

INDEX

A

- AA genome, 5
- AAA genome, 5
- AAA-group triploids, 33
- AAB genome, 5
- AAB-group triploids, 33
- AB genome, 5
- ABB genome, 5
- aberrans*-group, 260
- Abiotic constraints, 23, 29, 30
- Abiotic factors, 14
- Abundance, 9, 23, 26, 31, 52, 56
- Acanthocereus pentagonus*, 107
- Accessions, 37
- Acerola, 63, 64
- Acetic acid, 98
- Acrocarpus fraxinifolius*, 109
- Africa, 3, 5, 8–10, 12, 13, 15, 17, 20, 22–29, 34–36, 39, 41, 43–45, 47, 48, 51, 52, 55, 57–60, 160, 167, 168, 218, 238, 249, 251, 275
- Agar, 294, 295, 298
- Aglenchus agricola*, 277
- Agrobacterium tumefaciens*, 41, 186, 193
- Agroecosystem, 105, 112
- Agro-forest system, 105
- Agronomic management, 243
- Agronomic practices, 64
- AILV, 217, 218
- Albania, 218
- Albizia, 122
- Aldicarb, 129, 201, 210
- Algeria, 218
- Allele, 198, 199
- Allotrichodoros*, 218
- Almería, 227
- Almond, 177, 220, 250
- Alphonse Lavalley, 73
- Alternate cropping, 3, 28
- Altitude, 105, 108, 114
- Amanohashidate, 270
- Amarillo, 66, 107
- America, 8, 9, 11–13, 15–17, 20, 28–36, 39, 43, 45, 49, 51, 53, 55, 121, 122
- American grape species, 204
- Americani, 39
- AMF, 43
- Amines, 300
- Aminoacid sequence, 224
- Ammonia, 98, 300, 301
- Ampelidaceae, 204
- Ampelopsis*, 204
- Ampelopsis aconitifolia*, 204
- Amphimixis, 196
- Amplimerlinius amplus*, 277
- Amplimerlinius macrurus*, 277
- Amplimerlinius paraglobigerus*, 277
- AMV, 219, 221
- Anacardiaceae, 244
- Anacardium occidentale*, 66
- Ananas comosus, 79, 81, 107
- Anatolian region, 247
- Anchorage, 22, 23
- Andaman Island, 19
- Andong, 258
- Anhui province, 258
- Animal manure, 21, 301
- Annona, 64, 106
- Annona muricata*, 109
- Annual crops, 18, 125
- Anoxia, 90
- Anoxic soil, 94
- Antagonist, 234, 237
- Antagonistic organisms, 130
- Anthurium, 20
- Antibiotics, 301
- Antibodies, 222, 223, 224
- Antigens, 261
- Antracnosis, 111
- Ants, 111

- Anus, 138
Aorolaimus holdeman, 68, 79
Aorolaimus levicaudatus, 74
Aphanocladium album, 298, 308,
 314, 315
Aphelenchoides, 111, 277
Aphelenchus, 65, 74, 76, 79, 80
Aphelenchus avenae, 277
 Aphids, 111
 Apple, 220
 Apricot, 177, 178, 186, 220, 250
 Apulia, 219
 Aquatic fungi, 234
 Arabis mosaic nepovirus, 200, 216,
 288
 Arabis mosaic virus 210, 211
 Araceae, 35
 Aragua State, 64–74, 76, 79, 81
 Arcanut, 18–20, 35
 Arganil, 259
 Argentina, 70, 178, 218, 275
 Aristophanes, 275
 Arizona, 139, 170
 Armenia, 218, 275
 ArMV, 200, 288, 294
 Aroma, 105
Arthrobotrys oligospora, 188
 Arthrobotrys, 42, 188
 Artichoke italian latent nepovirus, 217
 Artocarpus altilis, 66
 Ascolana, 283, 294, 296, 297, 311
 Asia, 3–6, 8–10, 16–19, 20–23, 28, 30,
 31, 34–36, 39, 45, 48–50, 52,
 54–56, 58–60, 119, 121, 122, 132,
 134, 218, 243, 251, 253–255, 258,
 259, 262, 275
 Asiatic pyroid citrus nematode, 158
Asparagus officinalis, 233, 236
 Asphyxia, 87, 90
Atta cephalotes, 111
Atta fervens, 111
Atta mexicana, 111
 Australasia, 149
 Australia, 5, 9, 10, 12, 15, 17, 18, 21,
 22, 28, 35, 36, 39, 48, 58, 157,
 159, 160, 168, 171, 188, 191, 192,
 193, 207, 211, 218, 275, 279, 280,
 312
 Australimusa section, 4, 18
 Austria, 218
 Auxines, 92
 Avocado, 20, 63, 64, 65, 106
Azadirachta indica, 130, 304, 308,
 311
 Azadirachtin, 301, 304
 Azerbaijan, 218, 244
- B**
Bacillus mycooides, 236
Bacillus thuringiensis, 42
 Backyard culture, 204
 Backyard production system, 18
 Bacteria, 234–236, 239, 241, 276,
 300, 301, 304
 Bacterial Canker Complex, 180
 Bacterial Canker, 180
 Bacterial endospores, 234
 Bacterium, 141
 Badnavirus, 40
 Baermann funnel, 146
 Bahia grass, 182, 192
 Bahia, 124, 131, 133, 134
 Balearic Islands, 218
 Baluchistan, 246, 248, 252
 Bamboo, 66
 Banana, 3, 4, 6–61, 63–66, 149, 161
 Banana breeding scheme, 36
 Banana cultivation, 7
 Banana hybrids, 3, 36
 Banana nematodes, 3, 15, 17, 18,
 34–36, 42
 Banana production, 7, 13, 17, 21, 23,
 25–27, 31, 43, 48, 51
 Banana propagation, 38
 Banana roots, 9, 13, 28, 31
 Banana streak disease, 40
 Banane Cochon, 38
 Bangka, 9, 35
 Bangladesh, 19, 54
 Bare-fallow, 16
 Barinas state, 65
 Basamid, 128, 129, 131

- BCC, 180
 Bean, 18
Beauveria, 268
Beauveria bassiana, 107, 109
 Belgium, 254
 Belize, 9, 16, 55, 56
 Bell pepper, 113
Belonolaimus longicaudatus, 157, 158, 160, 161, 166, 170
 Bergaptene, 303
 Bermuda grass, 182
 Betel vine, 20
 BHC, 266
 Big Ebanga, 38
 Biochemical factors, 11
 Biocontrol, 42, 43, 127, 130, 131, 235, 239, 298, 314
 Biocontrol agent, 42, 43, 298, 314
 Biocontrol strategy, 298
 Biodiversity, 8
 Biofumigation, 177, 183, 193, 215, 232, 300, 311
 Biological control, 3, 7, 34, 41, 101, 130, 188, 215, 237, 243, 248, 250
 Biological control agent, 21, 98, 188, 191, 215, 294
 Biological control measures, 267
 Biological management, 237
 Biological suppression, 234
 Biotypes, 68
Bixa orellana, 130
 Black head disease, 8
 Black head toppling disease, 13
 Black leaf streak, 23, 31
 Black pepper, 20
 Black pine, 269
 Black root rot, 111
 Black Sea region, 220
 Black Sigatoka, 17, 23, 30, 31, 53
 Black weevils, 27, 56
 Blackcurrant, 220
 Bluggoe, 5, 30
 Bodles Altafort, 36, 54
 Bolivia, 122, 123, 125, 131
borealis-group, 260
 Börner, 204, 208
 Bourbon, 103, 106, 107, 108
 Brassicaceae, 300
Brassica juncea, 233, 300
Brassica nigra, 300
Brassica oleracea, 300
 Brazil, 5, 8, 9, 30, 32, 33, 36, 38, 48, 60, 66, 75, 80, 122–125, 130, 131, 133, 134, 154, 157, 161, 166, 170, 218, 254
 Breadfruit, 63, 66
 Breadfruit tree, 66
 Breeding, 17, 37, 39, 40, 41, 50, 55, 56, 195, 197, 202, 204, 208–213
 Breeding incompatibilities, 37
 Breeding programs, 37, 40, 131, 142
 Breeding strategies, 196
 Brewing banana, 4, 7
 Brewing-cooking banana, 5
 Brooming, 79
 Brown lesion, 73, 281
 Bulbous crops, 217
 Bulgaria, 215, 218, 219, 220, 221, 228, 240
 Bunch, 4, 13, 14, 22, 26, 37, 39
 Bunch grapes, 204, 209
 Burrowing, 3, 7, 9–11, 13–15, 17–19, 21–23, 25, 26, 31, 33–35, 39, 45–47, 49–52, 54–56, 58–61
 Burrowing nematode, 3, 7, 9, 15, 19, 22, 34, 35, 37, 136
Bursaphelenchus, 254, 260, 270–272
Bursaphelenchus antoniae, 259
Bursaphelenchus baujardi, 260
Bursaphelenchus cocophilus, 71
Bursaphelenchus conicaudatus, 260
Bursaphelenchus doui, 260
Bursaphelenchus fraudulentus, 260
Bursaphelenchus kolymensis, 260
Bursaphelenchus luxuriosae, 260
Bursaphelenchus mucronatus, 260, 261, 272, 274
Bursaphelenchus singaporensis, 260
Bursaphelenchus xylophilus, 253, 254, 256, 257, 260–262, 271–274
 Butane, 98
 Butanoic acid, 98

C

- C1613, 227
 Cabernet Sauvignon, 204, 205, 208, 229, 230, 231, 237
 Cabernet Sauvignon-157, 229
 Cacambou, 5
 Cacao, 119–134
 Cacao germplasm, 127
 Cacao-growing countries, 120
 Cacao production, 127
 Cacao propagation, 121
 Cacao seedling, 130
 Cacao tissue culture, 121
 Cadusafos, 307, 313
 Calcareous soil, 141, 147
 Calcium, 245
Calendula, 304
 California, 136, 140, 143, 145, 156, 158, 159, 161, 165, 168, 170–172, 180, 186, 191, 192, 195, 197–200, 203–205, 208, 210–213, 243, 246, 249, 251, 252, 275, 283, 305, 306, 308, 313, 314
 Calliandra, 122
 Callose, 40
Calocarpum mammosum, 106, 109
 Cameroon, 10, 23–28, 37, 39, 47, 55, 120
 Canada, 253, 256, 262, 271
 Canary Islands, 8, 10, 14, 25, 30, 38, 39, 55, 218
Canavalia ensiformis, 28
 Cap Verde, 30
Capsicum annum, 109, 303, 313
 Capsicum pubescens, 109
 Carabobo, 65, 67, 68, 70, 72, 75, 77, 79, 81
 CARBAP, 27, 29, 39, 44
 Carbofuran, 128, 307
 Carbohydrate, 140, 143, 151, 163, 164, 165
 Carbohydrate transfer, 140
 Carbon, 302
 Cardamon, 35
 Cardinal, 73, 74, 82
 Caribbean, 5, 6, 8, 9, 11, 13, 15–17, 20, 30–33, 35, 36, 39, 40, 45, 51, 53
Carica papaya, 76, 106, 109, 130
 Carrizo, 68
 Carrot, 305, 306
 Caryological characteristics, 204
 Cash crops, 113
 Cashew, 63, 64, 66
 Cassava, 16, 33
 Castor, 226
 Catch crops, 232
Catenaria anguillulae, 234, 236
 Catimor, 103, 108
 Catuai, 112, 115
 Catual, 103, 108, 110
 Caturra, 103, 104, 106, 107, 108, 110, 112, 115
 Cavendish, 3, 6–10, 11, 14, 18, 19, 21, 23, 25, 30, 38, 39, 41, 46
 Cavendish banana, 7, 8, 18, 30
 Cavendish plantations, 10
 Cavendish subgroup, 11
Cedrella mexicana, 109
 Cedrus, 256
 Cell, 11, 12, 22, 32, 40, 89
 Cell hyperplasia, 89
 Cellina di Nardò, 282, 284, 285
 Cellular wall, 94
 Cell wall, 40
 Central Africa, 5, 6, 122, 123
 Central America, 6, 8, 9, 11, 13, 15, 16, 22, 23, 28–32, 49, 53, 54, 55, 57, 119, 218
 Central cylinder, 74, 80
 Cerambycid beetle, 253
Ceratocystis, 257
Cercospora coffeicola, 110, 111
Chamaedorea elegans, 109, 118
Chamaedorea tepejilote, 109
Chamomilla recutita, 233
 Chemical control, 3, 16, 45, 185, 187, 226, 304
 Chemical destruction, 17
 Chemical formulation, 34

- Chemical fumigants, 232
 Chemical management, 144, 153
 Chemical measure, 266
 Chemical products, 93, 94, 95, 98
 Chemical treatments, 85, 92
 Chemicals, 15, 21, 33, 41, 42, 124, 128, 131, 267
 Chemoreceptors, 88
 Chemotaxis, 40
Chenopodium ambrosioides, 233
 Cheravirus, 216
 Cherries, 177, 186
 Cherry raspberry leaf nepovirus, 216
 Cherry rosette nepovirus, 217
 Chestnut, 220, 221
 Chiapas, 101–103, 105, 107, 108, 110, 111, 115–118
 Chicomuselo, 115, 116, 118
 Chile, 85, 87, 88, 94, 98, 99, 178, 218, 237, 275, 278, 311
 China, 8, 17, 19, 21, 34, 52, 158, 178, 243, 244, 253, 254, 258, 261, 262, 268, 270, 271, 274, 278, 314
 Chinantecos, 106
 Chitin, 301, 314
 Chitinases, 94
Chlorella, 228, 229, 230, 238
Chlorella vulgaris, 228, 229, 230, 238
 Chloropicrin, 184, 305
 Chlorosis, 35, 123, 126, 204, 205
 Chlorotic plants, 157
 Choles, 106
 Cholesterol, 245
Chrysanthemum, 304
 Cima di Bitonto, 282, 284, 285
Cineraria maritima, 303, 313
 Citrange Carrizo, 67, 69, 70
 Citrons, 135
 Citrumelo Swingle, 67, 69, 70
 Citrus, 9, 11, 12, 20, 32, 34, 35, 51, 58, 63, 64, 66–71, 74, 81, 89, 90, 97, 98, 107, 135–173, 220
Citrus amblicarpa, 70
Citrus aurantifolia, 159
Citrus aurantium, 70, 159
 Citrus biotype, 68, 143
 Citrus-growing countries, 34
Citrus latifolia, 109
Citrus limon, 159
 Citrus nematode, 136
Citrus paradisi, 67, 142, 159
Citrus reshni, 67, 69, 70, 72
Citrus reticulata, 70, 109, 142, 159
 Citrus rhizosphere, 136
 Citrus roots, 142, 158, 159, 165
Citrus sinensis, 67, 68, 109, 142, 159
Citrus volkameriana, 67, 69, 70
Citrus, 66, 68, 69, 135, 283
 Clay, 64
 Cleopatra mandarin, 155, 165
 Climate, 8, 14, 101, 102, 114, 183, 263
 Clones, 4, 22, 27, 30, 39
 CLRV, 221
 Coat protein gene, 206, 209, 210, 211, 212, 213
 Cobb, 8, 9, 18, 32, 34, 46–48, 50–52, 54, 55, 57–61
 Cobb technique, 221
 Coccus, 110
Coccus hesperidum, 111
Coccus viridis, 111
 Cocoa, 18, 23, 35, 119, 131, 132, 133, 134
 Cocoa genotypes, 121
 Cocoa market, 119
 Cocoa production, 120, 132
 Cocoa Swollen Shoot Virus, 124
 Coconut, 18–20, 35, 63, 64, 71–73
 Coconut trees, 72
Cocos nucifera, 71
 Coffee, 9, 18–20, 23, 30, 32–34, 52, 101, 110
Coffea arabica, 102–105, 113–118
Coffea canephora, 103, 106, 113–115, 117
 Coffee leaf borer, 111
 Coffee plantations, 103, 104, 108, 111, 117
 Coffee plants, 106, 108, 109, 110, 111, 113, 115, 116

- Coffee production, 101
 Coffee seedlings, 108
 Colima, 102
Colletotrichum coffeanum, 111
 Colombia, 5, 8, 30, 31, 33, 36, 188
 Commercial banana plantations, 3
 Commercial plantains, 33
 Commercial polyculture, 101
 Compost, 294, 295, 302, 303
 Conformation, 39
 Congo, 122, 123
 Conifer forests, 253, 254
 Coniferous forests, 254, 271
 Control, 3, 7, 13, 15–17, 21, 27–29, 33, 34, 38, 41–49, 53–58, 60, 253, 254, 258, 263–271
 Control measures, 265, 266, 270
 Control strategies, 101, 225
 Cooking bananas, 5, 6, 30
 Coratina, 284, 285
 Corchosis, 112, 117, 118
 Córdoba, 101, 105
 Corm, 4, 12, 16, 26, 27, 31, 48
 Corn, 4, 18, 33, 143, 158, 221, 226
 Cortex, 11, 12, 32, 68, 80, 123, 124, 137, 138, 139, 151, 152
 Cortical cells, 160, 199
 Cortical parenchyma, 11, 32, 75
 Cortical tissue, 155
Corticium koleroga, 107, 111
Corticium salmonicolor, 111
Coslenchus cancellatus, 277
Coslenchus costatus, 277
Coslenchus lateralis, 277
Cosmos bipinnatus, 233
 Costa Rica, 8, 12, 14–17, 31, 38, 39, 46, 49, 51, 55
 Côte d'Ivoire, 120, 122, 124, 125
Crambe abyssinica, 300
 Crete, 10, 25, 60, 218, 241
Criconema, 247, 277
Criconema demani, 68, 79
Criconema mutabile, 247
Criconemella, 65, 111, 115
Criconemella goodeyi, 125
Criconemoides, 74, 76, 178, 192, 193, 277
Criconemoides curvata, 180
Criconemoides informis, 277
Criconemoides onoense, 68, 74, 125
Criconemoides ornatum, 68, 79, 80
Criconemoides siculum, 279
Criconemoides sphaerocephala, 68, 74
Criconemoides xenoplax, 178, 180, 182, 183, 186–190, 195, 207, 277
 Criolla Negra, 74
 Criollo amarillo, 79
 CRLV, 216
 Croatia, 218
 Crop, 3, 7, 9, 12, 14, 16–18, 20, 26, 28, 29, 34, 45, 52, 54, 57, 58, 63, 64, 66, 67, 71, 73, 76–78, 80, 88, 140, 143, 144, 163, 181, 177, 182, 301, 312
 Crop loss, 140, 143, 144, 163, 181
 Crop production, 64
 Crop repetition, 88
 Crop residues, 301, 312
 Crop rotation, 177, 182
 Crop systems, 7, 16
 Cropping system, 4, 8, 21, 44, 45, 59, 101, 105
Crotalaria, 158, 233
 Cruciferous species, 300
 Crustacean shells, 301
 CRV, 217
 Cryptobiosis, 12
 CSSV, 124
 Cuba, 30, 31, 32, 35, 39, 42, 49, 58
 Cultivar, 4, 5, 8, 14, 18, 19, 21, 23, 26, 30, 33, 36–38, 40, 41, 45, 48–51, 53–55, 57–60, 77, 79, 82, 127, 177
 Cultural practices, 3, 16, 34, 44, 45, 136, 153, 154, 171
 Cutting, 121, 253, 269
 Cyanogenic compounds, 183
Cylindrocladium, 112
Cynodon dactylon, 182
 Cyprus, 14, 218, 244

Cyst nematode, 21, 276
 Cystatin, 41, 46, 59
 Cystein proteinase, 41
 Cytoplasm structure, 89
 Cytoplasm, 89
 Czech Republic, 218, 239

D

1,3-D, 184, 226, 305
 DA12I, 282, 284–287, 296
Dactylellina dactyloides, 188
Dactylellina ellipsospora, 188
 Daegu, 258
 Dagger nematode, 160, 177, 180, 195
 Daily variation, 63
 Damage, 3, 7, 9, 10, 11, 13, 14, 19, 21, 22, 26, 28, 29, 32, 34, 35, 37, 38, 43, 45–47, 53, 54, 57, 58, 63, 64, 66, 69, 73, 76, 80, 122, 123, 128, 129, 135, 136, 138, 141, 143, 144, 147, 150, 151, 153, 155–157, 159, 160, 162, 177–181, 184, 185, 187, 189, 192
 Damage symptoms, 119, 123
 Damaged roots, 160
 Danube, 220
Dastarcus longulus, 267, 268
 Date palm, 20, 63, 73
 Dazomet, 184, 185, 227, 305
 DBCP, 15, 51, 54, 128, 129, 148, 160, 161, 169–172, 201
 D-D, 15, 227
 DDT, 266
 Decay, 22
 Defense response, 94
 Defoliation, 283
 Deformations, 10, 12
 Delaware, 226
 Density, 135, 140, 141, 143, 144, 145, 146, 152, 160, 166, 167
 Dessert, 3–5, 7–10, 12–15, 17, 18, 21, 23, 25, 28, 30–34, 36, 40, 44
 Dessert bananas, 3–6, 33, 44
 Detection, 19, 20, 215, 222–225, 238, 239, 241, 242
 Development, 12, 18, 22, 27, 29, 34, 37, 38, 43–45, 50, 53, 55, 58
 Diagnostic character, 260
 Diagnostic procedures, 222, 225
 1,2-dibromo-3-chloropropane, 15
 Dibromochloropropane, 148
 Dichloropropane, 15, 227
 1,3-dichloropropene, 148, 178, 184, 191, 201, 226, 238, 305
 Dichloropropene, 15, 171, 227
 Dieback, 123, 126
 Dieback conditions, 123
 Diet, 4, 244
 Digestion, 41
 2,3-dihydro-2,2dimethylbenzofuran-7-methylcarbamate, 307
 3,5 dimethyl 1,3,5-thiadiazinane-2-thione, 305
Diospyros, 68
 Diploid, 4, 37, 38, 52, 36–40
Discocriconemella limitanea, 125
 Disease, 7, 22, 23, 29, 30, 36, 39, 40, 43, 46, 47, 58, 60, 66, 71, 72, 73, 79, 82, 87, 90, 91, 94, 119, 123, 124, 130, 131, 136, 142, 149, 150, 151, 160, 164, 165, 171
 Disease complexes, 119, 124
 Disease-free suckers, 66
 Disease resistance, 36
 Dispersal, 4, 7
 Dissemination, 9, 12, 25, 27, 30, 31, 34, 35, 45, 54
 Distribution, 3, 4, 8, 9, 10, 23, 25, 26, 28, 30, 34, 36, 44–47, 52, 54, 63, 64, 76, 215, 217–219, 237, 238, 240
Ditylenchus, 76, 79, 80, 277
Ditylenchus acutus, 79
Ditylenchus anchiliposomus, 277
Ditylenchus virtudeasae, 277
 DNA, 223, 224, 239, 241
 DNA fragments, 261
 DNA hybridization probes, 261
 DNA sequence, 261
 DNA sequencing, 224

- Dog Ridge, 198, 199, 202, 203, 207, 227
- Dolichodorus heterocephalus*, 277, 309
- Dolichodorus minor*, 124, 125
- Dominant genes, 199
- Dominican Republic, 30, 32, 33, 57
- Donghae, 258
- Dorylaimida, 215, 238, 240, 241
- Dosage, 34, 46
- Dose, 92, 93
- Douglas fir, 256
- Drainages, 64
- Drip fumigation, 305
- Drip irrigation, 188
- Drought, 101, 102, 103, 105
- Drupe, 177
- Durability, 199
- Durian trees, 18
- Dwarf Cavendish, 5, 39
- Dwarfism, 39
- E**
- EAHB, 26, 39
- East Africa, 5, 6, 10, 22, 23, 25
- East African Highland bananas, 26
- Eastern Asia, 17
- Economic importance, 135, 143, 149, 153, 154, 157
- Economy, 18
- Ectoparasitic nematodes, 136, 215
- Ecuador, 8, 30, 39, 63
- Ecuadorus*, 218
- EDB, 15, 267
- Egg, 11, 123, 257, 265
- Egg hatching, 187, 299
- Egg laying, 11
- Egg mass, 12, 68, 69, 78, 123, 137, 138, 141, 159, 179
- Egg stage, 92
- Egypt, 8, 10, 25, 138, 170, 244, 251
- eidmanni*-group, 260
- El Jarillo, 73
- Electron microscopy, 222, 241
- ELISA, 201, 203, 210, 222, 239
- Elytra, 257
- Emamectin benzoate, 267
- Embrapa, 39
- Emergence, 11
- Endogenous, 11, 50
- Endophytic fungi, 42, 43, 49, 55
- Ensete*, 10, 54, 58
- Entomoparasitic fungi, 268
- Entomopathogenic nematodes, 268
- Environmental conditions, 7, 9, 21, 36
- Environmental factors, 13
- Environmental quality, 16
- Enzyme, 94, 301
- Epidermis, 12, 199
- EPPO, 216, 222
- Equator, 119
- Equipment, 146, 147, 148, 153
- Eradication, 253, 259, 269
- Eriobotrya japonica*, 109
- Erythrina*, 122
- Esfahan, 246, 251
- Etanoic acid, 98
- Ethane, 98
- Ethiopia, 10, 54
- Ethoprop, 128
- Ethoprophos, 129
- Ethylene dibromide, 15
- EU, 253, 254, 255, 259, 262, 263, 270
- Eumusa, 4, 58
- Eumusa section, 4
- Europe, 6, 8, 36, 180, 187, 216, 217, 218, 241, 254, 259, 260, 263, 270, 272, 273, 275
- European Union, 253, 254, 263, 271
- Euvitis, 199, 203, 204, 208, 209
- Exclusion, 146
- Excretory pore, 138
- Exogenous, 11
- Export, 3, 4, 6–8, 12, 14, 15, 17, 18, 21–23, 30, 31, 33, 34, 44, 45, 66
- F**
- F1 hybrids, 195, 204, 205
- Faba bean, 20
- Falcon State, 72, 76

- Fallow, 16, 28, 182, 226
 Fallow periods, 29
 False Horn, 5, 23, 30, 33
 Fanleaf degeneration, 205, 211, 213
 Far East, 253
 Farmers, 18, 22, 27, 28, 29, 36, 39, 41, 44
 Farms, 131
 Fars province, 246
 Federal Republic of Yugoslavia, 218
 Feeder roots, 68, 69
 Feeding, 216, 220, 222, 226, 228
 Feeding site, 86, 89, 137, 196, 179
 Fenamiphos, 128, 129, 227, 234, 303, 307
 Fenitrothion, 266
 Fensulfothion, 128, 129
 Fenthion, 266
 Fermentation, 98
 Fertiliser, 3, 28, 29, 57, 107–109, 305
 Fertilization, 137
 Fertilizing, 18, 86
 FHIA, 36, 37, 38, 39, 44, 46, 56
 FHIA-01, 37, 39
 Fibrous roots, 136–138, 140, 144, 145, 149, 150, 151, 157, 158, 163
 Ficus carica, 73
 Field experiments, 33, 37, 39, 56
 Field survey, 265
 Fig, 63, 64, 68, 69, 70, 72, 73, 75–77, 286
 Figure Pomme, 5, 30
 Figure sucrée, 5, 30
 Fiji, 9, 18, 20, 34, 47, 52
Filenchus, 247
Filenchus filiformis, 277
Filenchus sandneri, 277
Filenchus thornei, 277
 First World War, 119
 Flavonols, 40, 41
 Flavour, 105
 Flood, 16
 Florida, 9, 11, 12, 20, 32, 34, 35, 47–49, 52, 53, 60, 135, 139, 141, 142, 144, 146–151, 153–157, 160, 161, 163–173, 178, 191
 Flowering, 13
 Flowers, 113, 177
 Folate, 245
 FONCOPAL, 73
 Food, 4, 35, 43, 45
 Food legume, 20
 Forest disease, 263, 264
 Formulations, 300, 309, 311
Fortunella, 135
 Fosthiazate, 307, 308, 315
 Fosthietan, 129
 Fougamou, 5
 France, 178, 187, 191, 195, 197, 203, 204, 205, 206, 208–213, 218, 219, 240
 Frantoio, 285
 Freedom, 198, 199, 200, 203, 206, 207
 French Guiana, 31, 32, 48
 French Horn, 23, 30, 33
 French plantain, 5
 French West Indies, 9, 10, 17, 57
 Fruit, 13, 22, 45, 63, 64, 66, 73, 76, 77, 80, 82
 Fruit characteristics, 36
 Fruit tree crops, 64
 Fruit trees, 87, 91, 92
 FS17, 282, 284–287
 Fujian, 19
 Fumigant, 15, 16, 148, 153, 161, 177, 184, 185, 187, 304
 Fumigant nematicides, 177
 Fumigant residues, 153
 Fumigation, 91, 92, 148, 158, 160, 167, 169, 170, 177, 178, 184, 190, 192
 Fumigator, 305
 Fungal diseases, 101, 106
 Fungi, 148, 152, 168, 276, 297, 298, 300, 301, 304, 305, 310, 314
 Fungicides, 108
 Fungus, 107
 Fungus inoculations, 289
 Furanocoumarins, 303, 312, 315
Fusarium, 8, 43, 46, 47, 50, 52, 54, 58, 60

- Fusarium oxysporum f. sp. coffeae*, 112
Fusarium oxysporum f. sp. cubense, 8
Fusarium oxysporum, 11, 43, 75, 83, 112, 142, 152
Fusarium solani, 142, 152, 164, 167, 172
- G**
- Gall, 12, 38, 66, 74–77, 79, 158, 159, 179, 196, 221, 281, 294, 296, 297, 305
Gall index, 74
Galling, 137
Gambia, 23
Gamma-aminobutyric acid, 267
Gangneung, 258
Garnica, 103, 104, 106, 107, 108, 110, 114–116, 118
Gas exchange, 64
Gelatinous matrix, 179
Genetic diversity, 245, 248, 251
Genetic resistance, 66
Genome, 5
Geocenamum, 247
Geocenamum rugosum, 247
Geocenamum brevidens, 247
Geographic origin, 39
Germany, 178, 188, 218, 223
Germplasm, 36, 38, 41, 46, 47, 49, 57, 59
GFLV, 195, 200–206, 209, 212, 215, 216, 219, 222, 223, 225, 227
GFLV B particles, 223
GFLV particles, 222
Ghana, 24–26, 45, 46, 120, 122–125
Giant Cavendish, 5
Giant cell, 74, 89, 123, 159, 196, 200
Ginger, 18–20, 34, 35
Gliocladium, 257
Gliricidia, 122
Globodera pallida, 41, 59
Globodera rostochiensis, 302, 303, 307, 308, 313
Glomus, 185
Glomus mosseae, 130, 131
Glucosinolate, 232, 300
Glyphosate, 201
Golden apple, 228
Goldfinger, 37
Gonytrichum, 112
Gracilacus, 275–277, 281, 310, 313
Gracilacus aculeata, 68
Gracilacus peratica, 276, 277, 285, 310
Gracilacus teres, 277, 285
Grafted plant, 113, 114, 115
Grafting, 121, 269, 296
Grande Naine, 14, 39
Grape, 68, 74, 200, 208, 209, 210, 211, 212, 213
Grapefruit, 67, 135, 160, 162, 164, 170, 171
Grapevine, 63, 73, 82, 195, 200–202, 206–213, 215, 216, 218, 219, 221, 223, 227–230, 233, 238, 241, 242, 286
Grapevine fanleaf nepovirus, 216
Grapevine Fanleaf Virus, 195, 208, 210
Grass, 221
Greece, 178, 217, 218, 219, 239–241, 243, 244, 275, 277, 278, 279, 280, 286, 301, 310, 311, 313–315
Greenhouse, 10, 14, 26, 39, 43, 59
Greenhouse studies, 226
Green-red, 5
Grenada, 10, 32
Gros Michel, 5, 8, 9, 11, 14, 26, 30, 31, 33, 36, 38, 40, 52, 53
Guam, 20
Guangdong province, 258
Guárico, 74
Guatemala, 102
Guava, 63, 64, 74, 75, 80
Guerrero, 102, 105, 110
Guinea, 17–20, 37, 47
Guineo, 33
Gulf of Mexico, 101
Gulf slope, 105
Gumi, 258
Gyeongbuk, 258

H

- Hainan, 19
 Halogenated hydrocarbons, 184
 Handling, 15, 21
 Hardiness, 39
 Hardwood cuttings, 206
 Harmony, 198, 199, 203, 207, 227
 Harvest, 13, 29, 44, 63, 64
 Harvesting, 102
 Haryana, 218
 Hatching, 11, 40, 43, 138, 146, 151
 Hawaii, 9, 20, 35, 57
 Heat shock protein genes, 261
 Heat treatment, 12, 15
 Heat-treated seeds, 16
Hedera, 220
Helicotylenchus, 64, 65, 66, 73, 74, 76, 77, 79–81, 111, 112, 115, 178, 275, 277, 278, 281, 314, 315
Helicotylenchus cavenessi, 125
Helicotylenchus crenacauda, 68
Helicotylenchus digonicus, 247, 248, 277
Helicotylenchus dihystra, 19, 68, 64, 66, 74, 124, 125, 131, 277, 281
Helicotylenchus erythrinae, 68, 125, 277, 281
Helicotylenchus multicinctus, 3, 7, 9, 14, 19, 21, 23, 24, 26, 31–33, 36, 38, 45–47, 51, 53, 54, 56, 60, 65, 66, 68
Helicotylenchus neopaxilli, 277
Helicotylenchus oleae, 277, 281
Helicotylenchus pseudorobustus, 277
Helicotylenchus tunisiensis, 278
Helicotylenchus vulgaris, 278
Hemicriconemoides, 64, 68, 76, 80, 81, 82
Hemicriconemoides cocophilus, 125
Hemicriconemoides communis, 68
Hemicriconemoides mangiferae, 64
Hemicriconemoides strictathecatus, 64, 66, 68, 76, 80
Hemicycliophora, 111, 159, 168, 172, 278
Hemicycliophora arenaria, 159
Hemicycliophora loofi, 125
Hemicycliophora nudata, 159
Hemicycliophora oostenbrinki, 125
Hemicycliophora paradox, 125
Hemileia vastatrix, 107, 111
 Herbaceous plants, 138
 Herbicides, 108
Heterodera, 125, 132, 247, 248, 250, 251, 252, 275, 276, 278, 281, 308, 309, 311, 312, 313, 315
Heterodera marioni, 247, 248
Heterodera mediterranea, 247, 276, 278, 288, 308, 315
Heterodera oryzicola, 10, 19, 21, 47
Heterodera schachtii, 41, 303
Hevea brasiliensis, 109
Hibiscus sabdariffa, 109
 Highgate, 5
 Highland bananas, 10, 23, 25, 26, 28, 29, 33, 39
Hirsutella rhossiliensis, 188, 191, 234, 238
 Histochemical studies, 40
 Histopathology, 283, 315
 Home garden bananas, 25
 Home gardens, 21
 Homologation procedures, 43
 Honduras, 10, 12, 15, 16, 17, 31, 32, 36, 39, 46, 54, 55
 Honey bee, 268
Hoplolaimus, 178, 278
Hoplolaimus aorolaimoides, 278
Hoplolaimus galeatus, 125
Hoplolaimus pararobustus, 10, 24–26, 125
Hoplolaimus seinhorsti, 10, 64–66, 68, 74, 80
 Hormones, 92
 Horn plantain, 5
 Horticultural characteristics, 39
 Host, 7, 11, 12, 14, 27, 29, 33, 35, 38, 43, 45, 46, 50, 51, 52, 57, 58, 59
 Household refuse, 21
 hsp70, 261
 HT-5203, 226
 Hubei province, 258

- Humic index, 302
 Humid forest, 22
 Humidity, 87, 90–92, 94–96, 120, 302
 Hungary, 218, 237
hunti-group, 260
 Hybrid, 4, 27, 36, 39, 40, 44, 45, 49, 52, 53, 59
 Hybrid VR 039-16, 205
 Hybrid VR 043-43, 205
 Hybridization, 186
 Hydrogen sulphide, 301
 Hydrolysis, 300
 Hyogo, 264
 Hyperplasia, 123, 151, 157, 159
 Hypersensitive resistance reactions, 199
 Hypersensitive response, 159
 Hypertrophy, 123
 Hyphae, 298
 Hyphomycetes, 234
Hypothenemus hampei, 107, 109, 110
- I**
Idiarthron subquadratum, 111
 IITA, 27, 29, 39, 44, 47, 56, 57
 India, 4, 5, 8, 9, 17, 19, 20–22, 34, 35, 36, 40, 52, 58, 120, 122, 124, 125, 132, 143, 154, 170, 218, 278
 Indian subcontinent, 158
 Indonesia, 5, 8, 9, 18–20, 34, 35, 36, 38, 50, 59, 120, 130, 132, 149
 Indonesian peninsula, 22
 Infection, 40, 48, 137, 141, 142, 148, 152, 157, 159, 161, 163, 164, 168
 Infectivity, 299
Inga, 106, 109
 Injectors, 15
 INMECAFE, 108, 118
 Inoculation, 14, 26, 43, 49, 202, 203, 204
 Insecticide, 128, 253, 265, 266, 267
 Insects pests, 64
 Insect vector, 253, 254, 255, 257, 258, 262, 263, 274
 Inspection, 73, 253, 270
 Instituto Mexicano del Café, 103, 104, 108, 118
 Integrated management, 119, 189
 Integrated Nematode Management, 112
 Integrated Pest Management, 127, 177
 Intercropping, 215, 225, 227, 233
 Intercrops, 28
 International Plant Genetic Resources Institute, 8
 Intracropping, 101
 Introduction, 254, 255, 258, 259, 262, 263
 Intundu, 5
 Iodomethane, 184
 IPGRI, 8, 57
 IPM, 7, 27, 29, 33, 34, 57, 58, 112, 113, 127, 130, 178, 189, 190
 IPM strategies, 27, 29, 33
 IPPC, 34, 35
 Iran, 218, 243, 244, 245, 246, 249–252, 275
 Iraq, 218, 244, 275
 Iron, 245
 Irrigation, 69, 71, 72, 85, 87, 90, 91, 93–96, 98, 135, 147, 182–184, 187, 192, 305–307
 Irrigation practices, 85
 Irrigation systems, 145, 149
 Irrigation water, 226, 241
 Isocyanates, 300
 Isopimpinellin, 303
 Isothiocyanates, 300, 310, 311
 Israel, 9, 14, 38, 138, 144, 160, 162, 165, 167, 168, 218, 278, 280, 312, 315
 Italia, 73, 74, 82
 Italy, 178, 187, 191, 215, 217–219, 227, 234, 241, 243, 244, 248, 254, 275, 277–280, 283, 286, 298, 299, 301, 308–311, 313–315
 ITS-RFLP, 261, 271
 Ivory Coast, 12, 16, 17, 23–26, 36, 39, 45, 49, 55, 56
 Ivy, 220, 221

J

Jalisco, 102
 Jamaica, 8, 13, 17, 20, 31, 33, 36, 38,
 46, 51, 54
 Japan, 154, 173, 253, 254, 258, 262,
 264, 265, 266, 269, 270, 271, 272,
 273
 Japanese black pine, 258, 265, 269
 Japanese pine forests, 269
 Japanese red pine, 258, 269
 Jarillazo, 79
 Jasmonic acid, 94
 Jiangsu Province, 258
 Jordan, 275, 276, 277, 278, 279, 280,
 288, 308, 310
 Juglans, 109
 Juvenile stages, 11

K

Kaleghochi, 246
 Kashmir, 244
 Kava, 20
 Kenya, 24, 25, 50
 Kerala district, 19
 Kerman province, 245, 246, 251
 Kernel, 244
 Khorasan province, 245, 246
 Kisubi, 5
 Korea, 253, 258, 262, 263, 269, 272,
 273, 274
 Kuharski Carrizo citrange, 154
 Kumquat, 135
 Kunnan, 5
 Kyoto University, 253, 269
 Kyoto, 253, 269, 270, 271, 273
 Kyrgyzstan, 244
 Kyushu island, 264

L

Laboratory, 14, 39, 42
 Lady's finger, 5
Lagenidium, 234
 Lakatan, 5
 Lake Maracaibo, 65
 Laknao, 5
 Land, 7, 15, 23, 28, 29

Land, clearing, 23
 Lannate, 129
 Lara State, 64, 73, 75, 77, 79, 81
 La Réunion, 10, 60
 Latin America, 5, 11, 15, 30, 33, 34,
 119
 Leaves, 14, 33
 Lebanon, 10, 57, 278, 313
 Leccino, 282, 284, 285, 288, 289,
 291, 292, 295
 Legislation, 34
 Leguminous, 66
 Lemon, 67, 135
 Lesion, 283, 294
 Lesion nematode, 3, 7, 9, 10, 12, 13,
 17, 25, 26, 34, 37, 45, 54, 59, 136,
 195, 206
Leucaena, 122
Leucoptera coffeella, 107, 111
 Levamisol hydrochloride, 267
 Libya, 278, 309
 Lignification, 40
 Lignin, 41, 94
Lilium longiflorum, 306
 Lime, 135
 Linoleic acid, 244
Litchi chinensis, 109
 Longevity, 13, 17, 29, 45, 77
 Longidoridae, 215, 217, 238, 239,
 240, 241, 242
 Longidorid nematodes, 216, 238, 242
Longidorus, 124, 125, 200, 209, 217,
 218, 220–222, 232, 234, 238–242
Longidorus africanus, 247, 278
Longidorus apulus, 217, 218
Longidorus artemisiae, 217, 241
Longidorus arthensis, 217
Longidorus attenuatus, 200, 223
Longidorus balticus, 217
Longidorus carpathicus, 217
Longidorus closelongatus, 278
Longidorus cretensis, 217, 278
Longidorus cylindricapitatus, 217
Longidorus dalmassoi, 217
Longidorus danuvii, 217
Longidorus distinctus, 231

- Longidorus elongatus*, 200, 217, 220, 221, 223, 227, 240, 241
Longidorus fagi, 217
Longidorus fasciatus, 217, 219
Longidorus helveticus, 223
Longidorus juglandicola, 217
Longidorus macrosoma, 217, 221, 223
Longidorus macrosoma, 278
Longidorus piceicola, 217
Longidorus pisi, 220, 221
Longidorus profundorum, 223
Longidorus siddiqii, 278
Longidorus sturhani, 217, 223
 Louisiana, 35
 Lousã, 259
 Lowlands, 8, 23
Lycopersicum esculentum, 109
- M**
- Maça, 5
 Macadamia, 107
Macadamia integrifolia, 109
Macadamia tetraphylla, 109
Macrophomina phaseolina, 75, 83
 Madagascar, 10, 22, 46, 60, 243, 244
 Magnesium, 245
 Maize, 66
 Malawi, 122, 123, 125
 Malaysia, 5, 8, 10, 19, 20, 35, 37, 45, 49, 56, 60, 130, 131, 132, 133, 134
Malpighia glabra, 64
 Malta, 218
 Management, 3, 4, 7, 8, 11, 12, 15, 16, 17, 21, 22, 26–29, 33, 34, 40, 43–46, 48, 49, 55, 56–61, 63, 64, 69, 73, 74, 79, 85, 101, 106–109, 111–113, 115, 118, 127, 128, 130, 135, 137, 143, 145, 147, 149, 153, 160, 166, 167, 171, 177, 178, 181, 182, 189, 190, 192, 193, 215, 222, 225, 226, 233, 235, 237, 239, 248, 250, 293, 302, 304, 307, 308, 310
 Management practices, 7, 18
 Management strategies, 3, 28
 Management tactics, 45
 Mandarin, 67, 135
 Manganese, 245
Mangifera indica, 75, 107, 109
 Mango, 63, 64, 75
 Manure, 301, 302, 309, 312
 Maracay, 63, 68, 81, 82, 83
 Maragogipe, 103, 107, 108
 Marantaceae, 35
 Marcus Tullius Cicero, 275
 Margarita Island, 73
 Maricongo, 33
 Marigold, 226
 Marigold oil, 304
 Maritime pine, 255, 259, 273
 Maritza, 220
 Market, 4, 8, 18, 30
 Martinique, 3, 12, 16, 30, 31, 39, 42, 47, 48, 52, 56
 Mastic tree, 244
 Matavia, 5
 Maturation time, 13
 Mauritius, 243
 Mazatecos, 106
 Mbire, 5
 Mediterranean Basin, 200
 Mediterranean biotype, 68, 143
 Meiotic parthenogenesis, 196, 201
Meloidogyne, 3, 7, 10, 12, 19, 21, 23–26, 31, 33, 36, 38, 42, 45–48, 51–57, 60, 64, 65, 68, 73–77, 79–83, 98, 99, 107, 110, 111, 114, 115, 117, 122, 123, 125, 131–134, 141, 158, 161, 162, 165, 166, 168–170, 172, 173, 178, 179, 182, 185, 186, 190–193, 195, 196, 198, 199, 207–211, 213, 214, 275, 276, 278, 279, 281–283, 292–294, 303, 307–309, 311–315
Meloidogyne arenaria, 19, 32, 42, 65, 75, 122, 123, 130, 158, 178, 186, 196, 197, 198, 199, 214, 278, 303
Meloidogyne acrita, 122, 199, 278
Meloidogyne arabicida, 112
Meloidogyne baetica, 278, 282
Meloidogyne exigua, 68, 122, 123, 125
Meloidogyne floridensis, 178

- Meloidogyne fujianensis*, 158
Meloidogyne graminicola, 19
Meloidogyne hapla, 178, 196, 197, 207, 278, 303
Meloidogyne hispanica, 178
Meloidogyne incognita, 14, 21, 32, 38, 41, 64–66, 68, 74, 75, 76, 77, 79, 80–83, 112, 115, 122, 123, 125, 126, 158, 178, 186, 187, 189, 196, 197, 198, 199, 214, 246, 247, 249, 278, 281, 282, 284, 288–294, 296, 297, 299, 300, 301, 303, 305
Meloidogyne javanica, 19, 32, 65, 74, 76, 77, 79, 122, 123, 125, 130, 158, 161, 178, 186, 189, 192, 196–198, 214, 246–250, 252, 278, 281, 282, 284, 294–296, 298, 303, 305, 313
Meloidogyne lusitanica, 279, 282, 308
Meloidogyne mayaguensis, 64, 81
Meloidogyne morocciensis, 178
Meloidogyne oteifae, 158
Meloidogyne thamesi, 122, 125
 Melon, 113
 Mérida, 65, 77
 Meristem, 16, 38, 44
Merlinius, 247
Merlinius brevidens, 279
 Mesulfenfos, 267
 Metabolism, 89
 Metam potassium, 184
 Metam sodium, 148, 184, 305
 Metanoic acid, 98
 Methane, 98
 Methomyl, 227
 Methyl bromide, 112, 128, 132, 148, 153, 178, 184, 185, 193, 201, 212, 226, 237, 267
 Methyl iodide, 185
 Methyl isothiocyanate, 184, 185
 Methyl phenphos, 267
 Mexican Institute of Coffee, 104
 Mexican Republic, 102
 Mexico, 8, 101, 102, 103, 104, 105, 106, 108, 109, 111, 112, 114, 115, 116, 117, 243, 256, 275
 Michoacán, 101, 102
 Microarthropods, 301
 Microbial antagonist, 3
 Microbial biodegradation, 44
 Microbial degradation, 148
Microcitrus hybrid, 155
 Microfauna, 301
 Micronutrient, 14, 33, 67, 68
 Microorganism, 42, 43, 130, 265
 Microsclerotia, 300
 Microsprinkler, 135
 Middle East, 6, 143, 160, 219, 243, 244
 Migration, 11
 Migratory endoparasites, 7, 42, 136
 Milam lemon, 152, 154
 Milbemectine, 267
 Minirhizotron, 85, 95, 97
 Miranda, 67, 70, 73, 79
 MIT, 184, 185
 Mites, 64
 Mitotic parthenogenesis, 196
 Mixed-cropping production system, 18
 Mixes, 106
 Mixtecos, 106
 Modelling, 234
 Modelling studies, 39
 Moisture, 135, 141, 144, 145, 151, 161, 172
 Mokpo, 258
 Moldova, 218
 Molecular beacon, 223, 224
 Molecular detection tools, 215
 Molecular detection, 222
 Molecular probe, 224
Monacrosporium elliposporum, 188
 Monagas, 67, 68, 70, 76, 83
 Monitoring programme, 15
Monochamus alternatus, 253, 257, 265, 266, 271, 272

- Monochamus beetles, 257, 266, 267, 269
Monochamus galloprovincialis, 255, 259, 273
 Monocultivation, 108, 110
 Monoculture, 8, 18
 Mononchids, 128
Monotrichodoros, 218
Monotrichodoros monohystera, 64, 66, 68
 Montreal Protocol, 112
 Moraiolo, 296, 297
 Morantel tartarate, 267
 Morelos, 103
 Morocco, 10, 51, 178, 193
 Morphological identification, 260
 Morphological variations, 11
 Moulting, 216
 Mountain System, 105
 Mtp 3146-1-87, 205, 206
Mucuna pruriens, 28
Muhlenbergia schreberi, 189
 Mujuba, 5
 Mulberry, 220
 Mulched plants, 29
 Mulching, 3, 28, 48, 53
 Multiplication rate of nematodes, 39
 Mundo Novo, 103, 104, 106, 107, 108
Musa, 3, 4, 7, 8, 11, 14, 17–19, 21, 22, 23, 26, 30–33, 36–41, 44–60, 107, 121
Musa AA, 30, 36
Musa AAA, 11, 23, 30, 32, 65, 81
Musa AAB, 19, 30, 32, 33, 46, 65, 65, 82
Musa ABB, 23, 30, 32
Musa acuminata, 4, 109
Musa balbisiana, 4, 40
Musa genome AA, 18
Musa genome AAA, 18
Musa genome AAB, 18
Musa genome AB, 18
Musa genome ABB, 18, 31
Musa group AAA, 24
Musa group AAB, 24
Musa group ABB, 24
Musa group EAHB, 24
Musa group mixed, 24
Musa varieties, 4
Muscadinia, 195, 197, 202, 204, 205, 206, 208, 209, 213
Muscadinia rotundifolia, 195, 197, 198, 204–206, 210, 227
 Muscle activity blockers, 267
Mycena citricolor, 106, 107, 111
Mycoleptodiscus terrestris, 124
 Mycorrhizae, 42
 Mycorrhizal infection, 130
Mycosphaerella fijiensis, 23
 Myrobalan plum, 187
 Myrosinase, 232
 Mysore, 5
- N**
 Nahuas, 106
 Na methyldithiocarbamate, 305
 Natural hybridization, 4
 Nayarit, 102, 105, 108, 110, 118
 NCS, 267
 Necrosis, 11, 13, 15, 23, 26, 35, 37, 43, 52, 79, 137, 141, 160, 281, 288
 Nemadectin, 267
 Nemaguard, 186
 Nematicidal activity, 303, 304, 313
 Nematicidal plants, 215, 232, 235, 239, 303
 Nematicide, 3, 14–17, 21, 26, 28, 33, 34, 42, 44–46, 48, 51, 54, 59, 66, 75, 79, 87, 91–95, 101, 119, 124, 127, 128, 129, 142–145, 148, 149, 153, 154, 158, 162, 168, 170, 171, 173, 178, 185, 187–189, 192, 226, 227, 253, 267, 305, 307, 308
 Nematicide treatments, 14, 26
 Nematode, 3, 4, 7–19, 21–61, 63–67, 69–71, 73–80, 85–93, 95, 96, 98, 99, 101, 110, 111, 114, 119, 122–124, 126–173, 177–202, 206–209, 212, 213, 215, 216, 218, 219, 221–228, 230, 231, 233–243,

- 246–255, 257, 258, 261, 263, 266, 267, 269–277, 281–283, 285, 286, 288, 289, 292–315
- Nematode analysis, 95
- Nematode attack, 86, 179
- Nematode control method, 12
- Nematode control, 124
- Nematode countings, 15
- Nematode counts, 16
- Nematode density, 143, 144, 145
- Nematode management strategies, 85
- Nematode management, 143, 147
- Nematode populations, 69, 74, 178, 181, 182, 183, 188, 189, 190
- Nematode reproduction, 88
- Nematode species, 7, 12, 13, 19, 23
- Nematode survival, 7
- Nematode transmitting viruses, 86
- Nematode vectors, 215–219, 225, 237, 239, 240, 241
- Nematology, 7, 47
- Nematophagous fungi, 297, 312
- Nemfix, 234
- Neodiplogaster tropica*, 125
- Neolobocriconema olearum*, 279
- Neopsilenchus magnidens*, 279
- Nepovirus, 216, 180, 191
- Nested-PCR, 269
- New Caledonia, 35
- New Delhi, 158
- New South Wales, 160
- New Zealand, 218
- Ney poovan, 5
- Niacin, 245
- Nigeria, 23–27, 29, 36, 39, 47–49, 57, 58, 119, 120, 122–125, 128–133
- Nitrile, 300
- Nitrite, 301
- Nitrogen, 302
- Non-fumigant nematicide, 15, 185, 304, 307
- Non-quarantine pests, 225
- North Africa, 6, 243
- North America, 6, 8, 143, 155, 160, 180, 216, 218, 253, 254, 255, 256, 258, 260, 275
- North Carolina, 197, 211, 213
- North Yemen, 10
- Nothocriconema princeps*, 279
- Nshakara, 5
- Nuccellus, 121
- Nuclear genome, 40
- Nucleotide polymorphisms, 223, 224
- Nueva Esparta, 68, 73
- Nurse cells, 89, 137, 138, 139
- Nursery, 29, 33, 36, 43, 68, 76, 77, 119, 131, 136, 146, 147, 151, 153, 155, 156, 160, 167, 170, 288, 293, 294, 299, 304, 305, 306, 307, 311, 312, 315
- Nutrient deficiencies, 64
- Nutrients, 136, 139, 140, 144, 154
- Nyoya, 5
- O**
- Oaxaca, 102, 105, 107, 108, 110, 117
- Oceania, 3, 8, 17, 18, 21, 22, 45, 218
- OcI deltaD86, 41
- Ocimum gratissimum*, 130
- Oesophagus, 216
- Ogma*, 275, 279, 281, 315
- Ogma civellae*, 279
- Ogma rhombosquamatum*, 279, 288, 315
- Ohady, 246
- Oilseed cakes, 301
- Ojo de gallo, 106
- Olea europaea* L. subsp. *europaea*, 275
- Olea europaea*, 68
- Oleic acid, 244
- Oligonychus coffeae*, 110, 111
- Olive, 68, 136, 143, 250, 252, 275, 281, 283, 291, 294, 296, 300, 308, 309, 311–314
- Olive mill wastes, 303
- Olive pomace, 302, 303, 309, 312

Olive roots, 275, 276, 281, 285, 288, 299, 308, 309
 Oman, 138, 154, 167
 Orange, 64, 66, 135, 170
 Organic amendments, 101, 119, 124, 128, 129, 130, 131, 134, 215, 228, 237
 Organic coffee, 103, 104, 105, 108, 115
 Organic management, 234
 Organic matter, 98, 227, 230
 Organic molecules, 98
 Organic mulches, 29
 Oriental States, 66, 68
 Ornamental plants, 177
 Ornamental species, 107
 Ornamentals, 9, 10, 35, 46
 Orography, 63
 Osmotic pressure, 140
 Otomis, 106
 Ovipositing beetles, 257
Oxalis rosea, 233
 Oxamyl, 129, 227, 307
 Oxazolidine2-ethione, 300
 Oxygen, 63, 87, 94
 Ozonated water, 306
 Ozone, 113, 305, 306, 309, 310
 Ozone generator, 306

P

Pacamar, 103
 Pacific, 4, 5, 20, 22, 34, 45, 47–50, 52, 54–56, 58–60, 101, 102, 105, 106, 110
 Pacific Slope, 102
Paecilomyces lilacinus, 42, 58, 141, 170, 188, 297
 Pakistan, 218, 243, 244, 248, 251
 PAL, 287
 Pamir, 275
 Panama, 20
 Panama disease, 8, 11, 54
 Pangola grass, 16, 33
 Pantothenic acid, 245
 Papaya, 63, 64, 76–78, 80, 81
 Papua New Guinea, 35

Paraguanera, 76, 77, 78
Paralongidorus, 124
Paralongidorus iberis, 218, 239
Paralongidorus litoralis, 247, 248, 252
Paralongidorus maximus, 220, 221, 223
Paralongidorus monegrensis, 218, 239
Paraphelenchus pseudoparietinus, 279
 Parasitic fungi, 42
 Parasitism, 3, 37
 Parasitoid, 267
Paratrichodorus, 124, 160, 171, 216, 217, 218, 240, 242
Paratrichodorus christiei, 125
Paratrichodorus lobatus, 160
Paratrichodorus minor, 68, 160, 233, 279
Paratrichodorus pachydermus, 217, 235
Paratrichodorus porosus, 160
Paratrichodorus teres, 279
Paratrophurus loofi, 279
Paratylenchus, 68, 74, 76, 77, 79, 80, 178, 246, 247, 279
Paratylenchus arculatus, 125, 279
Paratylenchus baldacii, 279
Paratylenchus elachistus, 68
Paratylenchus hamatus, 246, 247
Paratylenchus minutus, 68
Paratylenchus nawadus, 79
Paratylenchus projectus, 247
Paratylenchus vandenbrandei, 279
 Parenchyma, 11
 Parenchyma cells, 12, 123
 Paring, 12, 15, 26, 27
Parthenocissus, 204
Paspalum notatum, 182
Passiflora, 77, 82, 83
Passiflora edulis f. sp. *flavicarpa*, 77, 78, 83
Passiflora edulis, 77
Passiflora quadrangularis, 78
 Passionfruit, 63, 77

- Pasteuria*, 141, 164, 170, 171, 234, 236, 238
Pasteuria penetrans, 42, 188, 243, 249, 251
 Pathogen, 77, 86, 87, 90, 94, 181
 Pathogenic fungi, 298, 305
 Pathogenicity, 7, 16, 26, 33, 49, 51, 54, 57, 142, 149, 155, 160, 162, 167, 170, 172, 253, 266
 PCR, 200, 201, 210, 213, 214, 222, 223, 224, 238, 239, 242, 261, 262, 271, 273
 PCR-based diagnostics, 261
 PCR amplification, 261
Pea early-browning tobravirus, 217
 Peach, 63, 78, 79, 177, 178, 186, 192, 199, 209, 213, 216, 220, 221, 227, 234
 Peach nematode, 79
 Peach rosette mosaic nepovirus, 200, 216
 Peach Tree Short Life, 180
 PEBV, 217
 Pelipita, 5, 30
 Pellets, 300, 311
Peltamigratus, 111
Peltamigratus holdemani, 125
Peltamigratus macbethi, 79
 Pendolino, 288–292
 Pepper, 9, 19, 35, 199, 210, 220, 221
Pepper ringspot tobravirus, 217
 PepRSV, 217
 Perennial crop, 124, 125, 188
 Perennials, 4, 18, 140, 143, 199
 Permanent farming system, 22
 Permanent plantain crop, 28
 Perolera, 79
Persea americana, 65, 109
 Persimmon, 20, 68
 Peru, 218, 275
 Pest avoidance, 190
 Pest, 3, 4, 7, 10, 13, 19, 21–23, 25–27, 29, 30, 34–36, 39, 43, 45, 47, 48, 50, 51, 54, 55, 58, 60, 190, 225
 Pesteh, 243
 Pest management, 7, 48
 Pest risk analyses, 225
 Pesticide, 7, 29, 34, 36, 39, 127, 128
 Pesticide application, 27, 29
 Peyan, 5
Phaseolus vulgaris, 109
 Phenol, 40, 286, 287, 301
 Phenological stages, 69
 Phenology, 71
 Phenotypic differences, 39
 Phenylalanine ammonia lyase, 140
 Phenylpropanoid compounds, 40
 Phenylphenalenone, 40
Phialophora, 112
 Philippines, 5, 8, 9, 10, 14, 16, 18, 19, 21, 35, 37, 38, 42, 45, 48, 50, 52, 54–56, 58, 59, 60
 Phloem, 151
Phoenix dactylifera, 73
Phoma costarricensis, 111
 Phosphorganics, 307
 Phosphorus, 230, 245
 Phylloxera, 196, 197, 204, 205, 208, 210
Physalis ixocarpa, 109
 Phytoalexins, 40
 Phytoparasitic nematodes, 86, 90, 92, 94, 95
Phytophthora, 137, 142, 147, 163, 164, 165, 234, 246
Phytophthora cinnamomi, 65, 79
Phytophthora citrophthora, 142, 163
Phytophthora megakarya, 124
Phytophthora nicotianae, 137, 142, 147, 164, 165
Phytophthora nicotianae, 142, 147
 Phytosanitary legislation, 217
 Phytosanitary risk, 255
 Phytotoxic activity, 305
 Phytotoxic effects, 234
 Phytotoxicity, 185, 15, 184, 304, 306
Picea, 256
Pimenta dioica, 107, 109
 Pine, 220
 Pineapple, 11, 16, 35, 41, 48, 63, 64, 79

- Pine stand, 268, 269
 Pine tissues, 267
 Pine trees, 258, 259, 260, 265, 266, 267, 268, 269, 271, 273, 274
 Pine wilt disease, 253, 263, 269, 270, 271, 272, 273
 Pine wilt nematode, 253
piniperdae-group, 260
 Pink blight, 111
Pinus, 253, 255, 256, 258, 268, 269, 273
Pinus densiflora, 253, 258, 269
Pinus luchuensis, 258
Pinus pinaster, 253, 255, 258
Pinus thunbergii, 253, 258, 265, 269
 Pisang awak, 26, 57
 Pisang berangan, 5
 Pisang jari buaya, 36–38, 40
 Pisang kelat, 5
 Pisang lilin, 5
 Pisang mas, 5
 Pisang masak hijau, 5
 Pisang nangka, 5
 Pisang raja, 5
 Pistachio, 243–252
Pistacia atlantica, 244, 246, 248, 249
Pistacia cabulica, 244
Pistacia chinensis, 244
Pistacia falcata, 244
Pistacia integerrima, 244, 246, 249
Pistacia khinjuk, 244, 245, 249
Pistacia kurdica, 244
Pistacia lentiscus, 244, 248
Pistacia mutica, 244, 245, 249
Pistacia palaestina, 244, 249
Pistacia terebinthus, 244, 246, 248
Pistacia vera, 243–252
 Pit observation, 95
Pithecolobium, 122
Plagiohammus maculosus, 111, 107
Plagiohammus spinipensis, 111
Planococcus citri, 110, 111
 Plant, 63, 65, 66, 67, 69, 71, 72, 73, 74, 76, 77, 78, 79
 Plantain hybrids, 30
 Plantain, 10, 25, 26, 30–33, 38, 47, 49, 50, 51, 53, 54, 55, 56, 63, 64, 65, 66, 121
 Plantation longevity, 11, 23, 26, 32, 48
 Plantation, 3, 8, 9, 10, 13, 15, 16, 17, 21, 25, 46, 54, 60, 73, 75, 76
 Plant defence mechanisms, 3
 Plant defence, 3, 40, 41, 42
 Plant growth, 13, 14, 21, 33, 50, 52, 77
 Plant Health Directive 2000/29/EC, 216, 225
 Plant health measures, 3, 34
 Plant husbandry, 127
 Planting, 3, 7, 9, 12, 13, 15, 17, 21, 22, 25–27, 29, 31, 33, 35, 45, 48, 51, 59, 60
 Planting material, 3, 9, 12, 15, 21, 22, 25–27, 29, 31, 33, 35, 48, 59, 60, 127, 293, 294
 Plant-parasitic nematodes, 13, 36, 40–43, 45, 52, 53, 57–60
 Plant physiology, 14
 Plant products, 302
 Plant Protection Convention, 34
 Plant resistance, 85, 88, 94
 Plant size, 13
 Plant tissues, 257
 Plant toppling, 66
 Plant varieties, resistant, 7
 Plant vigor, 27, 85, 95
 Plant viruses, 124, 133
 Pliny the Elder, 275
 Plot, 32, 44
 Plum, 177, 186, 192, 199, 209–211
 Plum hybrid, 187
 Pluma Hidalgo, 106, 107
Pochonia chlamydosporia, 188, 243, 249, 250, 252, 297
 POD, 287
Pogonomyrmex barbatus, 111
 Poland, 218, 238
 Pollen, 37
 Polyclonal antibodies, 261
 Polycultivation system, 105

- Polycultivation, 106, 108, 109, 111, 114
 Polyculture, 101
 Polyculture system, 106, 109
 Polyethylene films, 250
 Polynesia, 36
 Polyphenol oxidase, 40
 Pome, 30
 Pomelos, 135
Poncirus, 135, 147, 161, 165, 166, 168, 171
Poncirus biotype, 68
Poncirus trifoliata, 67–70, 142, 143, 147, 152, 155, 159,
 Poovan, 5
 Popoulou, 5
 Population density, 13, 108, 110, 114, 144, 146, 177, 179, 180, 181, 182, 183, 187, 189
 Population development, 138, 152
 Population dynamics, 14, 39, 44, 59
 Population growth, 136, 138, 139, 140, 141, 143, 151, 155, 157
 Population increase, 88
 Portugal, 218, 241, 253–256, 259, 262, 263, 270, 272, 273, 277–280, 308, 311–313
 Portuguesa, 65, 75, 76
 Potassium, 245
 Potato, 217, 227, 235, 238, 239, 240
 Poteau, 5
 Poyo, 12, 39, 40, 47, 49, 53, 55, 56, 57
 PPO, 40
 Prata, 5, 30
Pratylenchoides, 247
Pratylenchoides ritteri, 279
Pratylenchus, 3, 7, 9, 12, 25, 31, 33, 37, 42, 46, 48, 50, 51, 53–55, 58, 60, 65, 73, 74, 76, 79, 80–82, 89, 98, 110–112, 114, 115, 178, 179, 182, 192, 193, 246–249, 252, 275, 279, 281, 293, 294, 306, 310, 311, 312, 314
Pratylenchus thornei, 247
Pratylenchus brachyurus, 68, 74, 79, 80, 125, 124, 154, 155, 161, 165, 169–171, 179
Pratylenchus coffeae, 9, 12, 14, 19, 21, 23–26, 31, 32, 34, 36, 37, 39, 40, 42, 44, 65, 66, 124, 125, 146, 153–157, 163, 165, 166, 169, 170, 173, 279
Pratylenchus convallariae, 179
Pratylenchus crenatus, 179, 279
Pratylenchus fallax, 279
Pratylenchus goodeyi, 7, 9, 10, 14, 23–26, 28, 34, 36, 37, 39
Pratylenchus hamatus, 247
Pratylenchus hexincisus, 179
Pratylenchus jaehni, 154, 166
Pratylenchus microdorus, 279
Pratylenchus neglectus, 179, 246–248, 279
Pratylenchus penetrans, 73, 178, 179, 186, 207, 233, 247–249, 275, 279, 306, 310
Pratylenchus pratensis, 179
Pratylenchus thornei, 179, 279
Pratylenchus vulnus, 178, 179, 186, 190, 195, 206, 207, 212, 246, 247, 252, 275, 279, 283, 285, 288, 289, 290–293, 299
Pratylenchus zaeae, 68, 179
 Precociousness, 87
 Predators, 301
 Pre-planting measures, 177, 181, 182
 Prevention, 85, 177, 178, 181, 182, 190
 Primary root, 12, 13
 PRMV, 216
 Proanthocyanidins, 40
 Probe, 223, 224
 Production, 135, 140, 145, 154, 161, 166, 168, 169, 170, 171
 Production cycle, 86
 Productivity, 39, 40, 45, 129, 131
 Progeny, 4
 Propagation, 52
 Propagation material, 68, 219, 225
 Propane, 98

- Prophylactic measures, 36
 Prophylactic methods, 34
 Protein, 41
 Prunes, 177, 178
 Pruning, 108
Prunus, 177, 178, 179, 180, 181, 186, 187, 190, 191, 192, 193
Prunus armeniaca, 177
Prunus avium, 177, 186
Prunus cerasifera, 177, 186
Prunus cerasus, 177
Prunus davidiana, 188
Prunus domestica, 177, 186
Prunus dulcis, 177
Prunus insititia, 186
Prunus mahaleb, 185, 186
Prunus munsoniana, 186
Prunus persica, 78, 107, 177, 186
Prunus salicina, 177, 186
Pseudococcus cryptus, 110
Pseudomonas, 42, 180, 188, 193, 236
Pseudomonas 'BG33R', 188
Pseudomonas syringae, 180
Pseudotsuga, 256
Psidium fiedrichsthalianum, 75
Psidium guajava, 74, 75, 83, 107
Psilenchus, 279
 Psoralen, 303
 PTSL, 180, 182, 186, 187, 188
 Puebla, 102, 103, 106–108, 110, 117, 118
 Puerto Rico, 31, 33, 56, 57, 157
 Purple passion fruit, 77
 PVC plastic films, 305
 PWD, 253, 254, 258, 263, 264, 265, 266, 267, 268, 269, 270
 PWN, 253, 254, 255, 256, 257, 258, 259, 261, 262, 263, 264, 266, 267, 268, 269, 270
Pythium, 234, 235
- Q**
 Quantitative PCR, 223
 Quarantine, 11, 30, 34, 35, 45, 114, 177, 182, 181, 190, 217, 221, 224, 225, 226, 227, 253, 256, 259
- Quiescence, 12
Quillaja saponaria, 304, 309
 Quillay, 304
- R**
 Radiation, 108
 Radical tissue, 88, 89
Radopholus citri, 149
Radopholus similis, 3, 7–21, 23–26, 28, 30–61, 65, 66, 125, 146, 149, 150, 152–155, 161, 163–169, 171, 172
Radopholus, 3, 7, 9, 25, 31, 34, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 111, 279
 Rafsanjan, 246, 251
 Rainfall, 102, 120
 Ramsey, 198, 199, 202, 203, 207
 RAPD, 261, 262, 272, 274
 RAPD markers, 142
Raphanus sativum, 300
 Raspberry, 216, 219, 220, 221, 227, 240, 241
 Raspberry ringspot nepovirus, 217
 Ratoons, 13, 29
 rDNA ITS regions, 261
 rDNA sequences, 157
 Real-time PCR, 261
 Rectum, 138
 Red, 5
 Red pine, 269
 Red ring disease, 71, 72, 73
 Red Spanish, 79, 80
 Replanting, 16, 28, 44
 Reproduction potential, 203
 Reproductive capabilities, 11
 Republic of Georgia, 218
 Republic of South Africa, 38
 Research institute, 8, 44
 Research station, 36
 Resin exudation, 265
 Resistance, 3, 14, 27, 29, 33, 36–41, 43, 45–50, 53–55, 57–60, 75, 79, 81, 85, 88, 89, 93, 94, 101, 113, 141, 142, 143, 148, 152, 154, 155, 163–168, 172, 177, 178, 185–187,

- 191–199, 202–214, 225, 227, 253, 258, 263, 267, 268, 270, 294, 295, 314
- Resistance-breaking biotypes, 198
- Resistance-breaking populations, 198, 199, 207
- Resistance durability, 199
- Resistance genes, 148, 154, 199
- Resistance mechanisms, 199, 200
- Resistance spectra, 199
- Resistance trait, 142
- Resistant cultivars, 294
- Resistant grapes, 196
- Resistant grapevine, 195
- Resistant hybrids, 142
- Resistant planting materials, 119, 127
- Resistant rootstocks, 147, 152, 153, 185, 186, 190, 296
- Resistant varieties, 34
- Retention, 216, 222, 241
- Reverse transcription, 224
- Rhabditis, 128
- Rhizobacteria, 42, 43, 52, 56
- Rhizoctonia solani*, 235
- Rhizome, 4, 8, 11, 12, 15, 21, 27, 32, 54–56
- Rhizoplane, 139
- Rhizosphere, 135, 138, 139, 140, 141, 142, 151, 152, 154, 159, 160, 163, 164, 178, 181, 190, 192, 286
- Riboflavin, 245
- Ribosomal DNA, 223, 241
- Ribosomal probes, 261
- Rice, 4, 19, 41, 56
- Ricinin, 301
- Ridge Pineapple, 152, 154
- Ring nematode, 180, 195, 207
- Rizosphere, 96
- RKN, 195, 196, 197, 198, 199, 200, 202, 204, 205, 207
- RKN resistant rootstocks, 207
- RNA-1 molecule, 223
- RNA-2 molecules, 223
- Robusta, 5
- Robusta coffee, 107
- Rojo, 66, 107
- Romania, 218
- Root, 4, 9, 10–16, 18, 22, 25, 26, 28, 32, 34, 41, 42, 44, 46, 48, 49, 50, 52, 54, 58, 60, 61, 65, 85–87, 93, 123, 137, 139, 140, 144, 146, 147, 149, 150, 151, 154, 157, 160, 179, 180, 183, 286–288, 291, 300
- Root abundance, 160
- Root cell compounds, 41
- Root cell structure, 86
- Root cells, 179, 180
- Root disease, 65
- Root gall index, 288, 291, 300
- Root growth, 87, 93, 140, 147, 149, 151, 157
- Root-knot nematode, 3, 10, 12, 14, 19, 23, 32, 38, 48, 54, 58, 59, 73, 101, 119, 122, 123, 124, 127, 130, 133, 134, 136, 195, 196, 201, 204, 208, 210, 211, 213
- Root lesion nematodes, 179
- Root mass density, 137, 144, 146
- Root pathogens, 42
- Root phenols, 286
- Root sampling, 14
- Rootstock, 67, 69, 70, 74, 75, 78, 79, 85, 89, 90, 98, 127, 141–144, 147, 152, 154, 155, 157–159, 162–164, 166–172, 195, 196, 197, 199, 202–213, 243, 246–249, 252, 275, 276, 281, 283–286, 293, 294, 296, 310, 312, 313
- Root surface, 123
- Root system, 85, 139, 150, 154, 179, 180, 183
- Root weight, 14
- Rose, 220
- Rossellinia bunodes*, 111
- Rossetti, 73
- Rotation, 10, 11, 16, 17, 21, 28, 29, 33, 34, 44, 45, 57, 66, 294
- Rotylenchulus macrorodatus*, 247, 248, 252, 276, 280, 286, 315
- Rotylenchulus macrosomus*, 247, 280

- Rotylenchulus reniformis*, 10, 19, 32, 41, 48, 59, 65, 66, 68, 74, 76–83, 124, 125, 280, 286
Rotylenchulus, 65, 73, 74, 76–79, 81–83, 275, 276, 280, 281, 308, 309, 315
Rotylenchus caudaphasmidius, 68
Rotylenchus cypriensis, 280
Rotylenchus microstriatus, 125
Rotylenchus robustus, 280
Rotylenchus, 247, 280
 RRSV, 217, 221, 223, 227
 RT-PCR, 223
 Rubber, 18
 Rue plant, 303
 140 Ruggeri, 205
 Russia, 178, 218, 241
 Rust spot, 111
Ruta graveolens, 234, 303, 311–315
Ruta graveolens, 303
 Rutaceae, 135, 152
 Rwanda, 24
- S**
 Saba, 5
 Safet velchi, 5
Saissetia, 110
Saissetia coffea, 111
Saissetia oleae, 111
 Salicylic acid, 94
 Salinity, 137, 140, 144, 147, 164, 167, 245, 246
 Salt Creek, 198, 202, 203
 Sampling, 85, 95, 96
 Sampling method, 14
 Sanitation, 136, 146, 147, 153, 266
 Sanliurfa province, 247
 Sao Paulo State, 154, 161
 São Tomé, 122
 Sapodilla, 63, 80, 82
 SAR, 41, 92, 94
 Sarakhs, 245
 Satellite DNA, 261, 262, 273
 Saturna, 235
Sclerodermus, 268
 Scorpions, 224
 Screening, 14, 36, 38, 49, 53, 54, 55, 294, 295, 314
Scutellonema brachyurum, 68, 125
Scutylechus quettensis, 247, 248
 Seasons, 63
 Secondary metabolites, 43, 60
 Secondary pathogens, 151
 Sedentary endoparasites, 136
 Sedentary nematodes, 41, 250
 Seed, 12, 22, 37, 44, 89, 90, 119, 121, 127
 Seedbeds, 121, 294
 Seedling, 76, 119, 121–124, 126, 127, 128, 129, 130, 131, 142, 152, 155, 156, 160, 164, 165, 168–172, 185, 202, 269
 Seed plants, 15
 Seed treatment, 15
 Selection, 269
 Selection program, 249
Selenaspidus articulatus, 111
 Semnan, 246
 Senescence, 179
Sesamun indicum, 233
 Setúbal Peninsula, 255, 256
Severinia buxifolia, 142, 159
 28S gene, 261
 Shade coffee, 101
 Shade trees, 121, 122
 Shandong Province, 258
 Shoots, 123
 Sibling species, 11
 Sicily, 248
 Silk, 5
 Silk Fig, 30
 Silk worm, 268
 Sinan, 258
Sinapis alba, 233
 Sistan, 246
 Slovakia, 218, 240
 Slovenia, 218, 241
 Slow decline of citrus, 136, 137
 Slow decline symptoms, 136
 SLRSV, 200, 219, 221, 227, 216, 288, 294
 SLRV, 240

- SO₄, 204, 205, 207
 Sodium, 136, 140
 Sodium azide, 184
 Soil, 3, 8–10, 12, 14–18, 23, 27–32, 35, 41–44, 46, 48, 50, 51, 53, 55, 58, 60, 87, 88, 90, 91, 92, 93, 94, 95, 96, 97, 98
 Soil amendment, 130, 133, 301
 Soil-borne organisms, 300
 Soil-borne pathogens, 183, 184, 246
 Soil-borne viruses, 122
 Soil chemical characteristics, 304
 Soil conditions, 139
 Soil conservation, 107
 Soil eutrophication, 265
 Soil fertility, 28, 32
 Soil fumigant, 128, 178, 190
 Soil fumigation, 159, 160, 184, 194
 Soil fungi, 77
 Soil horizon, 154, 157
 Soil microbial population, 250
 Soil microflora, 301
 Soil microspaces, 95
 Soil moisture, 135, 139
 Soil organisms, 141, 152
 Soil pH, 144
 Soil preparation, 183, 184
 Soil samples, 74
 Soil solarization, 177, 178, 183, 243, 248, 252, 300
 Soil submersion, 87
 Soil temperature, 299, 304
 Soil water potential, 157
 Solarization, 183, 193, 298, 299, 300, 315
 Solid cake, 302
 Solomon Islands, 18, 19, 35
 Sorghum, 33, 183
 Source of resistance, 37
 South Africa, 24, 25, 51, 143, 145, 147, 148, 154, 155, 160, 162, 167, 168, 188, 218,
 South America, 6, 8, 119, 120, 218, 275
 South Asia, 20
 South Carolina, 180, 192, 193
 Southeast Asia, 8, 10, 17, 18, 35
 Southern Asia, 20
 Sowing, 63
 Soybean severe stunt virus, 226
 Soybean severe stunt, 226
 Spain, 138, 141, 146, 165, 168, 170, 171, 172, 177, 178, 187, 191, 193, 207, 212, 218, 239, 240, 254, 275, 277–280, 285, 294, 299, 301, 308, 309, 312, 313
 Species-specific primers, 261
 Spicule structure, 260
 Spiral nematode, 3, 9, 12, 19, 33
Spondias purpurea, 107
 Spraing disease, 217, 227
 Spraying, 253, 265, 266, 267
 Spreading decline symptoms, 150
 Spreading decline, 149, 150, 152, 153, 154, 163, 164, 171
 Spring treatment, 96
 Sri Lanka, 19, 20, 34, 35, 50
 SSS, 226
 SSS severity, 226
 SSSV, 226
 State of Mexico, 103
 Steam, 183
 Steam applications, 177
 Steam sterilization, 304
 Stele, 11
 Stellar structures, 288
Stenotrophomonas maltophilia, 236
 Sterculiaceae, 119
 Stone fruit orchards, 180, 182, 184, 188, 190, 192
 Strawberry latent ringspot sadwavirus, 200, 216, 288
 Strawberry, 113, 227, 305, 306
 Stress, 68, 74, 79
 Struma, 220
 Stunting, 10, 12, 13, 35, 64, 123, 124
 Stylet, 86, 88, 216, 276, 285
 Suberin, 94
 Sub-group Bluggoe, 5
 Sub-group Cavendish, 5
 Sub-group Chuoi Xiem, 5
 Sub-group Gros-Michel, 5

Sub-group Ibota, 5
 Sub-group Laknao, 5
 Sub-group Matooke, 5
 Sub-group Mbire, 5
 Sub-group Mutika Lujugira, 5
 Sub-group Mysore, 5
 Sub-group Ney poovan, 5
 Sub-group Pelipita, 5
 Sub-group Peyan, 5
 Sub-group Pisang awak, 5
 Sub-group Pisang kelat, 5
 Sub-group Pisang nangka, 5
 Sub-group Pisang raja, 5
 Sub-group Plantain, 5
 Sub-group Pome, 5
 Sub-group Popoulou, 5
 Sub-group Red, 5
 Sub-group Saba, 5
 Sub-group Silk, 5
 Sub-group sucrier, 5
 Sub-Saharan Africa, 22, 23
 Substrates, 294, 295, 298, 305
 Suckers, 21, 27, 66, 108
 Sucre State, 71
 Sudan, 160, 173
 Sudan grass, 16
 Sudden death, 127
 Sugarcane, 11, 16, 20, 33, 34, 47, 48
 Sukari, 5
 Summer, 63
 Sun exposure, 27
 Sunlight system, 101, 109, 111, 114, 115
 Suppression, 129, 132, 134
 Suppressiveness, 3, 42
 Suppressive soils, 190
 Surface roots, 152, 154
 Surinam, 9, 16, 31, 53
 Survival strategy, 12
 Susceptibility, 7, 36, 37, 38, 39, 49, 253, 263, 270
 Susceptible rootstock, 69
 Sustainable nematode management, 17
 Swam taro, 20
 Swaziland, 24

Sweet dessert bananas, 5
 Sweet orange, 154, 168, 172
 Sweet potato, 18, 20, 28, 158
 Swietenia, 109
 Swingle citrumelo, 142, 147, 166
 Switzerland, 218
 Symptom, 13, 67, 68, 74, 76, 79, 80, 178–180, 193, 219, 221, 222
 Syncytia, 288
 Synthetic banana hybrids, 39
 Syria, 243, 244, 251
 Systemic acquired resistance, 41, 92
 Systemic herbicides, 201
 Systemic pesticide, 156

T

Táchira, 79
Tagetes erecta, 302
Tagetes florida, 302
Tagetes minuta, 302
Tagetes signata, 302
Tagetes, 233, 302, 310, 312, 313
 Tahiti lime, 69
 Taiwan, 10, 38, 39, 52, 154, 158, 172
 Tajikistan, 218
Talaromyces flavus, 300
 Tamarind, 20, 63, 80
Tamarindus indica, 80
 Tamil, 40
 Tamil Nadu Agriculture University, 39
 Tangelo, 67
 Tannins, 301
 Tanzania, 24, 26, 47, 57, 60
 TaqMan, 223, 238
 Taro, 18, 20, 34
 TBRV, 200, 217, 223, 227
 Tea, 9, 20, 34, 50
 Technical production systems, 88
 Tehran, 243, 246, 252
 Temperature, 63, 78, 120
Tephrosia vogelli, 28
 Terpens, 301, 303
 Test pit, 85, 87, 95, 96
 Test pit inspection, 85
 Tetraploid AAAB-group banana, 33

- Tetraploid banana, 36
 Tetraploid cultivars, 37, 38
 Texas, 138, 146, 162, 171
 Texture, 141, 144, 145, 151, 172
 Thailand, 5, 19, 35, 55, 59
Theobroma cacao, 107, 119
Theobroma, 119, 131, 132, 133, 134
 Thermophilic pathogens, 266
 Thiamin, 245
 Thiruvanthapuram, 5
Thymus vulgaris, 234, 236
 Tissue culture, 10, 16, 21, 30, 34, 36, 38, 39, 42, 43, 49
Tithonia diversifolia, 29
 Tobacco, 33, 113
 Tobacco ringspot nepovirus, 200, 216
 Tobravirus, 216, 217
 Togo, 120, 131
 Tojolobales, 106
 Tolerance limit, 75, 76
 Tolerance, 3, 36, 38, 39, 40, 43, 57, 58, 202, 203, 205, 207, 209, 212, 227
 Tolerant varieties, 34
 Tomato, 113, 199, 213, 214, 299, 300, 302, 303, 305, 306, 308, 309, 312
 Tomato black ring nepovirus, 200, 217
 Tomato ringspot nepovirus, 200, 216
 TomRSV, 216, 223
 Tondino di Zagaria, 303
 Toppling, 13, 22, 26, 52
 ToRSV, 216, 217, 219
 Totonacas, 106
 Toxicity, 128, 266, 267
 Toxic compounds, 92
 Toxic metabolites, 301
Toxoptera aurantii, 110, 111
 Trade, 66
 Traders, 22, 30, 34
 Transformation, transgenic, 41
 Transgenic plants, 206
 Transgenic resistance, 3
 Transmission, 215, 216, 217, 218, 219, 222, 227, 233, 234, 236, 238, 240, 241, 257, 272
 Transmission assays, 215
 Transmission control, 227
 Transmission process, 201
 Transpiration, 157
 Trap, 73
 Trapping fungi, 268
 Tree biomass, 130
 Tree canopy, 136, 138, 145, 149
 Tree growth, 307
 Trichloronitrometan, 305
Trichoderma harzianum, 298, 314
Trichoderma, 43, 112, 130
 Trichodoridae, 215, 222, 239
Trichodorus, 74, 124, 160, 162, 216, 217, 218, 238, 242, 247
Trichodorus aequalis, 280
Trichodorus giennensis, 280
Trichodorus monohystera, 125
Trichodorus primitivus, 217
Trichodorus primitivus, 235
Trichodorus primitivus, 280
Trichodorus taylori, 280
 Trifoliolate orange, 135
 Trinidad, 9, 32, 49, 51, 53–55, 71
 Triploid, 4, 8, 37
 Triplonchida, 215, 239
 Tristeza virus, 67, 142
Triticum aestivum, 182
Trogossita japonica, 267, 268
Trophotylenchulus saltensis, 276, 280, 288, 310
Trophurus, 247
Trophurus imperialis, 125
 Tropical fruit crops, 63
 Tropics, 8, 9, 25, 29
 Troyer, 67, 68, 69, 70
 TRSV, 216, 217, 223
 True grape, 204
 Trujillo State, 65, 79, 81
 Trunk, 73, 144, 149, 150, 167
 TRV, 217, 218, 227, 235
 Tsotziles, 106
 Thiocyanates, 300
 Tuber, 25, 35
 Tucupita, 73, 74
 Tunisia, 218, 243, 244

- Turkestan, 275
 Turkey, 178, 218, 243, 244, 247, 248, 250, 252
 Turkmenistan, 218
 Turmeric, 20
 Tuxtla Chico, 101, 115
Tylenchorhynchus, 64, 66, 68, 73, 76, 79, 80, 111, 115, 247
Tylenchorhynchus aduncus, 280
Tylenchorhynchus annulatus, 64, 66, 68
Tylenchorhynchus capitatus, 68
Tylenchorhynchus clarus, 280
Tylenchorhynchus contractus, 74
Tylenchorhynchus dubius, 280
Tylenchorhynchus goffarti, 280
Tylenchorhynchus huesingi, 280
Tylenchorhynchus mamillatus, 280
Tylenchorhynchus martini, 125
Tylenchorhynchus striatus, 280
Tylenchorhynchus tenuis, 280
Tylenchulus, 275, 276, 280, 281, 310, 311
Tylenchulus graminis, 143, 166
Tylenchulus palustris, 143, 166
Tylenchulus semipenetrans, 67–72, 74, 81, 82, 83, 89, 97, 98, 135, 136–148, 152, 155, 160–173, 195, 207, 276, 280, 283, 310, 311
Tylenchulus similis, 9, 18, 48
Tylenchus, 65, 74, 76, 79, 111, 247
Tylenchus arcuatus, 280
Tylenchus coffeae, 9, 125, 132
Tylenchus multicinctus, 9
Tylenchus musicola, 10
 Type B phylloxera, 205
 Typica, 103, 104, 107, 108
 Tzelzales, 106
- U**
 Uganda, 22, 24, 28, 29, 36, 39, 46, 49, 52, 57, 58
 Ukraine, 218
 United Nations, 112
 United States, 8, 135, 154, 157, 178, 180, 183, 193
- Upper Amazon region, 119
 Urea, 300, 309
 USA, 195, 197, 207, 210, 211, 218, 226, 240, 243, 244, 245, 249, 250, 251, 253, 256, 258, 262, 275, 278, 279, 280, 283, 310, 311
 Uttar Pradesh, 218
 Uzbekistan, 218, 243, 244
- V**
 Valera Amarilla, 79
 Valera Roja, 79, 80
 Valles Altos, 70
 Vanilla planifolia, 109, 117
 Vascular discoloration, 289, 290
 Vascular parenchyma, 75
 Vascular tissues, 32, 155
 Vection, 201
 Vector, 253, 262, 265, 266, 267, 268, 269, 270, 271, 272
 Vector endemism, 226
 Vegetative activity, 69, 70, 71
 Vegetative growth, 26
 Vegetative phase, 13
 Venezuela, 31, 52, 59, 60, 63–69, 71–83, 122, 134, 157
 Veracruz, 101–103, 105, 107, 108, 109, 110, 112, 114–118
 Vermiform stages, 93
Vernonia amygdalina, 130
Verticillium dahliae, 275, 276, 288–294, 298, 300, 311
 Verticillium wilt, 246, 294, 300, 309
Verticillium, 112, 306
Vicia villosa, 233
 Vietnam, 19, 21, 38, 47, 54
Vigna unguiculata, 233
 Vigor, 27, 38, 39, 178, 180, 189
 Villa Nueva, 74
 Violeta, 73
 Viral DNA, 40
 Virulence, 253, 270
 Virulent populations, 199, 200
 Virus, 180, 181, 215, 216, 217, 218, 219, 222, 223, 225, 226, 227, 237, 238, 239, 240, 241, 242

Virus dispersal, 219, 225
 Virus-free certified plants, 225
 Virus-infected plants, 180
 Virus persistence, 226
 Virus transmission, 203
 Virus vector nematodes, 200, 221, 228, 237
 Virus vector species, 195
 Vitamin B6, 245
 Vitamin C, 245
Vitis, 68, 73, 82, 195, 197, 198, 202, 203, 204, 205, 206, 208, 209, 210, 211, 212, 213
Vitis aestivalis, 197
Vitis arizonica, 202, 203, 204
Vitis berlandieri, 197, 200, 205, 212
Vitis candicans, 198, 202, 203
Vitis champinii, 197, 198, 199, 207
Vitis cinerea, 197, 204
Vitis doaniana, 197
Vitis germplasm, 206
Vitis longii, 197, 198
Vitis mustangensis, 198, 199
Vitis riparia 'Gloire', 203
Vitis riparia 'Grand glabre', 203
Vitis riparia 'Messner n. 9', 203
Vitis riparia, 197, 198, 200, 202, 203, 204, 207
Vitis rotundifolia, 204
Vitis rubra, 202
Vitis rufotomentosa, 197, 202, 203
Vitis rupestris 'du Lot', 204
Vitis rupestris, 197, 198, 202, 205, 207, 210
Vitis slavini, 202
Vitis solonis, 197, 202, 203
Vitis species, 197, 198, 202
Vitis vinifera, 68, 73, 82, 197, 198, 203, 204, 205, 212
 Volatile chemicals, 184
 Vulva, 138

W

Wastes, 301, 312, 314
 Water contamination, 44
 Water deficiency, 246

Water deficit, 150, 151
 Watering, 86, 87
 Watermelon, 113
 Weed control, 232, 233
 Weed fallow, 16
 Weed management, 154
 Weeding, 18
 Weeds, 9, 11, 35, 56, 64, 101, 106, 107, 110, 108, 114, 182, 183, 189, 293, 294, 304
 West Africa, 5, 6, 119, 120, 122, 132
 West African beans, 120
 West African cocoa, 120
 West Bengal, 218
 Wheat, 182, 192, 226
 Wild plums hybrids, 186
 William, 39, 54
 Wilting, 123, 126, 136
 Wind, 13
 Windward Islands, 15, 16, 49
 Winter treatment, 96
 Wood, 105, 106
 Woody cuttings, 294

X

Xanthomonas campestris pv. *pruni*, 180
Xanthosema, 109
 Xanthotoxin, 303
Xiphinema aequum, 280, 313
Xiphinema, 64, 65, 73, 74, 76, 77, 79, 82, 111, 124, 160, 162, 167, 173, 178, 180, 191, 195, 200, 203, 206, 208–221, 225, 226, 229, 230, 233–242, 246, 248, 249, 275, 276, 280, 281, 294, 303, 308, 309, 311, 312, 313
Xiphinema americanum group, 221, 225
Xiphinema americanum sensu stricto, 216, 217, 219, 222, 226, 234, 236
Xiphinema americanum sensu lato, 74, 76, 216, 217, 218, 221, 222, 233, 237, 239

- Xiphinema americanum*, 180, 200, 207, 216, 217, 219, 221, 223, 225, 226, 233, 234, 236, 239, 240, 246, 247
- Xiphinema attorodorum*, 125
- Xiphinema barensense*, 280
- Xiphinema basiri*, 180
- Xiphinema brasiliense*, 64, 66, 68, 80
- Xiphinema brevicollum*, 68, 125, 160, 180, 236, 237
- Xiphinema bricolense*, 216
- Xiphinema bricolensis*, 200, 216
- Xiphinema californicum*, 180, 217, 280
- Xiphinema diversicaudatum*, 180, 200, 216, 219, 220, 223, 227, 231, 232, 234–236, 238–242, 288
- Xiphinema ebriense*, 125
- Xiphinema elongatum*, 125, 276, 280, 286
- Xiphinema ifacolum*, 125
- Xiphinema index*, 160, 195, 196, 198, 200–216, 218–220, 223–231, 233, 234, 236–239, 241, 242, 247, 276, 280, 286, 287, 296, 303, 309, 313
- Xiphinema index-resistant hybrid*, 198
- Xiphinema ingens*, 280, 311
- Xiphinema insigne*, 125
- Xiphinema italiae*, 200, 213, 219, 220, 223, 238, 242, 280
- Xiphinema krugi*, 68
- Xiphinema longicaudatus*, 125
- Xiphinema macroacanthum*, 280
- Xiphinema nigeriense*, 125, 247
- Xiphinema pachtaicum*, 280
- Xiphinema pacificum*, 200, 210
- Xiphinema peruvianum*, 68
- Xiphinema pirinense*, 218
- Xiphinema rivesi*, 180, 191, 216, 217, 218, 234, 236
- Xiphinema sahelense*, 280
- Xiphinema setariae*, 125
- Xiphinema silvesi*, 218
- Xiphinema simillimum*, 68, 80
- Xiphinema turcicum*, 280
- Xiphinema vuittenezi*, 180, 223, 239, 242, 247, 280
- Xiphinema vulgare*, 68, 160
- xylophilus*-group, 260, 261
- Y**
- Yam, 20, 25
- Yangambi Km5, 5, 37, 50
- Yaracuy, 65, 67, 70, 72, 75–77, 81
- Yazd, 246
- Yellow Creole, 79
- Yellow disease of pepper, 9
- Yellow passionfruit, 77
- Yeongam, 258
- Yield, 11, 13–15, 21, 23, 26, 28, 29, 33, 42, 45, 46, 48, 50–52, 54, 56, 57, 58, 64, 121, 122, 127, 128, 129, 131, 134, 136, 137, 143–148, 153, 154, 155, 161, 163, 167, 170, 171, 173, 216, 248, 250
- Yield loss, 26, 145, 146
- Yusti, 282, 284, 285
- Z**
- Zanjan, 246
- Zanzibar, 24, 25
- Zea mays*, 109
- Zhejiang Province, 258
- Zimbabwe, 34
- Zinc, 245
- Zingiberaceae, 35
- Zoosporangia, 235
- Zoospores, 235, 236
- Zoosporic fungi, 234, 239
- Zoques, 106
- Zulia State, 64–68, 70, 73–75, 77, 80–82
- Zygotic embryo, 121
- Zygotylenchus guevarai*, 247, 280
- Zygotylenchus taomasinae*, 10