasitoid, 108
scorpion, desert, 113
scouting, 445; insects, 99, 116, 117, 444; insects/diseases, 347, 422, 423; temperature, 427, 429; water, 426
screens: perforated, 513; size, 370, 515, 544; vibratory, 467, 513
sedges, 210, 224, 236, 237
seed: certified, 72; composition, 54, 58-61, 77; configuration, 375; dispersal, 6, 30, 35; dynamic lots, 477, 478; germination, 9, 307, 313, 317, 383, 427, 443, 444, 448; infection, 462, 464; inoculant, 444; maturity, 8, 442, 528, 537; moisture, 450, 500, 515, 523, 525; production, 75, 110, 209, 389; propagation, 29, 30; quality, 61, 109, 384, 388, 391, 444; shriveled, 59, 64, 364, 389, 404, 541; size, 8, 35, 37, 41, 54, 61, 62, 66, 71, 73, 75, 77, 230, 361, 363, 365-368, 385-387, 446, 535, 538, 545, 546; size separation, 468; static lots, 476, 477; storage, 25, 30, 36, 61, 183; temperature, 500; weight, 41, 58, 364; yield, 66, 73
seedbed: cloddy, 442; diamond-shaped, 375; preparation, 354-359, 436; shaper, 355
seeding rate, 24, 373-375, 423
seedling emergence, 73, 74, 171, 426
seed lot acceptance, 495-497
selection: efficiency, 69-71, 337; indexes, 69, 70; mass, 65, 66
self-pollination, 4, 61, 66, 68, 71
sensory: attribute, 534; evaluation, 528, 530, 534; method, 529, 530; perception, 529; profiling, 537
sequestering agent, 469
sesame, 360
sethoxydim (Poast +), 215, 221, 223, 229, 236, 269, 275
shattercane, 226
shelf-life, 59, 366-368, 528, 535, 536, 543-547

- shelled stock**, 365, 446-448, 523
- shelling**: advances, 521, 522; outturn, 427, 446, 500; percentage, 62, 66, 71, 73, 328, 340, 345, 365; plant, 420, 468, 479, 480, 500, 522-524
- SHELNUT**, 420
- shock, anaphylactic**, 60
- shoot regeneration**, 80-82
- sicklepod**, 210-214, 220, 222-226, 228, 230, 231, 233-236, 375
- sida, prickly**, 210
- siderophore**, 161, 326
- signalgrass, broadleaf**, 209, 210, 212, 225, 230, 236
- silos**, 501, 503
- simulation models**; 140, 141; chemical movement in soils, 257, 258; expert systems, 419-451; physiological, 301-305, 318-325, 333, 337-347; temperature, 316, 317
- single seed descent**, 65-68
- sizing process**, 467
- Small White Spanish**, 14, 62
- smartweed**: Pennsylvania, 210; species, 233
- "sniffer port"**, 530, 532
- sodium calcium aluminosilicate (HSCAS)**, 469
- sodium hypochlorite**, 469
- soil**: acid, 174, 260, 261, 292, 392, 394, 401, 403, 405, 408; alkaline, 326; calcareous, 384, 397, 400, 401, 403, 405, 408; chromatography, 227; classification, 431; clodding, 432; compaction, 219, 356; constituents, 249, 251, 253, 254, 262; environment, 179, 245, 248, 249, 255; erosion, 355-357, 432, 436, 439; fertility, 38, 74, 354-478, 383-410, 436, 444; hardpan, 423, 426, 439; horizon, 323, 331, 400; nitrogen, 405; pesticide relations, 275, 276; phosphorus, 396, 397; potassium, 397, 398; profile, 259, 261, 342, 343, 439; properties, 250, 254, 259, 431; selection, 354; structure, 251; survey, 262-264, 266, 275, 276; test, 389-391, 393, 398, 399, 401, 408, 423, 444; texture, 119, 250, 255, 259-266, 275, 276, 323, 354, 356, 403, 404, 409, 431, 432; thermometer, 426, 427; water, 107, 249, 254, 310, 314, 322, 331, 341, 436, 437
- soil moisture**, 109, 113, 114, 118-120, 124, 234, 253, 323, 356, 385-387, 390, 394, 423, 432, 439, 444, 448
- soil pH**, 28, 166, 170, 171, 227, 248-253, 256, 259-261, 264, 267-269, 326, 392, 393, 400, 401, 404-410
- soil temperature**: aflatoxin contamination role, 457-460; carbohydrate concentration effects, 547; expert system use, 422, 423, 426, 427, 429, 430, 437, 439, 440, 444-446, 449; maturity effects, 535, 547; pest relationships, 113, 114, 118, 167; pesticide behavior effects, 252, 253; as a factor in planting, 372
- soil type**, 268, 274, 275, 394, 398, 401, 422, 433, 435-437, 440, 441, 443-446; Americus, 431, 437; boehmite, 251; Bonifay, 431; Carnegie, 265, 432; Esto, 265, 432; Faceville, 432; Greenville, 265, 386, 403, 406, 407, 432, 437; Lakeland, 275, 344, 399, 406, 431, 437; Lucy, 431; Norfolk, 406, 431; Orangeburg, 432; Pelham, 406; Redbay, 437; Tifton, 42, 105, 227, 266, 357, 402, 406, 407, 432, 437; Troup, 431; Volclay, 469
- solar**: energy, 518; heat, 467; radiation, 252, 347, 506
- solarization**, 167
- somaclonal variation**, 80
- somatic**, 35, 37, 80-82, 96; cell, 35, 37
- sorghum**, 117, 118, 360, 398
- sorting**: device, 467; method, 467
- Southern analyses**, see hybridization
- Southern Runner**, 75, 128, 139, 140, 363, 365, 366, 388, 389, 409, 430, 464
- soybeans**, 59, 81, 83, 84, 96, 100, 118, 169, 188, 213, 220, 235, 236, 288, 289, 291, 304, 311, 335, 342, 356, 376, 384, 397, 398, 404, 407, 444
- spacing, interrow**, 374-377
- Spanco**, 357, 358, 362, 363, 370, 371, 430
- Spanhoma**, 118, 364
- Spanish 18-38**, 62
- spanish-type cultivars**: belt screening comparisons, 515; botanical differences, 4, 16, 81; breeding research, 61-63; bulk density comparisons, 505; computer modelling, 339, 346, 430; cultivars, 364-

- 367, 370, 371; cultural practices, 357, 358, 361-363, 372, 374; flavor, 533, 534; maturity/harvest dates, 377, 378; nitrogen fixation comparisons, 295, 395; nutritional variances, 384, 388, 402-405, 408; oil content, 543; pest resistance studies, 42, 110, 118; production, 17; weed control, 211, 212
- Spantex**, 39
- species**: lists, 16, 19, 20; distributions, 21-26; diversity, 31-35; weeds in peanuts, 224, 225
- spiders**, 103-105, 115, 123, 136
- spreading type**, 72
- spurge**, prostrate, 210, 225; species, 210, 224, 225
- stability**: market grade, 71; traits, 72
- stachyose**, 538, 540, 547
- stackpole drying**, 538
- staminal tube**, 4
- standard petal**, 3, 4, 22, 23
- staphylinid adult**, 119
- starch**, 5, 8, 60; grains, 5, 8
- Starr**, 17, 61, 62, 179, 339, 340, 362, 363, 371, 430, 505
- static lot**, 476, 478
- statistical process control (SPC)**, 521
- stem purpling**, 409
- stem rot, southern**, 42, 217, 366, 368
- Stephan vertical cutter mill**, 487, 488
- stigma**, 4, 5, 38
- stillbene biosynthesis**, 458
- stillbene phytoalexins**, 457, 469
- Stivo**, 189
- stomata**, 8, 10, 310
- storage**: circular type, 504; cold, 523, 524; condition, 25, 456, 500, 518, 523, 524, 546; dry-bulk, 500; environment, 500; farmers stock, 500-507; flat, 501, 502, 504, 505; season, 501; shelled stock, 523, 524; structure, 504
- STORNUT**, 420
- strawberry**, 135
- stress resistance**, 55
- stunting**: from insects, 106; from bud necrosis, 126; from nutrient deficiencies, 407, 409
- style**, 2, 4-6
- subsampling mill, USDA**, 487, 488
- subsampling variance**, 486-489, 498
- subsidies**, 433, 570, 572
- subsistence agriculture**, 97
- subsoiling**, 422, 432
- subterranean**: diseases, 194; growth, 78, 307; insects, 107
- sucrose**, 8, 60, 78, 163, 538-543, 547
- sulfonylureas**, 222, 256
- sugars**, 163, 538-540; insoluble, 538; reducing, 539, 546
- suicide gene**, 192, 193
- sulfides**, 541
- sulfur**, 400, 401, 539; application, 400; compounds, 532; concentration, 401; deficiency, 400, 401; elemental, 400
- sulfur-containing compound**, 532, 541
- sulfur specific flame photometric detection (FPD)**, 532
- Sunbelt Runner**, 366, 462
- sunflower**, 168, 554, 564, 566
- Sunrunner**, 67, 72, 363-366, 388, 409, 430
- superoxide**, 545
- superphosphate**, 400
- support price**, 478-484, 574, 575
- surface horizon**, 261, 262, 264, 399, 400
- surfactant**, 220, 229
- sustainable agriculture**, 160
- sweet potato**, 220
- symbiosis**, 9, 287, 288, 291-293, 295-297, 326, 395
- symbiotic nitrogen fixation**, 286-297, 325, 394, 395; see also nitrogen (fixation)
- synergistic effect**, 400
- syngamy**, 5
- syrphid**, 127; larvae, 136

T

- Tachimosari**, 8
- Tamnut**, 39, 346, 371
- Tamnut 74**, 39, 371, 376
- Tamrun 88**, 363, 365
- Tamspan**, 430
- Tamspan 90**, 42, 362, 363, 371
- tank mixes**, 270, 274
- tanks**, 501
- tannin**, 10, 123, 137
- tariffs**, 571-575; reduction, 574, 575

- tax**, 434
- taxonomy**: nematode, 181; plant, 1, 2, 16, 19, 20, 22-23, 36, 47, 361; *Rhizobium*, 287-290, 294; viruses, 185
- temperature**: ambient, 449, 517, 523, 524, 537; base, 73, 306, 313, 314, 316, 317; control, 546; cool, 73, 74; dewpoint, 518, 520; effects on disease, 429; effects on flowering, 313; effects on quality, 428; extreme, 74, 293; modelling, 317; optimum, 306, 307, 314, 317, 330, 334; overspace (warehouse), 467, 506, 518, 519; response, 306, 307, 312, 313, 316; roasting, 543; stress, 333, 546, 547; tolerance, 293, 333, 337
- tempering**, 524
- terbufos**, 118
- termites**, 45, 106-109, 123, 143, 460
- test weight**, 467
- testa**: color, 7, 41, 58, 65, 66, 369, 371; papery, 7; variegated, 7
- tetrafoliolate**, 9, 22, 23, 32, 138, 311
- tetraploid**, 18, 31-37, 39, 42, 143, 189 (see also polyploid)
- texture**: leaf, 10; peanut butter, 364; seeds/pods, 59, 366, 368, 546; see also soil (texture)
- thermal decomposition**, 540
- thermal time**, 73, 304, 306, 311, 315-317
- thermodynamic process**, 536
- thermometer**, 426, 427
- thermostat**, 449, 450
- thiamine**, 60
- thiazole**, 541
- thidiazuron**, 82
- thiocarbamates**, 225, 228, 249
- thio-derivatives**, 544
- thiols**, 546
- thionin**, 84
- thiophanate-methyl (Topsin-M)**, 272
- thiophene**, 541
- thrips**, 45, 46, 120, 121, 123-128, 136, 142, 143, 164, 214, 358, 373; brachypterous, 127; chilli, 121; cotton bud, 121; melon, 121; predatory, 127; sesbania, 121; tobacco, 121, 123, 124, 143, 214; western flower, 121
- THRUS**, 515
- Tifrun**, 395
- Tifton 8**, 105
- tillage**: conservation, 355-358, 437; conventional, 218, 219, 251, 253, 255, 354-358; minimum, 218, 219, 356-358; no-tillage, 219, 251, 253, 255, 356-358; reduced, 110, 356-358; strip, 356, 357
- tiller, rotary**, 355
- TILNUT**, 420, 422-424, 435-437, 443, 444, 451
- tissue culture**, 80-84, 96, 190
- TMV 2**, 106, 136, 137, 313
- toad**, 108
- tobacco**, 123, 124, 143, 145-147, 174, 184, 192, 193
- tobacco hornworm**, see hornworm
- tobacco mosaic**, see viruses (types)
- tobacco ringspot**, see viruses (types)
- tocopherols**, 545
- tomato**, 45, 121, 125, 145, 146, 167, 180
- tomato spotted wilt (TSWV)**, see viruses (types)
- tospovirus**, 125, 126, 187
- totipotent**, 81
- toxic fungal metabolite**, 456
- toxicity symptom**, 407, 409
- toxigenic strain**, 460
- toxin**: aflatoxin, 42, 45, 458; antibiosis, 161; from bacteria, 172, 173; Bt, 84, 96, 114, 145-147, 182, 183; from fungi, 456; plant-produced, 144, 183, 184, 193; from *Sclerotinia*, 168; see also aflatoxin and *Bacillus thuringiensis*
- trade**: agreement, 570, 572, 575, 576; policies, 570-572; statistics, 565-569
- trailer, hopper bottom**, 511, 512
- transcapsidation**, 191, 192
- transformation**: genetic, 40, 62, 80-84, 172-175, 184, 185, 188-194, 328, 329, 465; of pesticides, 252, 255-257, 267
- transgenic plant**, 62, 84, 145-147, 172, 175, 182-184, 189-194, 465
- translocation**, 33, 35, 37, 304, 307, 310
- transpiration**, 122, 302, 310, 322, 324, 327, 331, 338, 339, 341-343, 384
- triacylglycerol**, 544
- triazines**, 253, 256
- 2,4,5-trichlorophenoxyacetic acid**, 82
- trifluralin**, 215, 221, 222, 225, 237
- trifoliolate**, 9, 23, 31, 32
- trimethylpyrazine**, 538
- triploid**, 37

tripper, 504, 506-508, 510, 525
trisaccharide, 289
trisomics, 58
trumpetreeper, 210
trypsin, 146
tryptophan, 47
tuberform, 23, 31
turgor, 110, 340

U

univalent, 35, 37
ureas, substituted, 256
US-216, 17
US-217, 17
US-220, 17
US-224, 17
US-389, 17
US-607, 17
US-706-7, 17
US-1172, 17
US-1322, 17
US-1359, 17
US-1604, 17
USDA subsampling mill, 490, 494, 495
utilization of peanut, 561-565 (see also consumption of peanut products)

V

VA 61R, 120
VA 81B, 42, 73, 313, 363, 369, 370, 374-376, 431
VA 93B, 73, 363, 370
VA-C 92R, 363, 369, 370
Valencia R1, 319
valencia-type cultivars: botanical differences, 4, 16, 361; breeding, 73; cultivars, 371; flavor, 534, 543; in-shell cleaning and marketing, 480; nitrogen fixation, 295; nutritional, 388, 402, 406, 408; origin, 2; production, 17, 362, 363; reciprocal cross differences, 63; shoot bud formation response, 81; species collection sites, 16; tillage planting effects, 356
vapor: barrier, 501, 505, 506; pressure, 249, 274, 310, 324

variability: in *Arachis* species, 22, 23, 29-35, 42-47; in *A. hypogaea*, 16, 17, 32, 35-38, 40, 41, 55-61
vascular tissue, 8, 176
vectors, 111, 125, 126, 128, 146
vegetative: axes, 8-10, 16, 361; growth, 8-11, 72, 77, 124, 126, 216, 332, 367, 439; stage, 102, 178, 397
velvetleaf, 210, 230
ventilation, 501, 506, 509, 515-517, 520, 525
vermiculite, 168, 250
vernolate (Vernam), 215, 221, 225, 228, 235, 269, 270, 274, 275
vetch, 179, 180
vinylphenol, 540, 541
viral resistance, 84
Virginia Bunch 67, 119
virginia-type cultivars: ancestral contributions, 62; belt screening studies, 515; botanical differences, 4, 9, 16, 361, 367; bulk density comparisons, 505; composition, 47; cultivars, 61, 365, 367-370; cytoplasmic effects, 63; expert system use, 430; flavor, 533, 534, 537, 543; genetic variability, 58; grade factors, 482; growth stages, 311; herbicide response, 222, 234; insect resistance, 123; in-shell cleaning and marketing, 480; nitrogen fixation, 295; nutrition, 386-388, 390, 393, 395, 398, 402, 406; planting and digging studies, 372, 378; production, 17, 362, 363; reciprocal cross differences, 63; recurrent selection, 68; row spacing, 374-376; shelf-life, 544; shoot and bud formation, 81; species collection sites, 16; tillage and planting effects, 356, 357; water stress effects, 321; yields, 76
virus: biocontrol measure, 104, 105, 114, 115, 146; detection, 185-187; genetic transformation and molecular biology use, 83, 84, 185-188, 190-194; germplasm exchange effects, 26; immunodeficiency, 193; pests/diseases interrelationships, 125-128, 136, 138, 139, 145, 174, 184, 185; resistance in wild species, 43, 45; resistant cultivars, 136, 366; RNA cleavage, 193; shoot-tip culture relations, 82; symptoms on

interspecific hybrids, 39; taxonomy, 185

viruses (types): barley yellow dwarf virus, 188; blackeye cowpea mosaic, 185; bud necrosis (BNV), 46, 121, 125-128, 187; cauliflower mosaic, 145, 174, 192; clump, 43, 45, 187; cowpea mild mottle, 125; cucumber mosaic, 192; DNA, 146; entomopox, 114, 115; eyespot, 125; granulosis, 146; green/mosaic, 125; impatiens necrotic spot, 125; Indian peanut clump, 188; Indian tomato spotted wilt, 121; nuclear polyhedrosis, 104, 105, 146; peanut mottle (PMV), 43, 45, 125, 185-187; peanut stripe (PStV), 26, 43, 83, 125, 185, 186, 187; peanut stunt, 43, 126; peanut yellow spot, 125, 126; potato leaf-roll, 185, 188; ringspot, 43; groundnut rosette, 2, 26, 43, 45, 121, 125, 136, 137, 185-188; rosette assistor, 136, 185, 188; rosette satellite, 136; tobacco mosaic (TMV), 192; tobacco ringspot, 192; tomato spotted wilt (TSWV), 43, 45, 121, 125-128, 186, 187, 366, 363

VNUT, 420

volatile compounds, 530, 540

volatility, 248, 249, 262

volatilization, 225, 249, 253, 254

W

wagon-dried peanuts, 538

warehouse, 449, 466, 501-525; air (overspace), 467, 516, 518, 520; condensation, 467; conventional, 501, 504, 513; design, 504, 507, 513, 517, 525; doghouse, 501, 502, 507, 517; double roofing, 467, 518-520; double-wall, 505; eave height, 505, 525; elevator, 506-511, 525; fumigation, 516; insulation, 501, 502, 517, 525; loading, 505, 510, 511; muscogee, 501, 502, 517; painting, 467; roof slope, 501, 502, 505, 506, 525; type, 501; underground, 504; unloading, 505, 506, 510-513, 525; ventilation, 501, 518

warehousing, 466, 467, 525

wasp, braconid, 105

water: capture, 322-325; content, 59, 249, 310, 323, 331; optimal, 445, 446; quality, 247, 249; runoff, 247, 253, 255, 356, 422, 426, 432, 440; solubility, 248, 249, 262; stress, 38, 122, 142, 314, 315, 321, 329, 331, 345; uptake, 310, 331, 339; use, 302, 322-325, 332-334, 338, 341-343

water-holding capacity, 28, 74, 219, 260, 261, 275, 357, 431, 432, 546

water-use efficiency (WUE), 302, 309, 324, 325, 332-334, 338, 341-344

waterlogging, 439

waxes, 9, 250

weather network, 143

weeds, 207-238, 359, 443, 445, 521; annual, 217, 221; biomass, 207, 216; broadleaf, 119, 209, 212, 213, 216, 220-226, 228, 230, 231, 233, 234, 236, 237, 359, 376; competition, 74, 215, 216, 224, 357; control, 211, 214-238, 274, 358, 359, 373, 375, 376, 444, 445; interactions with diseases, 213, 214; interactions with insects, 214; interference, 207-213; management, 209, 214, 216-220, 223-233, 235, 238, 358, 359, 444; species (common), 224, 225; thresholds, 207-211

wheat, 162, 167, 179, 398, 404, 547

whiteflies, 120, 121, 125, 137-139; silverleaf, 137; sweetpotato, 121, 137-140

whitemold, 110, 111, 217, 366, 429

wild species, 6, 7, 14, 17-22, 27-47, 57, 78, 81, 105, 106, 108, 119, 123, 128, 129, 136, 137, 140, 143, 144

Williams (cultivar), 188

wilt, India tomato spotted, see viruses (types)

wind erosion, 439

windrow, 465, 533, 536-538

wing, flower, 3

wireworm, 107, 108

world: markets, 55, 554, 566, 567, 570, 574; price, 574-576; production, 556-560, 563; reference price, 569; trade, 565, 566, 571, 572, 576; utilization, 561-565

X**xanthine oxidase**, 545**xylem**, 106, 110, 291, 384, 385**Y****yeast**, 166**yellow spot**, see viruses (types)

yield: component, 69; fruit, 69; improvement, 61, 76, 77, 171, 216, 294, 297, 325, 336, 339, 340, 361, 374, 376, 395, 405, 406, 408, 441, 559, 561, 576; optimum, 63, 65, 66, 71-73, 75, 77, 176, 218, 235, 326, 336, 346, 357, 363, 365-369, 372, 374-376, 383, 388, 427, 535, 576; potential, 54, 76, 103, 212, 303,

330, 332, 336-339, 346, 373, 377, 386, 390, 392, 393, 395, 399, 426, 427, 438-441, 444, 446; reduction, 74, 75, 100, 102, 106, 107, 207, 209, 211-214, 217, 219, 227, 230, 234, 326, 336, 341, 356, 373, 378, 404, 408; response, 74, 171, 235, 326, 332, 339, 344-346, 392, 398-400, 403, 405, 408, 425, 428; stability, 71, 74, 75, 333, 341; statistics, 554-561; U.S., 574, 575

Z

zinc, 392, 400-402, 408-410; deficiency, 408, 409; toxicity, 401, 409, 410

zinc sulfate, 408, 409**zygote**, 79 (see also embryo)