



Food and Agriculture Organization
of the United Nations

The World Banana Forum (WBF) / Foro Mundial Bananero (FMB)
Working together for sustainable banana production and trade
Trabajando juntos hacia una producción y comercio sostenibles del banano



Fusarium TR4 Materials / Materiales sobre Fusarium R4T

| Focus | Audience | Type | Title | Subtitle | AUTHOR | Language | LINK |
|----------------------|----------------|---------|--|---|---------------------|-------------------------|---|
| Awareness-raising | Grower/ALL | Flyer | What is Panama TR4? | Learn about the disease and how to identify symptoms in banana plants. | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Awareness-raising | Grower | Flyer | Mixed farming on Panama TR4 affected land | How we conduct risk assessments for TR4 infested banana farms growing other crops or grazing cattle | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Awareness-raising | Grower | Flyer | Grazing cattle on land with Panama TR4 | How we work with growers grazing cattle on TR4 affected land | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Awareness-raising | Grower/ALL | Leaflet | Got a job to do on a banana farm? | What you need to do if you access banana farms for work | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Guidance | Grower/workers | Manual | Banana best management practices | Everything you need to know about on-farm biosecurity measures | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Guidance | Grower | Manual | On-farm biosecurity checklist | Rate your Panama TR4 readiness with this checklist | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Awareness-raising | Grower | Poster | Visitor register | Record movement of people, vehicles and machinery on, within and off your farm | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Awareness-raising | Grower | Poster | Shed poster - Bottle | Remind workers and contractors to maintain on-farm biosecurity measures with these eye-catching shed posters | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Awareness-raising | Grower | Poster | Shed poster - Shoes | Remind workers and contractors to maintain on-farm biosecurity measures with these eye-catching shed posters | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Awareness-raising | Grower | Poster | Shed poster - Shorts | Remind workers and contractors to maintain on-farm biosecurity measures with these eye-catching shed posters | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Awareness-raising | Grower/ALL | Poster | Farm gate signage - actual size (700mm x 530mm) | Printable biosecurity farm gate signs | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Awareness-raising | Grower/ALL | Poster | Farm gate signage - A4 size | Printable biosecurity farm gate signs | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Awareness-raising | Grower/ALL | Poster | Farm gate signage - A3 size | Printable biosecurity farm gate signs | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Capacity-development | Grower/workers | Manual | Decontamination guide | Learn how to effectively decontaminate people, vehicles and machinery for Panama TR4 | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Capacity-development | Grower/workers | Manual | Decontamination guide | Learn how to effectively decontaminate people, vehicles and machinery for Panama TR4 | State of Queensland | PUNJABI | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Capacity-development | Grower/workers | Manual | Decontamination guide | Learn how to effectively decontaminate people, vehicles and machinery for Panama TR4 | State of Queensland | HMONG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Capacity-development | Grower/workers | Manual | Wash-down designs to combat Panama disease tropical race 4 | Design and construction of wash-down facilities for Panama TR4 | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Awareness-raising | Growers | Leaflet | Surveillance for Panama TR4 | What to expect if Biosecurity Queensland visits your farm to conduct surveillance | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Awareness-raising | Growers | Leaflet | Check your plants for Panama TR4 | Conduct your own on-farm surveillance and report suspect plants | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Awareness-raising | Growers | Leaflet | Panama TR4 and the law | Biosecurity Queensland's legislative processes and growers' responsibilities | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Awareness-raising | ALL | Form | Sample Presence of Panama TR4 notice | The notice may require the occupier to comply with certain processes and procedures to minimise the biosecurity risk posed by the disease. These operational processes can be individualised to the property. | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Capacity-development | ALL | Leaflet | Diagnosing Panama TR4 | How we determine a plant sample is positive for Panama TR4 and the biosecurity processes involved | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Capacity-development | Grower | Manual | Trapping feral pigs on the Cassowary Coast: A practical guide | How to manage feral pigs on your property | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Awareness-raising | ALL | Leaflet | Frequently asked questions | Answers to commonly asked questions about Panama TR4 | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Awareness-raising | ALL | Flyer | The Panama TR4 support service | Who to contact if you need to reach out for emotional support | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Awareness-raising | ALL | Flyer | Handy contacts | Service provider and emergency contact numbers for banana growers | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Guidance | ALL | Report | Panama TR4 Program Review | The Queensland Department of Agriculture and Fisheries commissioned ACIL Allen Consulting to conduct an independent review of Biosecurity Queensland's Panama TR4 Program that is currently in place to control and contain Panama TR4. Download the reporting findings here. | State of Queensland | ENG | https://publications.qld.gov.au/dataset/panama-disease-tropical-race-4-grower-kit |
| Awareness-raising | Grower | Video | Patrick Leahy from Leahy's Bananas shares how his farm is getting ready for Panama TR4 | https://www.youtube.com/watch?v=coyLpjdqrY8 | State of Queensland | ENG/Subtitles available | https://panamatr4ready.com.au/ |
| Awareness-raising | ALL | Video | Are you Panama TR4 Ready? (2min version) | https://www.youtube.com/watch?v=g0SCrz8kT20 | State of Queensland | ENG/Subtitles available | https://panamatr4ready.com.au/ |
| Awareness-raising | ALL | Video | Are you Panama TR4 Ready? (Short version) | https://www.youtube.com/watch?v=56GweUJgMA | State of Queensland | ENG/Subtitles available | https://panamatr4ready.com.au/ |

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| Capacity-development | Grower | Video | On-farm biosecurity - managing footwear | https://www.youtube.com/watch?v=FlxbM4Zb6es | State of Queensland | ENG/Subtitles available | https://panamatr4ready.com.au/ |
| Awareness-raising | ALL | Video | The Biosecurity Act | https://www.youtube.com/watch?v=2Bv9fc600Q | State of Queensland | ENG/Subtitles available | https://panamatr4ready.com.au/ |
| Awareness-raising | ALL | Video | Biosecurity Act 2014: Protecting Queensland's future | https://www.youtube.com/watch?v=OeTNZlXWtrc | State of Queensland | ENG/Subtitles available | https://panamatr4ready.com.au/ |
| Capacity-development | ALL | Video | Panama Tropical Race 4: identifying the disease and protecting your farm | https://www.youtube.com/watch?v=onPpPeTGese | State of Queensland | ENG/Subtitles available | https://panamatr4ready.com.au/ |
| Capacity-development | ALL | Video | Panama disease tropical race 4: Identifying and reporting suspect plants | https://www.youtube.com/watch?v=DheDd8J1IUE&list=PLpiCDHV-ljhHhQeTeJfg5xpOJDkvOZEpu&index=7 | State of Queensland | ENG/Subtitles available | https://panamatr4ready.com.au/ |
| Awareness-raising | ALL | Video | Diagnostic Testing - Panama disease tropical race 4 | https://www.youtube.com/watch?v=CflymJqNnDQ | State of Queensland | ENG/Subtitles available | https://panamatr4ready.com.au/ |
| Awareness-raising | ALL | Video | Sample Collection and Testing - Panama disease tropical race 4 | https://www.youtube.com/watch?v=1z8CQLEEXbk | State of Queensland | ENG/Subtitles available | https://panamatr4ready.com.au/ |
| Awareness-raising | ALL | Video | Help shut the gate on Panama disease tropical race 4 | https://www.youtube.com/watch?v=HMY95WWyc5w | State of Queensland | ENG/Subtitles available | https://panamatr4ready.com.au/ |
| Capacity-development | Worker | Video | Biosecure premises: exit and personal decontamination | https://www.youtube.com/watch?v=mjA_3_RtPFM | State of Queensland | ENG/Subtitles available | https://panamatr4ready.com.au/ |
| Awareness-raising | ALL | Video | The Panama TR4 Education Package | https://www.youtube.com/watch?v=lpixe3THDBU | State of Queensland | ENG/Subtitles available | https://panamatr4ready.com.au/ |
| Awareness-raising | ALL | Video | The Panama TR4 Program | https://www.youtube.com/watch?v=h1LPZx0Z1IQ | State of Queensland | ENG/Subtitles available | https://panamatr4ready.com.au/ |
| Awareness-raising | ALL | Video | Panama Disease TR4 | https://www.youtube.com/watch?v=evFNHAcFP74 | State of Queensland | ENG/Subtitles available | https://panamatr4ready.com.au/ |
| Awareness-raising | Grower | Video | Banana growers - are you Panama TR4 Ready? | https://www.youtube.com/watch?v=ZQuNYXhxfXU | State of Queensland | ENG/Subtitles available | https://panamatr4ready.com.au/ |
| Awareness-raising | ALL | Video | Making biosecurity work for your farm | https://www.youtube.com/watch?v=HTZ75FPyUc&list=PLpiCDHV-ljhHhQeTeJfg5xpOJDkvOZEpu&index=4 | State of Queensland | ENG/Subtitles available | https://panamatr4ready.com.au/ |
| Guidance | ALL | Manual | Prevention and diagnostic of Fusarium Wilt (Panama disease) of banana caused by Fusarium oxysporum f. sp. cubense Tropical Race 4 (TR4) | Prepared for the Regional Workshop on the Diagnosis of Fusarium Wilt (Panama disease) caused by Fusarium oxysporum f. sp. cubense Tropical Race 4: Mitigating the Threat and Preventing its Spread in the Caribbean | FAO | ENG | www.fao.org/3/a-br126e.pdf |
| Awareness-raising | All | Leaflet | GLOBAL PROGRAMME ON BANANA FUSARIUM WILT DISEASE | PROTECTING BANANA PRODUCTION FROM THE DISEASE WITH FOCUS ON TROPICAL RACE 4 (TR4) | FAO | ENG | |
| Awareness-raising | All | Flyer | COMBATTING FUSARIUM WILT DISEASE OF BANANA | FCC-EMPRES Information Sheets | FAO | ENG/ES/FR | |
| Awareness-raising | All | Flyer | TASK FORCE ON FUSARIUM TR4 | COORDINATING GLOBAL EFFORTS TO PREVENT AND MANAGE THE DISEASE | FAO | ENG/ES/FR | |
| Guidance | Government | Manual | PLAN DE CONTINGENCIA ANTE UN BROTE DE LA RAZA 4 TROPICAL DE | EN UN PAÍS DE LA REGIÓN DEL OIRSA Versión 2. | OIRSA | ES | |
| Awareness-raising | Government | Leaflet | The MUSA Technical Working Group | Foc TR4 Fact Sheet | Caribbean Plant Health Directors Forum (CPHD) | ENG | https://drive.google.com/drive/folders/1bXSkFloV7ejprfLYvT2e6kp11UN2esBA |
| Awareness-raising | All | Leaflet | Priority Pest Threats to the Region | Fusarium wilt of bananas and plantains - TR4 | Caribbean Plant Health Directors Forum (CPHD) | ENG | https://drive.google.com/drive/folders/1bXSkFloV7ejprfLYvT2e6kp11UN2esBA |
| Awareness-raising | All | Poster | Can you picture the Caribbean without bananas? | Musa retractable | Caribbean Plant Health Directors Forum (CPHD) | ENG | https://drive.google.com/drive/folders/1bXSkFloV7ejprfLYvT2e6kp11UN2esBA |
| Awareness-raising | Growers | Poster | Ayúdenos a evitar el ingreso a Colombia de la marchitez por Fusarium R4T | | Instituto Colombiano Agropecuario (ICA) | ES | https://drive.google.com/drive/folders/1qWL_5xo4sSCTTmyqNbpEP_2r7i1EVUY |
| Awareness-raising | All | Leaflet | Boletín no. 6: Alerta temprana fitosanitaria FOC R4T | Alerta amarilla: no ha sido detectado en Colombia | Instituto Colombiano Agropecuario (ICA) | ES | https://drive.google.com/drive/folders/1qWL_5xo4sSCTTmyqNbpEP_2r7i1EVUY |
| Guidance | All | Manual | Cartilla bioseguridad: conozca los procedimientos en las áreas de producción de banano, plátano y heliconias | | Instituto Colombiano Agropecuario (ICA) | ES | https://drive.google.com/drive/folders/1qWL_5xo4sSCTTmyqNbpEP_2r7i1EVUY |
| Awareness-raising | All | Leaflet | Lo que usted debe saber sobre la marchitez por Foc R4T | Foc R4t no está en Colombia | Instituto Colombiano Agropecuario (ICA) | ES | https://drive.google.com/drive/folders/1qWL_5xo4sSCTTmyqNbpEP_2r7i1EVUY |
| Awareness-raising | All | Poster | La marchitez por Fusarium R4T no está en Colombia | Vigile los síntomas de la enfermedad | Instituto Colombiano Agropecuario (ICA) | ES | https://drive.google.com/drive/folders/1qWL_5xo4sSCTTmyqNbpEP_2r7i1EVUY |
| Awareness-raising | All | Leaflet | Conozca la enfermedad que destruye los cultivos de banano y plátano | | Instituto Colombiano Agropecuario (ICA) | ES | https://drive.google.com/drive/folders/1qWL_5xo4sSCTTmyqNbpEP_2r7i1EVUY |
| Guidance | Grower/workers | Leaflet | Protocolo de desinfección en las fincas productoras de banano de exportación | | CENIBANANO Augura | ES | https://drive.google.com/drive/folders/1qWL_5xo4sSCTTmyqNbpEP_2r7i1EVUY |
| Guidance | Grower/workers | Leaflet | Protocolo de infraestructura para recibir visitantes | | CENIBANANO Augura | ES | https://drive.google.com/drive/folders/1qWL_5xo4sSCTTmyqNbpEP_2r7i1EVUY |
| Guidance | Grower/workers | Leaflet | Protocolo para el ingreso de material de siembra | | CENIBANANO Augura | ES | https://drive.google.com/drive/folders/1qWL_5xo4sSCTTmyqNbpEP_2r7i1EVUY |
| Guidance | Grower/workers | Leaflet | Protocolo para el ingreso de visitantes a fincas productoras | | CENIBANANO Augura | ES | https://drive.google.com/drive/folders/1qWL_5xo4sSCTTmyqNbpEP_2r7i1EVUY |
| Guidance | Grower/workers | Leaflet | Protocolo para recibir visitantes-viajeros | | CENIBANANO Augura | ES | https://drive.google.com/drive/folders/1qWL_5xo4sSCTTmyqNbpEP_2r7i1EVUY |
| Awareness-raising | All | Poster | Valla R4T Narino | | Instituto Colombiano Agropecuario (ICA) | ES | https://drive.google.com/drive/folders/1qWL_5xo4sSCTTmyqNbpEP_2r7i1EVUY |
| Awareness-raising | All | Poster | Valla R4T Santander | | Instituto Colombiano Agropecuario (ICA) | ES | https://drive.google.com/drive/folders/1qWL_5xo4sSCTTmyqNbpEP_2r7i1EVUY |
| Awareness-raising | All | Poster | Valla R4T Quindio | | Instituto Colombiano Agropecuario (ICA) | ES | https://drive.google.com/drive/folders/1qWL_5xo4sSCTTmyqNbpEP_2r7i1EVUY |

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| Awareness-raising | All | Video | Cuña Fusarium R4T - Ref 03 | https://www.youtube.com/watch?v=oenbFcZz-Y&list=PLGMkIngZ7VloVHnP5HaPdk3fY50clRCgn&index=10 | Instituto Colombiano Agropecuario (ICA) | ES | |
| Awareness-raising | All | Video | Cuña Fusarium R4T - Ref 01 | https://www.youtube.com/watch?v=lb5qs7wa73M&list=PLGMkIngZ7VloVHnP5HaPdk3fY50clRCgn&index=12 | Instituto Colombiano Agropecuario (ICA) | ES | |
| Guidance | All | Manual | Integrated farm assurance | Best practices for nurseries | GLOBALG.A.P. | ENG | https://drive.google.com/drive/folders/1nNkoBJUsPFUaDyUrxCS7y2h4sPJKPK94 |
| Awareness-raising | All | Video | Marchitamiento por Fusarium oxysporum f sp cubense R4T | https://www.youtube.com/watch?v=JGXQx512QJE&feature=youtu.be | CORBANA & MAG San José, Costa Rica | ES | |
| Awareness-raising | All | Video | ICA: Mal de Panamá | https://www.youtube.com/watch?v=C-zBp2fZs7M | Asociacion de Bananeros de Colombia (AUGURA) | ES | |
| Awareness-raising | All | Video | Medidas para evitar la llegada del Fusarium R4T a Colombia | https://www.youtube.com/watch?v=JC7j6a4Rg | Asociacion de Bananeros de Colombia (AUGURA) | ES | |
| Awareness-raising | All | Video | Hongo Fusarium Raza 4 Tropical | https://www.youtube.com/watch?v=MBs4FxTrjCw | AGROCALIDAD Ecuador | ES | |
| Awareness-raising | All | Video | Medidas de Prevención Fusarium 1 | https://www.youtube.com/watch?v=EXoCTFDnYYQ | AGROCALIDAD Ecuador | ES | |
| Awareness-raising | All | Video | Prevención Fusarium R4T | https://www.youtube.com/watch?v=hEN2WaJKHE | AGROCALIDAD Ecuador | ES | |
| Awareness-raising | All | Video | Medidas de Prevención Fusarium 2 | https://www.youtube.com/watch?v=yPZlv2obNFU | AGROCALIDAD Ecuador | ES | |
| Awareness-raising | All | Video | Evitemos el Ingreso de Fusarium R4T al Ecuador | https://www.youtube.com/watch?v=fzQ9RBkMCtE | AGROCALIDAD Ecuador | ES | |
| Awareness-raising | All | Video | Medidas de Prevención Fusarium 3 | https://www.youtube.com/watch?v=srdali9aV_Q | AGROCALIDAD Ecuador | ES | |
| Guidance | Government | Manual | Plan Nacional de Contingencia para Fco R4T, Ecuador | | AGROCALIDAD Ecuador | ES | http://www.agrocalidad.gob.ec/wp-content/uploads/2014/07/PlandeContingenciaCompletoRevison11.pdf |
| Guidance | Government | Manual | MEDIDAS FITOSANITARIAS DE PREVENCIÓN PARA PLAGAS EMERGENTES EN ECUADOR | Fusarium oxysporum.f.sp.cubenseRaza 4 Tropical (Foc R4T) | AGROCALIDAD Ecuador | ES | https://www.ippc.int/static/media/files/publication/es/2017/09/5.2.2.a_Foc_R4T_Ecuador.pdf |
| Awareness-raising | Growers | Poster | Fusarium R4T es una de las 10 plagas más importantes en la agricultura, prevenamos su ingreso al país. | #AgrocalidadPreviene | AGROCALIDAD Ecuador | ES | https://pbs.twimg.com/media/DyLkrqKWsAEO-CL.jpg |
| Awareness-raising | Growers | Poster | Agrocalidad cuenta con laboratorio de Biología Molecular para el diagnóstico de Foc R4T | #AgrocalidadPreviene | AGROCALIDAD Ecuador | ES | https://pbs.twimg.com/media/D2Hg01eX0AAZByM.jpg |
| Awareness-raising | Growers | Leaflet | Medidas de prevención para que la plaga no llegue a tu cultivo | | AGROCALIDAD Ecuador | ES | http://www.agrocalidad.gob.ec/wp-content/uploads/1-Tr%C3%ADptico_FOCR4T2019-OUT2-convertido-2.pdf |
| Guidance | All | Manual | Participación de empresas y productores bananeros en estrategias de prevención y exclusión de Fusarium R4T en Latinoamérica y el Caribe | | AGROCALIDAD et al | ES | https://www.slideshare.net/ExternalEvents/participacin-de-empresas-y-productores-bananeros-en-estrategias-de-prevencin-y-exclusin-de-fusarium-r4t-en-latinoamerica-y-el-caribe-86072652 |
| Awareness-raising | All | Video | Mal de Panamá Raza 4 Tropical | Una seria amenaza para la producción de banano | Corbana & GLOBALGAP | ES | https://drive.google.com/drive/folders/1nNkoBJUsPFUaDyUrxCS7y2h4sPJKPK94 |
| Scientific background | Decision makers | Article | Biological Control Agents Against Fusarium wilt of banana | | Bubici, G. et al. (2019) | ENG | https://drive.google.com/drive/folders/1Xh17nW9DGXEM4iIEsk-RRZkV8KU1fS9c |
| Guidance | All | Manual | Fyffes Food Safety and Compliance Department | | Fyffes | ENG | https://drive.google.com/drive/folders/1YZD-54vgSdlupHDjXAnOJhNmbTvHqIGO |
| Scientific background | Decision makers | Article | Comparative analysis uncovers the limitations 1 of current molecular detection methods for Fusarium oxysporum f. sp. cubense race 4 strains | | Magdama, F et al (2019) | ENG | https://drive.google.com/drive/folders/1Xh17nW9DGXEM4iIEsk-RRZkV8KU1fS9c |
| Scientific background | Decision makers | Article | Assessing Variations in Host Resistance to Fusarium oxysporum f sp. cubense Race 4 in Musa Species, With a Focus on the Subtropical Race 4 | | Chen, A. et al (2019) | ENG | https://drive.google.com/drive/folders/1Xh17nW9DGXEM4iIEsk-RRZkV8KU1fS9c |
| Scientific background | Decision makers | Article | The Movement of Fusarium oxysporum f.sp. Cubense (Sub-Tropical Race 4) in Susceptible Cultivars of Banana | | Warman, N. et al (2018) | ENG | https://drive.google.com/drive/folders/1Xh17nW9DGXEM4iIEsk-RRZkV8KU1fS9c |