



KEY APPROACHES TO EQUIVALENCE IN PLANT HEALTH

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An IPPC framework on Equivalence



- ISPM 01 (International standard for phytosanitary measures) *Phytosanitary principles for the protection of plants and the application of phytosanitary measures in international trade*
- ISPM 24 (2005) *Guidelines for the determination and recognition of equivalence of phytosanitary measures offers general guidance*
- Report: *Equivalence: A Review of the Application of Equivalence between Phytosanitary Measures used to Manage Pest Risk in Trade* -
<https://www.ippc.int/en/irss/activities/5/>



Equivalence in plant health is about comparing the pest risk management outcomes.

There are some ISPMs that propose **pest risk management options** that should provide the same outcomes:

- ISPM 15 *Regulation of wood packaging material in international trade*
- ISPM 28 *Phytosanitary treatments for regulated pests*

There are some ISPMs that propose **pest risk management approaches**:

- ISPM 14 *The use of integrated measures in a systems approach for pest risk management*





Regional concepts of equivalence outside of ISPM 24

Usually equivalence is a **bilateral** agreement
between importer and exporter country NPPOs

- may be a regional import decision (e.g. EU)
- may employ intraregional mechanisms for recognising equivalence of inspection or application of measures (e.g. Southern Cone COSAVE)
- may involve benchmarking and recognition of labs or facilities that could be considered equivalence (e.g. US review of irradiation facilities, or other commodity treatment facilities; or recognition of diagnostic labs, e.g. centres of excellence)



Why is determining equivalence in pest risk management outcomes difficult?

1. Equivalence is when alternative measures achieve the appropriate level of protection (ALOP) as determined by the importing contracting party. ALOP often is not clearly benchmarked
2. Results from end point treatments (e.g. mortality of pests already infesting a commodity) are hard to compare to prevention, pest free areas or other measures
3. The efficacy of a system of integrated measures – Systems Approach – is not easy to determine



Beyond compliance tools

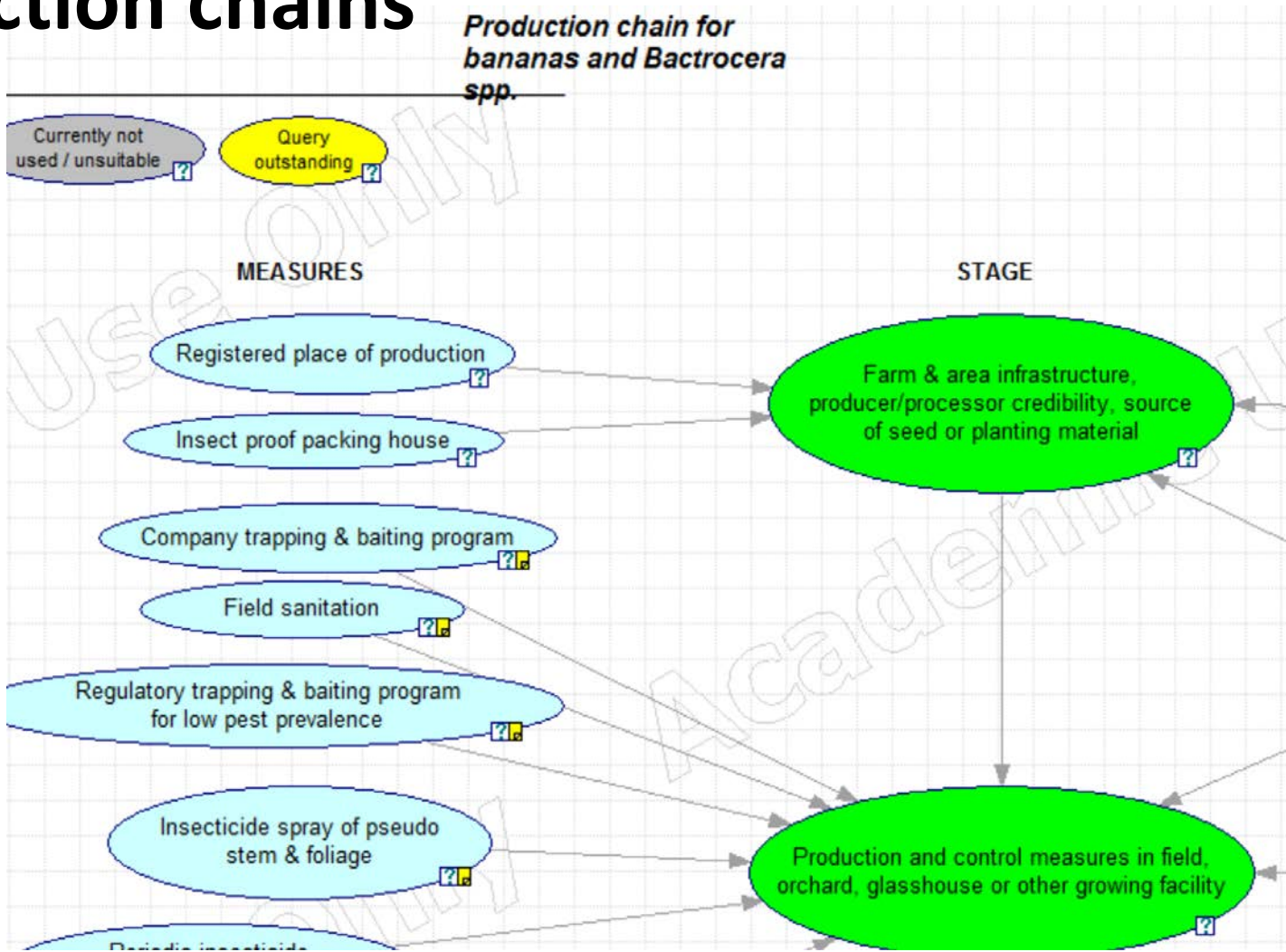
STDF project in South East Asia



(2011-2014)

1. Production chain mapping
2. Elicitation of measures, evaluation against criteria and inclusion of uncertainty for results
3. Clear stakeholder communication and representation for discussion and negotiations

1. Production chains



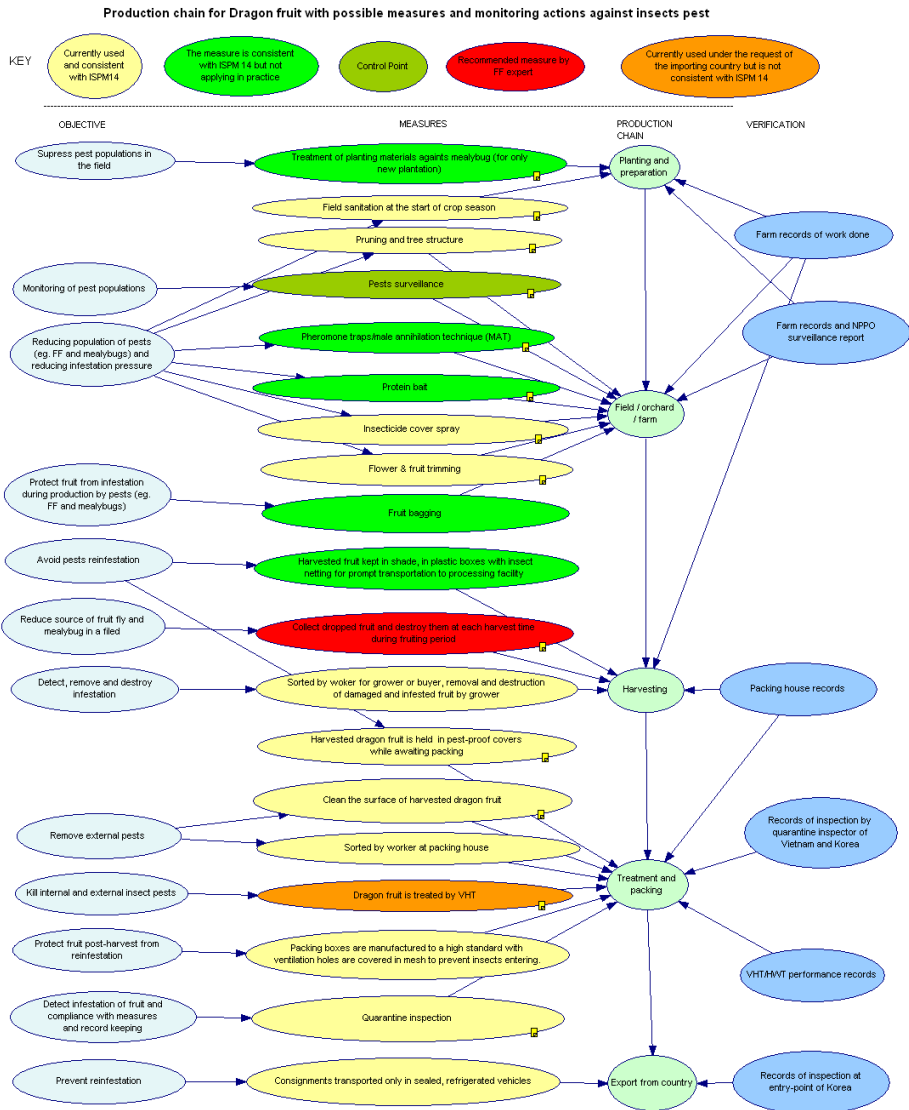
Improved confidence and competence
to understand the role of each measure
and potential gaps or redundancy

Separate columns:

- Objective of the measure
- Measures
- Time/place/stage in chain
- Verification measures

Colour coding:

- Official or commercial measures
- Currently applied or potential
- In line with least restrictive, or to be discussed for removal
- For risk reduction or verification





NPPO and other
stakeholders work on
Excel™ based
Decision Support
System





2. Elicitation framework

- Individual efficacy of measures assessed (including uncertainty)
- Provides framework for combining measures in current or proposed combinations
- Expert elicited distributions are easy to evaluate and communicate, using graphic representation

Microsoft Excel - DSS_for_Systems Approach Dragon fruit_insect pests 120111 New proposed

BEYOND COMPLIANCE
Decision support scheme (DSS) for screening Systems Approach measures

PART C: Comparison of Systems Approach measures

TABLE C1. Description of candidate measures [these may be used alone or with other measures]

Risk management measures available (automatically read in from Table B2)	Efficacy			Verification			Way in which measure reduces risk:	Associated measures
	1.1a) What is its potential contribution to risk reduction?	1.1b) Uncertainty	Graphic	1.2a) The measure can be verified?	1.2b) Uncertainty	Graphic		
i 2.1 Treatment of planting material against insects (aphids, ants)	High	Low		Easy	Low		Insecticide spray can kill aphids & ants on the surface of planting material before planting	The objective of this measure is reducing population of insect pests and reducing infestation pressure. Other measures with this objective include monitoring, lure trapping, bait spraying.
ii 3.1 Field sanitation at end of previous season	Medium	Low		Easy	Low		All infested fallen fruit are collected and destroyed	The objective of this measure is reducing population of insect pests and reducing infestation pressure. Other measures with this objective include monitoring, lure trapping, bait spraying.
iii 4.2 Pruning and tree structure	Medium	Low		Very easy	Low		Pruning & destroying all unused branches can reduce aphids & ants resources	The objective of this measure is reducing population of insect pests and reducing infestation pressure. Other measures with this objective include monitoring, lure trapping, bait spraying.
iv 4.5 Lure and kill phenomenon/ insecticide traps or MAT	High	Low		Easy	Low		Reduces adult fruit fly population	The objective of this measure is reducing population of FF and reducing infestation pressure. Other measures with this objective include monitoring, lure trapping, bait spraying.
v 4.6 Protein bait with insecticide mist	High	Low		Easy	Low		Reduces fruit fly population by killing adult insects that are attracted to the bait	The objective of this measure is reducing population of FF and reducing infestation pressure. Other measures with this objective include monitoring, lure trapping, bait spraying.
vi 4.7 Insecticide cover sprays	Medium	Low		Easy	Low		Kills aphids & ants on the tree and some fruit fly adults may be killed by contact with insecticide	The objective of this measure is reducing population of insect pests and reducing infestation pressure. Other measures with this objective include monitoring, lure trapping, bait spraying.
vii 5.2 Fruit timing and bagging	Very high	Low		Easy	Very low		Fruit timing removes aphids & ants resources. Bagging young fruit can avoid the entry of insect pests	The objective of this measure is to protect fruit from infestation during production by insect pests. Associated measures are other barrier measures such as insect netting.
viii 6.2 Harvested fruit kept in shade, in plastic boxes with insect netting for prompt transportation to processing facility	High	Low		Easy	Low		Avoids infestation of insect pests	The objective of this measure is to protect fruit from infestation post harvest by insect pests in the environment.
ix 6.4 Spraying by grower, removal and destruction of damaged and infested fruit	Medium	Medium		With some difficulty	Medium		This measure can remove some damaged fruit by fruit fly. Grower not as experienced as	Objective is to detect, remove and destroy infestation

Part B Selection of Measures | Chart1 | Part C Comparison of measures | Part C Comments



Beyond compliance outcomes

- Collected stakeholder expertise, literature, research results, etc. to indicate possible impact – which is useful when hard data is sparse
- Clarified available measures along production and evaluate them consistently against various criteria
- Clarified role of the NPPO in market access negotiations





Beyond Compliance Global STDF/IPPC project (2018-21)

- IPPC Secretariat is implementing the project, Imperial College London is the technical provider
- Project is receiving US\$568,966 from STDF and in kind contributions from the IPPC and Imperial College London surpassing US\$125,000
- Buy in for non qualifying countries to participate is a possibility



Beyond Compliance Global

- Trade cases were selected through a call by the IPPC, to be supported in implementing the tools with the aim of better understanding of pest risk management options and improved market access negotiations
- We are training over a dozen potential Facilitators representing each of the regions/RPPOs in the use of these tools. Selected trainees are from:

Kenya, Uganda, South Africa, Iraq, Mexico, Dominica, Belize

With two self funding China and Latvia.

Two Regional Plant Protection Organizations - Comunidad Andina and the Near East Plant Protection Organization (NEPPO).



In conclusion...

- ISPM 24 is a global approach to equivalence in plant health but is not very prescriptive or detailed
- ISPM 14 (Systems Approach) is one of the more commonly used approaches to pest risk management, when seeking alternative measures in the context of plant health
- Beyond Compliance Global is supporting the use of ISPM 14



Wish list

- A global registry of Systems Approach cases, with the objective of the proposal noted –e.g. new trade, equivalence, to maintain trade when interceptions require additional measures, etc.
- Details of such trade, to the degree confidentiality allows
- Increased coordination on emerging tools to estimate efficacy, so that ideas converge rather than having several unaligned versions



Beyond Compliance project eBook, under documents tab, at:

<http://www.standardsfacility.org/PG-328>

