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Critical issues in plant health: 50 years of research in African agriculture

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International Institute of Tropical Agriculture, Benin



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Contents

Series list	xii
The International Institute of Tropical Agriculture (IITA)	xvii
List of major IITA donors	xviii
Chapter lead author contact details	xix
Foreword	xx

Part 1 Managing threats to plant health

1	Key challenges in plant health in sub-Saharan Africa: stakeholder priorities	3
	Kenton Dashiell , <i>International Institute of Tropical Agriculture (IITA), Nigeria</i>	
	1 Introduction	3
	2 Priorities in plant health: international organisations	4
	3 Priorities in plant health: universities	9
	4 Priorities in plant health: NARS	13
	5 Priorities in plant health: BEAF - GIZ	16
	6 Conclusion	17
2	Introduction: meeting challenges in plant health in sub-Saharan Africa	19
	Peter Neuenschwander and Manuele Tamò , <i>International Institute of Tropical Agriculture (IITA), Benin</i>	
	1 The importance of plant protection in agriculture	19
	2 Historical development of plant protection	22
	3 History of IITA's plant protection research and implementation	25
	4 Structure of this text	31
	5 Where to look for further information	32
	6 References	33

3	Disease surveillance, diagnostics and germplasm health in crop protection	41
	P. Lava Kumar , <i>International Institute of Tropical Agriculture (IITA), Nigeria</i> ; James P. Legg , <i>IITA, Tanzania</i> ; Maria Ayodele , <i>IITA, Nigeria</i> ; George Mahuku , <i>IITA, Tanzania</i> ; and Alejandro Ortega-Beltran and Ranajit Bandyopadhyay , <i>IITA, Nigeria</i>	
	1 Introduction	41
	2 Disease surveillance	42
	3 Factors for emergence and re-emergence of epidemics in SSA	48
	4 Tools for disease diagnostics	51
	5 Early warning and response systems	57
	6 Germplasm safety and preventing the spread of seed-borne pathogens	59
	7 Conclusion and future trends	64
	8 References	66
4	Conserving and exploiting biodiversity in crop cultivation in sub-Saharan Africa	75
	Georg Goergen and Peter Neuenschwander , <i>International Institute of Tropical Agriculture (IITA), Benin</i> ; and Danny Coyne , <i>International Institute of Tropical Agriculture (IITA), Kenya</i>	
	1 Introduction	75
	2 Developing the insect collection at IITA	77
	3 Specific examples demonstrating the importance of an accurate diagnosis	79
	4 Exploiting scientific collections	86
	5 New challenges and opportunities	87
	6 From using to protecting biodiversity	88
	7 Conclusion and future trends	89
	8 References	89
5	Viruses affecting African crops and their vectors	95
	James P. Legg , <i>IITA, Tanzania</i> ; P. Lava Kumar , <i>IITA, Nigeria</i> ; George Mahuku , <i>IITA, Tanzania</i> ; Everlyne Wosula , <i>IITA, Tanzania</i> ; Livia Stavolone , <i>IITA, Nigeria</i> ; Eugene Terry , <i>New Markets Lab, USA</i> ; and Nilsa Bosque-Pérez , <i>University of Idaho, USA</i>	
	1 Introduction	95
	2 Cassava virus diseases	98
	3 Maize virus diseases	104
	4 Banana and plantain virus diseases	109
	5 Yam viruses	111
	6 Cowpea viruses	113
	7 Soybean viruses	117

8 Virus vectors	118
9 Emerging techniques and future perspectives for plant virus management in Africa	123
10 Future trends and conclusion	124
11 Where to look for further information	125
12 References	126

Part 2 Plant health in practice: managing threats to key African crops

6 Identifying and managing plant health risks for key African crops: cassava	139
Muaka Toko and Peter Neuenschwander , <i>International Institute of Tropical Agriculture (IITA), Benin</i> ; J. Steve Yaninek , <i>Purdue University, USA</i> ; Alejandro Ortega-Beltran , <i>International Institute of Tropical Agriculture (IITA), Nigeria</i> ; André Fanou and Victor Zinsou , <i>Université de Parakou, Benin</i> ; Kerstin D. Wydra , <i>Erfurt University of Applied Sciences, Germany</i> ; Rachid Hanna and Appolin Fotso , <i>International Institute of Tropical Agriculture (IITA), Cameroon</i> ; and Ouorou Douro-Kpindou , <i>International Institute of Tropical Agriculture (IITA), Benin</i>	
1 Introduction	139
2 The management of insect pests	141
3 Identifying and managing cassava diseases	155
4 Conclusion and future trends	159
5 Where to look for further information	161
6 References	163
7 Identifying and managing plant health risks for key African crops: maize	173
Ranajit Bandyopadhyay , <i>International Institute of Tropical Agriculture (IITA), Nigeria</i> ; Kitty F. Cardwell , <i>Oklahoma State University, USA</i> ; Alejandro Ortega-Beltran , <i>International Institute of Tropical Agriculture (IITA), Nigeria</i> ; Fritz Schulthess , <i>Rheinstrasse 160, Switzerland</i> ; William Meikle , <i>USDA-ARS, USA</i> ; Mamoudou Sétamou , <i>Texas A&M University, USA</i> ; and Peter J. Cotty , <i>USDA-ARS, USA</i>	
1 Introduction	173
2 Exploratory years in maize research	175
3 Diagnostic surveys and in-country plant health analysis	176
4 Downy mildew eradication programme, southern Nigeria 1995	178
5 Biological control of stemborers	182
6 Interactions between <i>Fusarium verticillioides</i> and maize pests	185
7 Post-harvest losses	188
8 Larger grain borer and other beetles	190

9	Mycotoxins	193
10	Conclusions and future trends	199
11	References	200
8	Identifying and managing plant health risks for key African crops: yam, taro and cocoyam	213
	Babatima Djana Mignouna , <i>IITA, Benin</i> ; P. Lava Kumar , <i>IITA, Nigeria</i> ; Danny Coyne , <i>IITA, Kenya</i> ; and Ranjit Bandyopadhyay, Alejandro Ortega-Beltran, Ranjana Bhattacharjee and David De Koeyer , <i>IITA, Nigeria</i>	
	1 Introduction	213
	2 Major threats to yam, taro and cocoyam and management options	216
	3 Status of pest and disease control measures	220
	4 Conclusion and future trends	223
	5 References	224
9	Identifying and managing plant health risks for key African crops: banana and plantain	229
	Stefan Hauser , <i>IITA, Nigeria</i> ; Clifford Gold , <i>Nevada City, USA</i> ; Cornelia Pasberg-Gauhl and Friedhelm Gauhl , <i>FG-Inter-Agro-Consult KG, Austria</i> ; Juliet Akello , <i>IITA, Zambia</i> ; Kim Jacobsen , <i>Royal Museum for Central Africa, Belgium</i> ; Lindsey Norgrove , <i>Bern University of Applied Sciences, Switzerland</i> ; Daniel Coyne , <i>IITA, Kenya</i> ; P. Lava Kumar , <i>IITA, Nigeria</i> ; George Mahuku, Manoj Kaushal , <i>IITA, Tanzania</i> ; Valentine Nakato , <i>IITA, Uganda</i> ; and Leena Tripathi and Jaiindra Tripathi , <i>IITA, Kenya</i>	
	1 Introduction	229
	2 Viruses	230
	3 Banana <i>Xanthomonas</i> wilt	233
	4 Fungal diseases	234
	5 Nematodes	238
	6 Banana weevil	244
	7 Conclusion	249
	8 Where to look for further information	250
	9 References	251
10	Identifying and managing plant health risks for key African crops: legumes	259
	Manuele Tamò , <i>International Institute of Tropical Agriculture (IITA), Bénin</i> ; Léonard Afouda , <i>Université de Parakou, Bénin</i> ; Ranjit Bandyopadhyay , <i>International Institute of Tropical Agriculture (IITA), Nigeria</i> ; Harry Bottenberg , <i>United States Agency for International Development, USA</i> ; Laura Cortada-Gonzales , <i>International Institute of Tropical Agriculture</i>	

	<i>(IITA), Kenya; Harun Murithi, International Institute of Tropical Agriculture (IITA), Tanzania; Alejandro Ortega-Beltran, International Institute of Tropical Agriculture (IITA), Nigeria; Barry Pittendrigh, Michigan State University, USA; Rachidatou Sikirou, Institut National des Recherches Agricoles au Bénin, Bénin; Abou Togola, International Institute of Tropical Agriculture (IITA), Nigeria; and Kerstin D. Wydra, Erfurt University of Applied Sciences, Germany</i>	
	1 Introduction	259
	2 Cowpea	261
	3 Soybean	279
	4 Conclusions and future trends	282
	5 Where to look for further information	283
	6 References	283
11	Identifying and managing plant health risks for key African crops: vegetables	295
	Ignace Godonou , <i>International Institute of Tropical Agriculture (IITA) and Catholic University of West Africa, Benin</i> ; May-Guri Saethre , <i>International Institute of Tropical Agriculture (IITA), Nigeria</i> ; Ghislain Tapa-Yotto , <i>International Institute of Tropical Agriculture (IITA) and Université Nationale d'Agriculture, Benin</i> ; Désiré Gnanvossou and Ouorou Douro-Kpindou , <i>International Institute of Tropical Agriculture (IITA), Benin</i> ; and Danny Coyne , <i>International Institute of Tropical Agriculture (IITA), Kenya</i>	
	1 Introduction	295
	2 Biotic constraints to vegetable production	296
	3 Problems in pesticide use	304
	4 Biological alternatives to pesticides for pest control	305
	5 Conclusions	309
	6 References	310
12	Identifying and managing plant health risks for key African crops: fruit and other tree crops	317
	Peter Neuenchwander and Désiré Gnanvossou , <i>International Institute of Tropical Agriculture (IITA), Benin</i> ; Stefan Hauser , <i>International Institute of Tropical Agriculture (IITA), Nigeria</i> ; Georg Goergen , <i>International Institute of Tropical Agriculture (IITA), Benin</i> ; Rachid Hanna , <i>International Institute of Tropical Agriculture (IITA), Cameroon</i> ; Lindsay Norgrove , <i>Bern University of Applied Sciences, Switzerland</i> ; and Koffi Negloh and Cyriaque Agboton , <i>International Institute of Tropical Agriculture (IITA), Benin</i>	
	1 Introduction	317
	2 Mango mealybug	321

3	Fruit flies	323
4	Spiralling whitefly	325
5	Papaya mealybug	326
6	<i>Phytophthora megakarya</i>	329
7	Coconut mite	331
8	Cashew wood borer	332
9	Conclusions	332
10	References	333

Part 3 Integrated pest management: putting it all together and exchange of knowledge with farmers

13	Commercial products promoting plant health in African agriculture Frederick Schreurs and Ranajit Bandyopadhyay, IITA, Nigeria; Christiaan Kooyman, IITA, Kenya; Alejandro Ortega-Beltran and Adebowale Akande, IITA, Nigeria; Matieyedou Konlambigue, IITA, Ghana; and Niels Van den Bosch, IITA, Nigeria	345
	1 Introduction	345
	2 Green Muscle	346
	3 Aflasafe	350
	4 Commercialization principles	356
	5 Conclusion and future trends	359
	6 Where to look for further information	360
	7 References	361
14	Weeds affecting field crops and water bodies in Africa David Chikoye, International Institute of Tropical Agriculture (IITA), Zambia; Friday Ekeleme, Stefan Hauser, Abebe Menkir and Alpha Y. Kamara, International Institute of Tropical Agriculture (IITA), Nigeria; Peter Neuenschwander and Obinna Ajuonu, International Institute of Tropical Agriculture (IITA), Bénin; and Hakeem A. Ajeigbe, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Nigeria	365
	1 Introduction	365
	2 Integrated management of speargrass (<i>Imperata cylindrica</i>)	366
	3 Integrated management of <i>Striga hermonthica</i>	373
	4 Role and control of <i>Chromolaena odorata</i> in the humid tropics	378
	5 Weed control in plantain	380
	6 Weed control in cassava systems	383
	7 Floating aquatic weeds	385
	8 Conclusion and future trends	389
	9 Where to look for further information	390
	10 References	390

15	Making integrated pest management (IPM) work in sub-Saharan Africa	397
	Danny Coyne , <i>IITA, Kenya</i> ; Michael Abberton , <i>IITA, Nigeria</i> ; Sounkoura Adetonah , <i>IITA, Bénin</i> ; Maria Ayodele , <i>IITA, Nigeria</i> ; Laura Cortada-Gonzales , <i>IITA, Kenya</i> ; Brice Gbaguidi , <i>IITA, Bénin</i> ; Stefan Hauser and P. Lava Kumar , <i>IITA, Nigeria</i> ; Peter Neuenschwander , <i>IITA, Bénin</i> ; Marc Schut , <i>Wageningen University, The Netherlands</i> ; Manuele Tamò , <i>IITA, Bénin</i> ; and Abou Togola , <i>IITA, Nigeria</i>	
	1 Introduction	397
	2 Healthy planting material	399
	3 The role of pesticides	399
	4 Gender access to IPM	404
	5 Improved exchange with farmers	405
	6 Improved collaboration	407
	7 Future trends and conclusion	407
	8 Where to look for further information	408
	9 References	409
Part 4 Conclusions and future challenges		
16	Improving plant health in sub-Saharan Africa: conclusions and future challenges	415
	Peter Neuenschwander and Manuele Tamò , <i>International Institute of Tropical Agriculture (IITA), Benin</i> ; and May-Guri Sæthre , <i>International Institute of Tropical Agriculture (IITA), Nigeria</i>	
	1 Introduction	415
	2 The views of IITA clients and peers	417
	3 Comparing various IITA projects and their impact	419
	4 Overall assessment	443
	5 IITA's plans for the future	445
	6 Recommendations	448
	7 Acknowledgements	449
	8 Where to look for further information	449
	9 References	450
	Index	457

Foreword

Sanginga Nteranya

Director General, International Institute of Tropical Agriculture (IITA), Nigeria

As Director General of IITA I have the pleasure to present to you 'Critical issues in plant health: 50 years of research in African agriculture'. Fifty years is a long time in an institution that was created to assist newly independent African countries to develop their own research and outreach capacity for crops for their own populations. Together with similar institutions, IITA became a founding member of the Consultative Group on International Agricultural Research (CGIAR). With a global reach, its goal was to combat malnutrition and poverty through research for development (R4D). What started in 1967 with a research staff of a few dozen scientists in Ibadan, Nigeria, supported by the Ford and Rockefeller Foundations, has developed into an institute of over 200 scientists based at 22 stations in 18 African countries and supported by dozens of international and national donors.

From the beginning, IITA invested its resources in Resource and Crop Management and variety development of its 'mandate' crops: cassava, yam and other root crops, maize, cowpea and other legumes, banana and plantain. Through the years, the focus was widened to include all aspects of development of rural households, from achieving higher yields to sustainable farm production and income generation, from subsistence farming to commercialized farm enterprises. The aim was to lift the rural and urban poor out of poverty and drudgery to face the international developments of the 21st century. This was to be achieved in close collaboration with and according to the needs of national programs, subject to local political conditions. While it was recognized that basic studies on these mostly under-researched crops was essential for sustainable progress, the application of results in practice and adoption, even adaption, by the collaborating national programs was always essential. In the context of changing international pressures, and with a total of six Directors General, the relative importance and stress on research versus development has continued to change. The Institute still has constantly to decide where and to what degree to stress basic research, testing and implementation, education, and commercialization and at what point to pass on the baton to national research institutions, international and local non-government organizations that can better (i.e. more cheaply) distribute new research results and techniques.

Today, it is fascinating to observe what high percentage of all plant breeders, biocontrol specialists, economists, and other professionals and decision makers active in African governments, international organisations and NGOs received their education at IITA. To our great joy, IITA's achievements

are regularly put into practice, sometimes without acknowledgement of the source - which is actually encouraged to improve adoption, though it may pose a handicap when we have to document impact for our donors. As a testimony to our outreach efforts, the percentage of African scientists among the family of international staff of IITA has constantly risen throughout the years, the collegial interaction with African universities has improved, and political acceptance at least in Africa must be considered excellent - perhaps better than on the larger world scene. This has only been possible thanks to the constant support by donors from Europe, America, but also from Africa, which is greatly appreciated. We can proudly tell them that their investment has paid of many times over and the benefits have gone directly to the poor as well as to upwardly mobile farmers and urban consumers.

Today, among all of IITA's R4D, plant protection occupies from one quarter to one third of all activities, next to crop improvement, soil and farm management and socio-economics. For this volume, two IITA staff who have worked here for 35 and 30 years, respectively, thereby covering a good part of IITA's history, have assembled all of our successes and failures in plant protection as editors of 16 chapters. First they asked 16 former IITA staff, former collaborators, and investors about their opinion on IITA's plant protection R4D. Then, 70 authors and co-authors describe their contributions to the common goal of protecting crops in a sustainable manner from pests like pathogens (including viruses), insects, mites, nematodes, and weeds. You will read many technical discussions; but throughout I hope you can feel the warm heart and determination of these scientists to improve the lot of African farmers. These include the richer segment of farmers who are able to profit from improved inputs created by our scientists, but also poor subsistence farmers, who can benefit from our research which they can use for free.

Some experts try to direct our research towards the mechanized, large-scale farming dependent on abundant fertilizer and pesticide use than can be seen in countries like the USA. Others want us to preserve small-scale family farms. We are well aware that the existing trend of increasing production by penetrating into forests, swamp-land and other habitats that are not particularly suited for agriculture or need to be protected as nature reserves is not sustainable. On the other hand, the ancient long-time fallow systems just do not suffice anymore. Relentless population increase creates an urgent need for new methods to produce more in a sustainable way on existing cultivated land. We therefore adopt pragmatic solutions, which in plant protection research mean the reduction of the horrendous crop losses and quality reduction due to pests in the field and in storage by all available means. These include developing resistant crop varieties, applying biological control in all its forms, developing so-called biorational pesticides to replace broad-spectrum synthetic pesticides that pollute the environment or at least to improve the application methods

of existing pesticides, and finally - and perhaps most importantly - to develop cultural control methods, in other words, good farming practices. The present volume shows how far we have come in this quest, but also points out how far we still have to go in collaboration and with the support of, African governments, their extension services, universities across the globe, financial donors, whom we see as investors and, of course, African farmers.

Have a good read and judge for yourself!

Nteranya Sanginga

Index

- Aceria guerreronis* 86, 320, 331-332
Acerophagus papayae 327-328
Acetolactase synthase (ALS) 376, 377
ACMV. *see* African cassava mosaic virus (ACMV)
ADP. *see* State Agriculture Development Projects (ADP)
Advisory Service on Agricultural Research for Development (BEAF) 4, 16-17
AEZ. *see* Agro-ecozone (AEZ)
Aflasafe® 27, 29, 195, 197, 199, 345-346, 438
Aflasafe Technology Transfer and Commercialization (ATTC) 355, 359
Aflatoxin 198-199
Africa cassava mosaic virus (ACMV) 46
Africa Food Prize 415, 447
Africa cassava mosaic virus (ACMV) 100
African root and tuber scale (ARTS). *see* *Stictococcus vayssierei*
African Union Commission (AUC) 352
African Union Inter-African Phytosanitary Council (AU-IAPSC) 57, 60, 63, 110
AfricaRice 7
Africa-wide Biological Control Program 9, 11, 28
Agar-gel double diffusion immuno assays 52
AgResults Aflasafe Pilot project 199, 353, 359
Agricultural research for development (AR4D) 16
'Agriculture at a Crossroads' 9
Agro-ecozone (AEZ) 174, 176, 189, 196
Alabi, Olajumoke 4, 10-11
Aleurodicus dispersus 318, 325-326
ALLIANCE approach 48, 111, 233
ALS. *see* Acetolactase synthase (ALS)
Amani breeding programme 99
Amblydromalus manihoti 85, 146, 148
Anacardium occidentale L. 320
Anagyris diversicornis 143
Anagyris lopezi 14, 78, 141-143, 144
Anagyris mangicola 321-322
Anoplolepis tenella 151-152
Anthracnose 261
Apanteles taragamae 83, 274
Apate terebrans 332
Aphidius colemanii 269
Aphis craccivora 267, 268-269
Aphis gossypii 301
Aphis spiraeicola 307
AR4D. *see* Agricultural research for development (AR4D)
Arodokoun, David 4, 14-15
'Arsenal' and 'Assault.' *see* Imazapyr
ARTS. *see* *Stictococcus vayssierei*
Asian soybean rust (ASR) 279, 279-281
Aspergillus flavus 28, 186, 194-198, 345, 351-352
Aspergillus parasiticus 195
ASR. *see* Asian soybean rust (ASR)
Athelia rolfsii 304
ATTC. *see* Aflasafe Technology Transfer and Commercialization (ATTC)
AUC. *see* African Union Commission (AUC)
AU-IAPSC. *see* African Union Inter-African Phytosanitary Council (AU-IAPSC)
AVRDC. *see* World Vegetable Center (AVRDC)
Bacillus cereus 266
Bacillus subtilis 262-263, 266
Bacillus thuringiensis 24, 266, 301, 419
Bacterial blight of cowpea (CoBB) 263-265, 263-265

- Bactrocera dorsalis* 318
Bactrocera invadens 80
Bactrocera orientalis 425
- Banana and plantain
 banana weevil 244–248
 biological control 247–248
 biology, pest distribution and status 244–245
 chemical control 247
 clean planting material 245
 cropping systems 245
 mulching 246
 pheromone-based 246–247
 residue management 246
 trapping 246
 banana *Xanthomonas* wilt (BXW) 233–234
 fungal diseases 234–238
 Fusarium wilt 237–238
 leaf diseases 234–237
 nematodes 238–243
 Helicotylenchus multicinctus 243–244
 Hoplolaimus pararobustus 244
 Meloidogyne spp. 243
 Pratylenchus coffeae 242–243
 Pratylenchus goodeyi 242
 Radopholus similis 238–241
 overview 229–230
 viruses 230–233
 banana bunchy top virus (BBTV) 232–233
 banana streak badnavirus (BSV) 231–232
- Banana bract mosaic virus (BBrMV) 231
 Banana bunchy top disease (BBTD) 230, 233
 Banana bunchy top virus (BBTV) 42, 43, 47, 48, 54, 97, 109–111, 232–233
 Banana streak badnavirus (BSV) 97, 98, 109–111, 230–232
 Banana *Xanthomonas* wilt (BXW) 26, 46, 53, 230, 233–234
- Barcode of Life Data System 89
Bassus javanus 85
Batrocera dorsalis 323–324
 BBrMV. *see* Banana bract mosaic virus (BBrMV)
 BBTD. *see* Banana bunchy top disease (BBTD)
 BBTV. *see* Banana bunchy top virus (BBTV)
 BCMV. *see* Bean common mosaic virus (BCMV)
 BCP. *see* Biological Control Products (BCP)
 BEAF. *see* Advisory Service on Agricultural Research for Development (BEAF)
- Bean common mosaic virus (BCMV) 114, 116
 Bean-Cowpea Collaborative Research Support Program 260
Beauveria bassiana 152, 247–248, 305–306, 347
 Becker Underwood 350
 Beet webworm. *see* *Hymenia recurvalis*
Bemisia tabaci 119–120, 302
 Bill & Melinda Gates Foundation 11, 352
 Biodiversity Center 15, 429
 Biodiversity in crop cultivation
 challenges and opportunities 87–88
 developing insect collection 77–78
 examples 79–86
 cassava mealybug 79
 fall armyworm 83
 floating fern 79–80
 legume pod borer 83–85
 mites 85–86
 oriental fruit fly 80
 potato cyst nematodes 82–83
 root knot nematode 82
 Siam weed 80–82
 exploiting scientific collections 86–87
 overview 75–77
 from using to protecting 88–89
 Biological control and IITA projects 424–430
 challenges 427–430
 comparing results 424–427
 environmental and human health benefits 430
 Biological Control Centre for Africa 78
 Biological Control Products (BCP) 349–350
 Biorational control and IITA projects
 challenges 438
 commercial production 438
 comparing results 437–438
 Bioversity International 111
Bipolaris maydis 177
Bipolaris sacchari 372
 Blackeye cowpea mosaic virus (BICMV) 114, 116
 Black leaf streak disease (BLSD) 230, 234
 BICMV. *see* Blackeye cowpea mosaic virus (BICMV)
 BLS. *see* Brown leaf spot (BLS)
 BLSD. *see* Black leaf streak disease (BLSD)
 BMZ. *see* German Ministry of Cooperation and Development (BMZ)
 Borgemeister, Christian 4, 11–12
 Borlaug, Norman 24
 Brader, Lukas 4, 5–6

- Brown leaf spot (BLS) 157-158
 BSV. *see* Banana streak badnavirus (BSV)
Busseola fusca 177-178, 182-185
 BXW. *see* Banana *Xanthomonas* wilt (BXW)
- CABI. *see* CAB International (CABI)
 CAB International (CABI) 4, 7-8, 345, 346, 429
- CAD. *see* Cassava anthracnose disease (CAD)
Callosobruchus maculatus 267
Carica papaya L. 318
Carpophilus dimidiatus 187
Carpophilus sp. 186
 Cashew wood borer. *see* *Apate terebrans*
- Cassava
 diseases 155-159
 anthracnose disease 156-157
 cassava bacterial blight (CBB) 155-156
 leaf spot diseases 157-158
 outside Africa 159
 root rot diseases 158-159
 insect pests management 141-155
 African root and tuber scale (ARTS) 150-152
 cassava green mite 145-150
 cassava mealybug 141-145
 grasshoppers 152-155
 overview 139-141
- Cassava anthracnose disease (CAD) 141
 Cassava bacterial blight (CBB) 47, 53, 141, 155-156
 Cassava brown streak disease (CBSD) 43, 51, 56, 58, 99, 101-102, 141
 Cassava brown streak ipomoviruses (CBSIs) 42, 43, 46, 54, 97, 98-99
 Cassava disease surveillance (CDS) 58-59
 Cassava green mite (CGM). *see* *Mononychellus tanajoa*
- Cassava mealybug. *see* *Phenacoccus manihoti*
- Cassava mosaic begomoviruses (CMBVs) 43, 46, 50, 54, 97, 98
 Cassava mosaic disease (CMD) 43, 51, 54, 56, 58, 95-96, 98-100, 101, 141, 431
- Cathartus quadricollis* 186
 CBB. *see* Cassava bacterial blight (CBB)
 CBOL. *see* Consortium for the Barcode of Life (CBOL)
 CBSD. *see* Cassava brown streak disease (CBSD)
 CBSIs. *see* Cassava brown streak ipomoviruses (CBSIs)
 CDS. *see* Cassava disease surveillance (CDS)
- Center for International Cooperation in Agricultural Research for Development (CIRAD) 111, 222, 320
 Centre for Development Research (ZEF) 11
 Centro Internacional de Agricultura Tropical (CIAT) 141
Ceraninus femoratus 271
Ceratitis capitata 323
Ceratitis cosyra 323
 Cercospora leaf blight (CLB) 157-158
 CFP. *see* Plantlets from corm fragments (CFP)
 CGIAR. *see* Consultative Group on International Agricultural Research (CGIAR)
 CGIAR++ 16
 CGIAR Genebank Platform Program 64
 CGIAR Research Program (CRP) 48, 260, 417
 CGM. *see* Cassava green mite (CGM)
 Charcoal rot 262-263
 Chemical control and IITA projects
 challenges 439-440
 comparing results 439
 integrating pesticides 440
 Chemica International 246
Chromolaena odorata 80-82
 CIAT *see* International Center for Tropical Agriculture (CIAT)
 Ciba-Geigy 181
Cicadulina leafhoppers 121-122
 CIMMYT. *see* International Maize and Wheat Improvement Center (CIMMYT)
 CIRAD. *see* Center for International Cooperation in Agricultural Research for Development (CIRAD)
Citrus sinensis 323
Clavigralla tomentosicollis 267, 277-278
 CLB. *see* Cercospora leaf blight (CLB)
 CLCuD. *see* Cotton leaf curl disease (CLCuD)
 CMBVs. *see* Cassava mosaic begomoviruses (CMBVs)
 CMD. *see* Cassava mosaic disease (CMD)
 CMV. *see* Cucumber mosaic virus (CMV)
 CoBB. *see* Bacterial blight of cowpea (CoBB)
 Coconut mite. *see* *Aceria guerreronis*
Cocos nucifera L. 320
 Cocoyam root rot disease (CRRD) 221
Colletotrichum gloeosporioides 156, 157, 218-219, 221, 261
 Commercial products and plant health
 Aflasafe
 commercialization 355-356

- communication and awareness 356
- description 350-351
- incentives 353-354
- manufacturing 352-353
- registration 351-352
- Green Muscle
 - description 346
 - developing formulation 347-348
 - future 350
 - identifying efficient isolate 346-347
 - mass production and registration 349
 - testing 348-349
- overview 345-346
- principles 356-359
- Commonwealth Scientific and Industrial Research Organisation 272
- Consortium for the Barcode of Life (CBOL) 87
- Consultative Group on International Agricultural Research (CGIAR) 7, 9, 12, 16, 17, 21, 25, 29, 61-62, 75, 119, 317, 407, 416, 417, 431, 434
- Cotesia sesamiae* 178, 183, 185
- Cotton leaf curl disease (CLCuD) 96
- Cowpea. *see Vigna unguiculata*
- Cowpea mild mottle virus (CPMMV) 114, 115, 118
- Cowpea Project for Africa. *see* Projet Niébé pour l'Afrique (PRONAF)
- CPMMV. *see* Cowpea mild mottle virus (CPMMV)
- Crop Crisis Control Project (C3P) 102
- Crop Improvement Division 26, 260
- Crop protection
 - disease surveillance
 - encounter pathogens 43, 46-47
 - exotic introduced pathogens (EIPs) 47-48
 - early warning and response systems (EWRS) 57-59
 - emergence and re-emergence of epidemics in SSA
 - agricultural intensification 49
 - causal factors for outbreaks 50-51
 - human migration, trade and transportation 50
 - omnipresent host, pathogen and vectors 49
 - smallholder farming practices 49-50
 - weak surveillance and quarantine controls 50
 - germplasm safety
 - CGIAR Germplasm Health Units 61-62
 - IITA GHU 62-63
 - phytosanitary procedures 60-61
 - preparedness for future phytosanitary challenges 63-64
 - preventing pathogen spread 59-60
 - overview 41-42
 - tools for disease diagnostics
 - antibody-based methods 52-53
 - conventional methods 51-52
 - ICT 56-57
 - nucleic acid-based methods 53-56
 - see also* Plant protection
- Crotalaria juncea* L. 266
- CRP. *see* CGIAR Research Program (CRP)
- CRRD. *see* Cocoyam root rot disease (CRRD)
- Cryptophlebia leucotreta* 183
- C3P. *see* Crop Crisis Control Project (C3P)
- Cucumber mosaic virus (CMV) 231
- Cultural and environmental control approach
 - challenges 436
 - comparing results 435-436
 - Striga* reduction strategy 437
- Cyanide 23
- Cypermethrin 277
- Cyrtobagous salviniae* 388
- Dabiré/Binso, Clémentine 4, 15
- Dasyses rugosella* 218
- Decis 304
- de Moraes, Gilberto 4, 13
- Département de Formation en Protection des Végétaux (DFPV) 346
- DEWN. *see* Digital Early Warning Network (DEWN)
- DFPV. *see* Département de Formation en Protection des Végétaux (DFPV)
- Diamondback moth. *see Plutella xylostella*
- Digital Early Warning Network (DEWN) 58
- Dimethoate 277
- Dioscorea rotundata* 43, 111, 219-220
- Downy mildew resistance (DMR) 181
- Dreyer, Hans 3, 4-5
- EACMV. *see* East African cassava mosaic virus (EACMV)
- Early warning and response systems (EWRS) 57-59
- East African cassava mosaic virus (EACMV) 46, 54, 100
- Eastern and Southern Africa Regional Centre (ESARC) 100
- Eccritotarsus catarinensis* 387

- Ecological Sustainable Cassava Plant Protection (ESCaPP) 15, 141
- Ecological Sustainable Cowpea Protection. see Protection Ecologique Durable du Niébé (PEDUNE)
- Eichhornia crassipes* 385
- EIPs. see Exotic introduced pathogens (EIPs)
- Eldana saccharina* 177, 305
- Eléphant Vert 350
- ELISA. see Enzyme-linked immunosorbent assay (ELISA)
- EMBRAPA. see Empresa Brasileira de Pesquisa Agropecuária (EMBRAPA)
- Empresa Brasileira de Pesquisa Agropecuária (EMBRAPA) 85, 141
- Encarsia dispersa* 326
- Encarsia guadeloupae* 326
- Endosulfan 304
- Enzyme-linked immunosorbent assay (ELISA) 52
- ESARC. see Eastern and Southern Africa Regional Centre (ESARC)
- ESCaPP. see Ecological Sustainable Cassava Plant Protection (ESCaPP)
- European Initiative for Agricultural Research for Development 16
- Euzopherodes vapidella* 218
- EWRS. see Early warning and response systems (EWRS)
- Exotic introduced pathogens (EIPs) 43, 47-48
- Faculty of Agriculture 10
- FAES. see Fondation Agir pour l'Education et la Santé (FAES)
- Fall armyworm (FAW). see *Spodoptera frugiperda*
- FAO. see Food and Agriculture Organisation (FAO)
- Farmer Field Fora (FFF) 398, 405-406
- Farmer Field Schools (FFS) 30, 398, 405-406, 441, 443
- Farmer Interface App (FIA) 276-277
- Farmer Welfare Fora (FWF) 406
- Farming Interface App 443
- FAW. see *Spodoptera frugiperda*
- FDA. see Federal Department of Agriculture (FDA)
- Federal Department of Agriculture (FDA) 181-182
- FFF. see Farmer Field Fora (FFF)
- FFS. see Farmer Field Schools (FFS)
- FIA. see Farmer Interface App (FIA)
- 5CP. see New Cassava Varieties and Clean Seed to Combat CMD and CBSD (5CP) project
- Floating fern. see *Salvinia molesta* D. S. Mitchell
- FOC. see *Fusarium oxysporum* f. sp. *cubense* (FOC); Fusarium wilt (FOC)
- FoC TR4. see *Fusarium oxysporum* f. sp. *cubense* Tropical Race IV (FoC TR4)
- Fondation Agir pour l'Education et la Santé (FAES) 349-350
- Food and Agriculture Organisation (FAO) 3-6, 30, 61, 181
- Fopius arisanus* 324-325
- Foreign Agricultural Service 351
- Frankliniella schultzei* 269
- 'From Uniformity to Diversity' 9
- Fruit and tree crops
- cashew wood borer 332
 - coconut mite 331-332
 - flies 323-325
 - mango mealybug 321-323
 - overview 317-320
 - papaya mealybug 326-329
 - Phytophthora megakarya* 329-331
 - spiralling whitefly 325-326
- Fuller, Claude 95
- Fusarium oxysporum* 10, 159, 304
- Fusarium oxysporum* f. sp. *cubense* (FOC) 237-238
- Fusarium oxysporum* f. sp. *cubense* Tropical Race IV (FoC TR4) 47, 249
- Fusarium solani* 159
- Fusarium* wilt (FOC) 230, 234
- FWF. see Farmer Welfare Fora (FWF)
- GenBank 89
- Gene-for-gene model 221
- Genetically modified organisms (GMOs) 25-26, 30, 63, 433-434, 447
- Genetic Resources Unit 429
- German Economic Corporation for International Cooperation (GIZ) 4, 16-17
- German Ministry of Cooperation and Development (BMZ) 16
- Germplasm Health Unit (GHU) 61-64, 399
- Gesellschaft für Technisches Zusammenarbeit (GTZ) 192
- GHU. see Germplasm Health Units (GHU)

- GIZ. see German Economic Corporation for International Cooperation (GIZ)
- GLCI. see Great Lakes Cassava Initiative (GLCI)
- GLIP. see Grain Legumes Improvement Program (GLIP)
- Gliricidia sepium* 370
- Globodera* spp. 82–83
- Glufosinate ammonium 371
- Glycine max* L. Merr. 117
- Glyphosate 371
- GMOs. see Genetically modified organisms (GMOs)
- Golden Rice 25
- Grain Legumes Improvement Program (GLIP) 259–260
- Great Lakes Cassava Initiative (GLCI) 103
- Green Guard* 27, 346, 350
- Green Muscle* 8, 17, 27, 29, 154, 345, 349, 438
- Green Revolution 431, 433
- GTZ. see Gesellschaft für Technisches Zusammenarbeit (GTZ)
- Guardian* 249
- Gyransoidea tebygi* 321–322
- Hangy, Willy Tata 4, 13–14
- Harmonia axyridis* 27
- 'Healthy Vegetables through Participatory Integrated Pest Management (IPM) in Peri-Urban Gardens of Southern Benin' 296
- Helicotylenchus multicinctus* 243–244
- Helicoverpa armigera* 300
- Hellula undalis* 300
- Herren, Hans R. 4, 8–9, 26, 144
- Hoplolaimus pararobustus* 244
- Host Plant Resistance, Biological Control and Habitat Management 260
- Hughes, Jacqueline 6–7
- Hydatothrips adolfifrideric* 269
- Hymenia recurvalis* 299, 306
- IAPSC. see Steering Committee for the Inter-Africa Phytosanitary Council (IAPSC)
- IBPGR. see International Bureau of Plant Genetic Resources (IBPGR)
- Icipe. see International Center of Insect Physiology and Ecology (Icipe)
- ICRISAT. see International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)
- IIBC. see International Institute of Biological Control (IIBC)
- IITA. see International Institute of Tropical Agriculture (IITA)
- Imazapyr 371
- Imidazolinone resistance (IR) gene 376
- Imperata cylindrica* 366–373
- INEAC. see Institut d'Etudes Agronomiques du Congo (INEAC)
- INERA. see Institut National pour l'Etude et la Recherche Agronomique (INERA)
- INGER. see International Network for Genetic Evaluation of Rice (INGER)
- INIBAP. see International Network for the Improvement of Banana and Plantain (INIBAP)
- INRAB. see National Agronomic Research Institute of Benin (INRAB)
- Institut d'Etudes Agronomiques du Congo (INEAC) 14
- Institute of Plant Protection in Vienna 331
- Institut National pour l'Etude et la Recherche Agronomique (INERA) 13–14, 15
- Integrated Management of Legume Pests Project 260
- Integrated pest management (IPM) 5, 24, 75
 combining techniques in 440–443
 challenges 441–442
 comparing results 440–441
 ICT tools 442–443
 gender access 404–405
 healthy planting material 399
 improved collaboration 407
 improved exchange with farmers 405–406
 overview 397–399
 pesticides role 399–404
- Integrated Sustainable Development Goals (iSDG) Model 8
- Intergovernmental Panel on Climate Change (IPCC) 19–20, 426, 427
- Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services 426
- International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) 9, 28
- International Bureau of Plant Genetic Resources (IBPGR) 61
- International Center for Tropical Agriculture (CIAT) 85
- International Center of Insect Physiology and Ecology (Icipe) 11, 12, 16, 31, 320
- International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) 16, 31, 260

- International Institute of Biological Control (IIBC) 321, 346
- International Institute of Tropical Agriculture (IITA) 5, 7, 8, 10, 11, 12-13, 19, 31, 42, 43, 52, 58, 59, 61, 65, 88, 100, 101, 111, 174, 230, 296, 320, 331, 355, 367, 426, 446
- clients and peers 417-419
- developing insect collection 77-78
- GHU 62-63
- plans 445-448
- projects and their impact 419-443
- research and implementation
- biological control 26-28
 - breeding programmes 25-26
 - Creation of the Consultative Group of International Agricultural Research (CGIAR) 25
 - focus on environment 30
 - focus on social and economic context 31
 - integrated pest management 28-30
- International Maize and Wheat Improvement Center (CIMMYT) 106, 175
- International Network for Genetic Evaluation of Rice (INGER) 7
- International Network for the Improvement of Banana and Plantain (INIBAP) 249
- International Panel of Experts on Sustainable Food Systems (IPES-Food) 9
- International Plant Protection Convention (IPPC) 5, 6, 60, 62
- International Research Center for Climate Change Resilient Agriculture (IRCCCA) 13
- International Rice Research Institute (IRRI) 4, 6-7
- IPCC. *see* Intergovernmental Panel on Climate Change (IPCC)
- IPES-Food. *see* International Panel of Experts on Sustainable Food Systems (IPES-Food)
- IPM. *see* Integrated pest management (IPM)
- IPM 2.0 442
- IPM-OMICS. *see* Legume Innovation Lab project (IPM-OMICS)
- IPPC. *see* International Plant Protection Convention (IPPC)
- IR. *see* Imidazolinone resistance (IR) gene
- IRCCCA. *see* International Research Center for Climate Change Resilient Agriculture (IRCCCA)
- IRRI. *see* International Rice Research Institute (IRRI)
- Irvingia gabonensis* 318, 324
- iSDG. *see* Integrated Sustainable Development Goals (iSDG) Model
- Kenya Agricultural and Livestock Research Organization 8, 353
- King Baudouin Award 25, 26, 144, 176
- Krall, Stephan 4, 16-17
- 'Kräuselkrankheit' 95
- LAMP. *see* Loop-mediated isothermal amplification (LAMP)
- Leaf blight and leaf spot 262
- Leaf caterpillar. *see* *Psara basalis*
- Legume Innovation Lab project (IPM-OMICS) 15
- Legume pod borer. *see* *Maruca vitrata* Fabricius
- Legumes
- cowpea
 - foliar diseases 261-262
 - insect pests 267-278
 - nematodes 265-267
 - soil-borne diseases 262-263
 - overview 259-260
 - soybean
 - foliar diseases 279-281
 - Leucaena leucocephala* 370
 - Lindecke, Marlis 4, 16
 - Lipaphis erysimi* 300, 301
 - Loop-mediated isothermal amplification (LAMP) 55, 112
 - Lutte biologique contre les Locustes et Sauteriaux (LUBILOSA) 17, 346, 349, 350
 - Lysinibacillus sphaericus* 262
 - Lysiphlebus testaceipes* 269, 307-308
- Macrophomina phaseolina* 262-263, 265
- Maize
- biological control of stemborers 182-185
 - diagnostic surveys and in-country plant health analysis 176-178
 - downy mildew eradication programme 178-182
 - exploratory years in research 175-176
 - Fusarium verticillioides* and maize pests 185-188
 - larger grain borer and beetles 190-192
 - mycotoxins 193-199

- overview 173-175
 post-harvest losses 188-190
- Maize chlorotic mottle virus (MCMV) 42, 47, 48, 53, 104, 107-109
- Maize lethal necrosis (MLN) 47, 97, 98, 104, 106-109, 109
- Maize Research Program 176
- Maize streak disease (MSD) 95-96
- Maize streak virus (MSV) 97, 104-106
- Mangifera indica* L. 318
- Maruca* pod borer 272-277
- Maruca vitrata* 83-85, 267, 272-277
- MCMV. see Maize chlorotic mottle virus (MCMV)
- Megalurothrips sjostedti* 267, 269
- Meloidogyne africana* 82
- Meloidogyne arenaria* 217
- Meloidogyne decalineata* 82
- Meloidogyne enterolobii* 217, 299
- Meloidogyne incognita* 217, 266
- Meloidogyne javanica* 217
- Meloidogyne oteifae* 82
- Meloidogyne* spp. 216, 243, 296, 299, 306-307
- Memorandum of Understanding 10
- Metarhizium acridum* 27, 154, 346, 347-348
- Metarhizium anisopliae* 152, 247, 305
- MI. see Millennium Institute (MI)
- Michigan State University (MSU) 12-13, 276, 443
- Millennium Institute (MI) 4, 8-9
- Millettia thonningii* 271, 274
- Mites 85-86
- Mitti, Joyce 4, 6
- MLN. see Maize lethal necrosis (MLN)
- Moniliophthora perniciosa* 319
- Mononychellus tanajoa* 14, 85, 145-150
- MorphoBank 88
- MSD. see Maize streak disease (MSD)
- MSU. see Michigan State University (MSU)
- MSV. see Maize streak virus (MSV)
- Mucuna* spp. 369, 436
- Musa acuminata* 230
- Mussidia nigrivenella* 182
- Mycocarvester 349
- Mycosphaerella fijiensis*. see *Pseudocercospora fijiensis*
- Mycosphaerella henningsii* 157
- 'Mycotoxins in Food in Africa' 194
- NAFDAC. see National Agency for Food and Drugs Administration and Control (NAFDAC)
- NAQS. see Nigerian Agricultural Quarantine Service (NAQS)
- NARO. see National Agricultural Research Organisation (NARO)
- NARS. see National Agricultural Research Systems (NARS)
- National Agency for Food and Drugs Administration and Control (NAFDAC) 351, 353
- National Agricultural Research Organisation (NARO) 9, 100, 281, 367
- National Agricultural Research Systems (NARS) 3, 13-15, 101, 260, 446
- National Agriculture Research programmes 175
- National Agronomic Research Institute of Benin (INRAB) 14-15, 303
- National Institute for Agricultural Studies and Research (INERA) 4
- National Plant Protection and Quarantine Organizations 399
- National Plant Protection Center 16
- National plant protection organisations (NPPOs) 6, 57, 60
- National Seed Service (NSS) 181-182
- Natural Resources Institute (NRI) 191
- Neochetina bruchi* 386
- Neochetina eichhorniae* 386-387
- Neohydronomus affinis* 388
- Neonicotinoids 24
- Neoseiulus baraki* 331-332
- Neoseiulus idaeus* 85, 146, 148
- Neoseiulus paspalivorus* 331
- Neozygites floridana* 146
- Nephaspis oculatus* 326
- NEPs. see New encounter pathogens (NEPs)
- New Cassava Varieties and Clean Seed to Combat CMD and CBSD (5CP) project 103
- New encounter pathogens (NEPs) 43
- Next-generation sequencing (NGS) 55, 123
- 'NextGen Phytosanitation' 56
- NGS. see Next-generation sequencing (NGS)
- NIBIO. see Norwegian Institute of Bioeconomy Research (NIBIO)
- Nicosulfuron 372
- Nigerian Agricultural Quarantine Service (NAQS) 59
- Nigeria Plant/Agricultural Quarantine Service (NPQS) 60, 61
- Niphograptus albigitallis* 387
- Norwegian Institute of Bioeconomy Research (NIBIO) 277, 443

- NOVACRID® 27, 346, 350
- NPPOs. *see* National plant protection organisations (NPPOs)
- NPQS. *see* Nigeria Plant/Agricultural Quarantine Service (NPQS)
- NRI. *see* Natural Resources Institute (NRI)
- NSS. *see* National Seed Service (NSS)
- Oduor, George 7-8
- Oecophylla longinoda* 325
- Oedaleus senegalensis* 154-155
- 'One Health' framework 57
- Open-pollinated maize and sorghum varieties (OPVs) 376
- OPVs. *see* Open-pollinated maize and sorghum varieties (OPVs)
- Organic methods 22
- Organization of African Unity 60
- Oriental fruit fly 80
- Ornithacris cavroisi* 347
- Orthogalumna terebrantis* 387
- PACA. *see* Partnership for Aflatoxin Control in Africa (PACA)
- Paenibacillus polymyxa* 262
- Papaya mealybug. *see* *Paracoccus marginatus*
- Paracoccus marginatus* 319, 326-326
- Paraquat 370
- Pareuchaetes pseudoinsulata* 82, 379
- Parthenium hysterophorus* 427
- Partnership for Aflatoxin Control in Africa (PACA) 352
- PCR. *see* Polymerase chain reaction (PCR)
- PDVs. *see* PolyDNA Viruses (PDVs)
- Pectobacterium carotovorum* 303
- PEDUNE. *see* Protection Ecologiquement Durable du Niébé (PEDUNE)
- Pennisetum purpureum* 183
- Pentalonia nigronervosa* 232
- Peronosclerospora sorghi* 178-179
- Peronosclerospora zeae* 180
- Phakopsora pachyrhizi* 279
- Phanerotoma philippinensis* 85
- Phanerotoma syleptae* 274. *see* *Phanerotoma philippinensis*
- Phenacoccus manihoti* 77, 79, 141-145
- Philenoptera cyanescens* 271
- Physoderma maydis* 177
- Phytophthora colocasiae* 219
- Phytophthora infestans* 60
- Phytophthora megakarya* 319
- Phytophthora palmivora* 319, 329
- Phytosanitary surveillance programmes 42
- Phytoseiulus longipes* 300
- Pistia stratiotes* L. 385
- Pittendrigh, Barry 4, 12-13
- Plant Health Management Division 5, 28, 260
- Plantlets from corm fragments (CFP) 241
- Plant Production and Protection Division 5
- Plant protection
- historical development 22-24
 - Green Revolution and its limitations 24
 - pesticides and their limitations 23-24
 - traditional agriculture in Africa 22-23
 - IITA's research and implementation 25-31
 - biological control 26-28
 - breeding programmes 25-26
 - Creation of the Consultative Group of International Agricultural Research (CGIAR) 25
 - focus on environment 30
 - focus on social and economic context 31
 - integrated pest management 28-30
 - importance 19-22
 - adapted productive crop plant genotypes 21
 - climate 19-20
 - measures to minimize damage 21-22
 - soil fertility 20-21
 - see also* Crop protection
- Plant Protection Laboratory 14
- Plutella xylostella* 300-301, 305-306
- Pod sucking bugs 277-278
- PolyDNA Viruses (PDVs) 185
- Polymerase chain reaction (PCR) 53, 55, 100
- Polyphagotarsonemus latus* 299, 309
- Potato cyst nematodes. *see* *Globodera* spp.
- Pratylenchus brachyurus* 217
- Pratylenchus coffeae* 217, 239
- Pratylenchus sudanensis* 217
- Projet Niébé pour l'Afrique (PRONAF) 15, 260, 406
- PRONAF. *see* Projet Niébé pour l'Afrique (PRONAF)
- Prostephanus truncatus* 188, 190-192
- Protection Ecologiquement Durable du Niébé (PEDUNE) 15, 260, 270
- Psara basalalis* 299, 306
- Pseudocercospora fijiensis* 235-236
- Pseudomonas syringae* 375
- Pseudothraupis devastans* 157

- Pterocarpus santalinoides* 271, 274
Puccinia fragosoana 372
Puccinia imperatae 372
- Quantitative trait loci (QTL) 222, 266, 270, 278
- Ralstonia solanaceum* 303
Rastrococcus invadens 318, 321
- R4D. *see* Research for development (R4D)
- Recombinase polymerase amplification (RPA) 55, 112
- Regional Plant Protection Organization 6
- RENACO. *see* Réseau de Recherche sur le Niébé pour l'Afrique de l'Ouest et du Centre (RENACO)
- Research for development (R4D) 417, 426
- Réseau de Recherche sur le Niébé pour l'Afrique de l'Ouest et du Centre (RENACO) 260
- Resistant varieties and IITA projects 431–435
 breeding 434–435
 challenges 432–434
 comparing results 431–432
- Reverse transcription-PCR (RT-PCR) 54
- Rhizopertha dominica* 188
- Rimsulfuron 372
- Riptortus dentipes* 277
- Rockefeller Foundation 190
- Root knot nematode. *see* *Meloidogyne africana*
- Root rot nematodes. *see* *Meloidogyne* spp.
- RPA. *see* Recombinase polymerase amplification (RPA)
- RT-PCR. *see* Reverse transcription-PCR (RT-PCR)
- SACMV. *see* Southern African cassava mosaic (SACMV)
- Salvinia auriculata* 80
Salvinia molesta 79–80, 385
- 'Save and Grow' 5
- SbCBV. *see* Soybean chlorotic blotch virus (SbCBV)
- SbMMV. *see* Soybean mild mottle virus (SbMMV)
- Schizaphis graminum* 307
- Science and Technology Research Commission (STRC) 57
- Scientific Animations Without Borders programme 276
- SCMV. *see* Sugarcane mosaic virus (SCMV)
- Scopus database 97
- Scutellonema bradys* 217
- Seed Health Unit (SHU) 7, 61
- Selepa docilis* 299
Selepa ergasima 299
- Semi-Arid Food Grains Research and Development Project 260
- Septoria vignae* 262
Septoria vignicola 262
- Sesamia botanephaga* 177
Sesamia calamistis 177–178, 305
- SHU. *see* Seed Health Unit (SHU)
- SI. *see* Sustainable intensification (SI)
- Siam weed. *see* *Chromolaena odorata*
- Silver bullet 23, 30
- Sitophilus zeamais* 186, 188
- Sixth International Plant Protection Congress 61
- Slash-and-burn practices 23
- SMV. *see* Soybean mosaic virus (SMV)
- Sordidin 246
- Southern African cassava mosaic (SACMV) 46
- Soybean. *see* *Glycine max* L. Merr.
- Soybean chlorotic blotch virus (SbCBV) 46, 118
- Soybean mild mottle virus (SbMMV) 46, 118
- Soybean mosaic virus (SMV) 97, 98, 118
- Speargrass. *see* *Imperata cylindrica*
- SP-IPM. *see* System-wide Program for IPM (SP-IPM)
- Spiralling whitefly. *see* *Aleurodicus dispersus*
- Spodoptera eridania* 83
Spodoptera frugiperda 10, 83, 427, 442
Sporisorium schweinfurthianum 372
- SSA. *see* Sub-Saharan Africa (SSA), plant health in
- State Agriculture Development Projects (ADP) 181–182
- Steering Committee for the Inter-Africa Phytosanitary Council (IAPSC) 6, 60
- Stellenbosch University (SU) 4, 9–10
- Stictococcus vayssierei* 150–152
- 'Stop Bunchy Top' 233
- STRC. *see* Science and Technology Research Commission (STRC)
- SU. *see* Stellenbosch University (SU)
- Sub-Saharan Africa (SSA), plant health in
 challenges
 historical development of protection 22–24
 IITA's research and implementation 25–31
 importance of protection 19–22

- improving
 IITA clients and peers 417-419
 IITA projects and their impact 419-443
 IITA's plans 445-448
 overall assessment 443-445
 overview 415-417
 recommendations 448-449
 stakeholder priorities
 Advisory Service on Agricultural Research for Development (BEAF) - German Economic Corporation for International Cooperation (GIZ) 16-17
 CAB International (CABI) 7-8
 Food and Agriculture Organisation (FAO) 4-6
 International Rice Research Institute (IRRI) 6-7
 Michigan State University (MSU) 12-13
 Millennium Institute (MI) 8-9
 National Agricultural Research Systems (NARS) 13-15
 overview 3-4
 Stellenbosch University (SU) 9-10
 University of Bonn 11-12
 University of Ibadan 10-11
 University of São Paulo 13
 Sugarcane mosaic virus (SCMV) 104, 108
 Sustainable Cowpea Protection and Cowpea Project 14
 Sustainable intensification (SI) 11
 Sustainable Tree Crops Programme 330
Syrphophagus africanus 269
 System-wide IPM Programme 119
 System-wide Program for IPM (SP-IPM) 29, 407, 417
- Tagetes erecta* L. 266
 Talstar 304
 Tanzania Official Seed Certification Institute (TOSCI) 103
- Taro and cocoyam
 overview 213-216
 pest and disease control measures
 clean seed systems 220-221
 host resistance against biotic stresses 221-223
 threats and management options
 fungal diseases 218-219
 insects 218
 nematodes 216-218
 viruses 219-220
- Taro leaf blight (TLB) 219, 221
 TC. *see* Tissue culture (TC)
 'Technical Guidelines for Safe Movement of Germplasm' 61
 Technology Transfer and Licensing Agreement (TTLA) 355
 TEM. *see* Transmission electron microscopy (TEM)
 TensorFlow 56
Tephrosia candida 271
Teretrius nigrescens 191-192
Terminalia ivorensis 237
Tetranychus evansi 300
Tetranychus ludeni 309
Tetranychus urticae 309
 TGX 1448-2E 374
Therophilus javanus 274. *see* *Bassus javanus*
 Thrips 269-272
 Times Higher Education World University Rankings 9
 Tissue culture (TC) 241
 TLB. *see* Taro leaf blight (TLB)
 Topsin-M 304
 TOSCI. *see* Tanzania Official Seed Certification Institute (TOSCI)
 Transmission electron microscopy (TEM) 52
Tribolium castaneum 186, 188
Trichoderma asperellum 404
Trichoderma spp. 330
 Tropical Whitefly IPM Project 119
 TTLA. *see* Technology Transfer and Licensing Agreement (TTLA)
Typhlodromalus aripo 14, 85, 86, 146-147, 149-150, 424-425
- Ugandan cassava brown streak virus 99
 University of Amsterdam 331
 University of Bonn 4, 11-12
 University of Ibadan 4, 10-11
 University of São Paulo 4, 13, 331
 USDA-ARS. *see* US Department of Agriculture - Agricultural Research Service (USDA-ARS)
 USDA Soybean Germplasm Collection 281
 US Department of Agriculture - Agricultural Research Service (USDA-ARS) 195, 196, 279-281, 345
- VCGs. *see* Vegetative compatibility groups (VCGs)
 Vegetables

- aphids 307-308
- arthropod pests 299-302
- Hymenia recurvalis* 306
- Meloidogyne* spp. 306-307
- mites 309
- overview 295-296
- pathogens 303-304
- plant parasitic nematodes 296, 299
- Plutella xylostella* 305-306
- problems in pesticide use 304-305
- Psara basalis* 306
- Vegetative compatibility groups (VCGs) 195, 196
- Vigna oblongifolia* 269
- Vigna unguiculata* 12, 113, 261
- Vigna vexillata* 269, 272
- Viljoen, Altus 4, 9-10
- VIPS expert system 443
- Viruses
 - banana and plantain diseases
 - overview 109-110
 - cassava diseases
 - building quality seed system
 - years 101-103
 - overview 98-99
 - resistance-breeding years 99-100
 - surveillance and epidemiology
 - years 100-101
 - cowpea
 - control through resistant varieties 116
 - diversity infecting cowpea 114-115
 - overcoming challenges to
 - diagnosis 115-116
 - overview 113-114
 - several viruses, one disease and unpredictability 115
 - disease in Africa 95-96
 - maize diseases
 - maize lethal necrosis (MLN) 106-109
 - maize streak virus (MSV) 104-106
 - overview 104
 - progress in research 96-98
 - soybean
 - occurrence, diversity and incidence 117-118
 - overview 117
 - techniques for management in Africa 123-124
 - vectors
 - Bemisia tabaci* control 121
 - leafhopper vectors of MSV 121-122
 - overview 118-119
 - whitefly vector of cassava viruses 119-121
- yam
 - disease aetiology, epidemiology and effects on yield 112
 - overview 111-112
 - seed degeneration 113
- Wageningen University 11
- WARDA. *see* West Africa Rice Development Association (WARDA)
- Weeds
 - control in cassava systems
 - agronomic measures, herbicides and crop varieties 383-384
 - description 383
 - control in plantain
 - description 380
 - hand-weeding, herbicide and fertilizer applications 381-382
 - floating aquatic
 - description 385-386
 - water fern 388
 - water hyacinth 386-387
 - water lettuce 388
 - integrated management of *Imperata cylindrica*
 - alley cropping 369-370
 - biological control 372-373
 - chemical control 370-372
 - cultural practices and high-density cropping 369
 - description 366-367
 - manual control 367-368
 - mechanical control 368
 - smothering with cover crops 368-369
 - integrated management of *Striga hermonthica*
 - control 377-378
 - description 373-374
 - herbicide-resistant maize and seed coating with herbicides 376-377
 - maize-legume rotation 374-375
 - nitrogen and inorganic fertilizer 375
 - Striga*-resistant/tolerant maize and cowpea 375-376
 - overview 365-366
 - role and control of *Chromolaena odorata*
 - biological control 379-380
 - description 378
 - slash and burn 379
- West African Virus Epidemiology project 48

- West Africa Rice Development Association (WARDA) 7
- White yam. *see* *Dioscorea rotundata*
- 'Workshop on Mycotoxins in Food in Africa' 196
- World Bank 181-182
- World Food Prize 26, 144
- World Vegetable Center (AVRDC) 7, 16
- World Wide Fund (WWF) 75
- WWF. *see* World Wide Fund (WWF)
- Xanthomonas axonopodis* 155-156
- Xanthomonas campestris* 233, 303
- Xanthomonas citri* 263
- Yam anthracnose disease (YAD) 221
- Yam Improvement for Income and Food Security in West Africa (YIIFSWA) Project 112
- Yam mild mosaic virus (YMMV) 112, 219-220
- Yam mosaic virus (YMV) 43, 53, 97, 112, 220
- Yellow sigatoka (YS) 235, 237
- YieldWise initiative 190
- YIIFSWA. *see* Yam Improvement for Income and Food Security in West Africa (YIIFSWA) Project
- YMMV. *see* Yam mild mosaic virus (YMMV)
- YMV. *see* Yam mosaic virus (YMV)
- YS. *see* Yellow sigatoka (YS)
- ZEF. *see* Centre for Development Research (ZEF)
- Zonocerus elegans* 152
- Zonocerus variegatus* 152-154, 156, 264