



The Food and Environment
Research Agency

Logistics in the Provision of Global Proficiency Testing Services

Mark Sykes

mark.sykes@fera.gsi.gov.uk

info@fapas.com

© Fera 2013

Overview

- Background to FAPAS
- Shipment of samples
- Local issues
- Examples

FAPAS

Food Analysis Performance Assessment Scheme

Proficiency Testing Group (PTG) at Fera

22 years old in 2012

216 Reports, 16638 Samples, 2471 customers (FAPAS 2012)

122 countries

~27 staff

FAPAS

FEPAS

GeMMA

LEAP

PhytoPAS

Bespoke

PT and Legislation

ISO/IEC 17025

Requirement to have Quality Control procedure, such as participation in a PT scheme if a suitable scheme exists

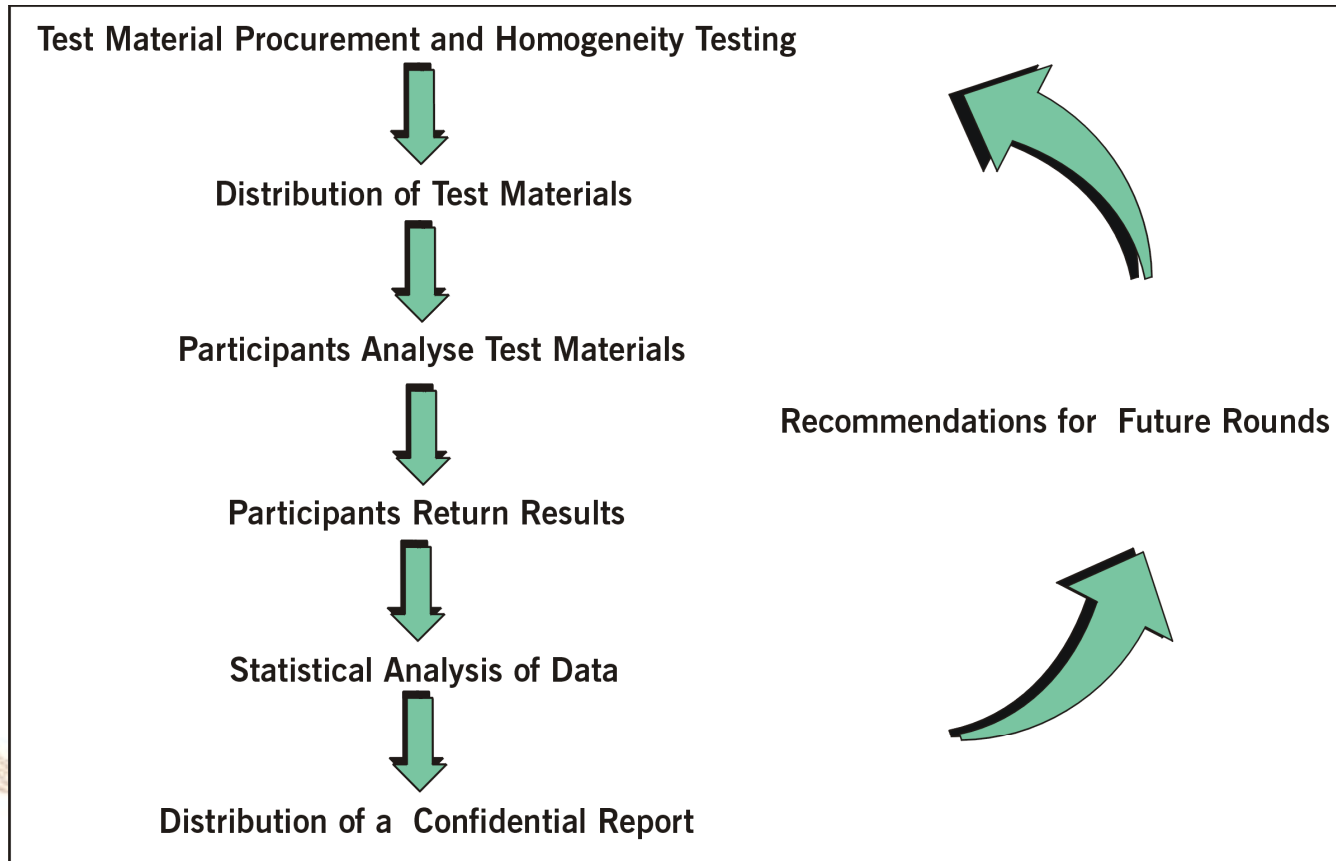
EC 882/2004

Official control laboratories for food and feed required to be accredited to ISO/IEC 17025

EC 83/1998

Water testing laboratories, quality of water intended for human consumption

The PT process



International Harmonised Protocol

Planning new PT

Examples

New allergens – celery, mustard

Authenticity – Basmati rice

Pork and Horse meat adulteration

Milk powder vs liquid milk

Agents

Local currency/language

Sales

Communications

Questions

Customs/imports

Seminars/workshops/visits

32 Agents, including UAE, Egypt, Israel, Turkey

The test material



The test material

Liquid or solid? Oily or aqueous?

Stable or unstable?

Binding to matrix?

Storage / transport / container?

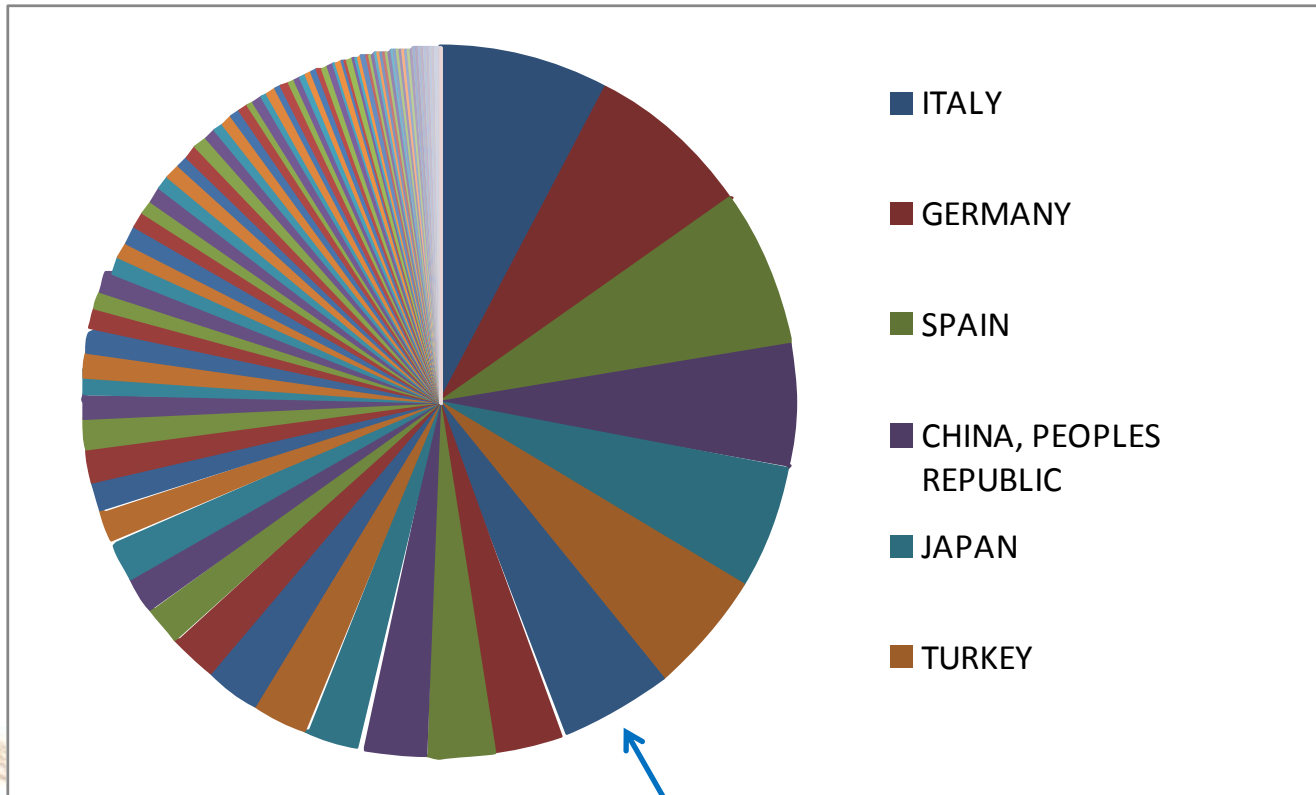
Incurred (natural) analyte or spiked?

Contaminated? (GM, allergens)

Transportation

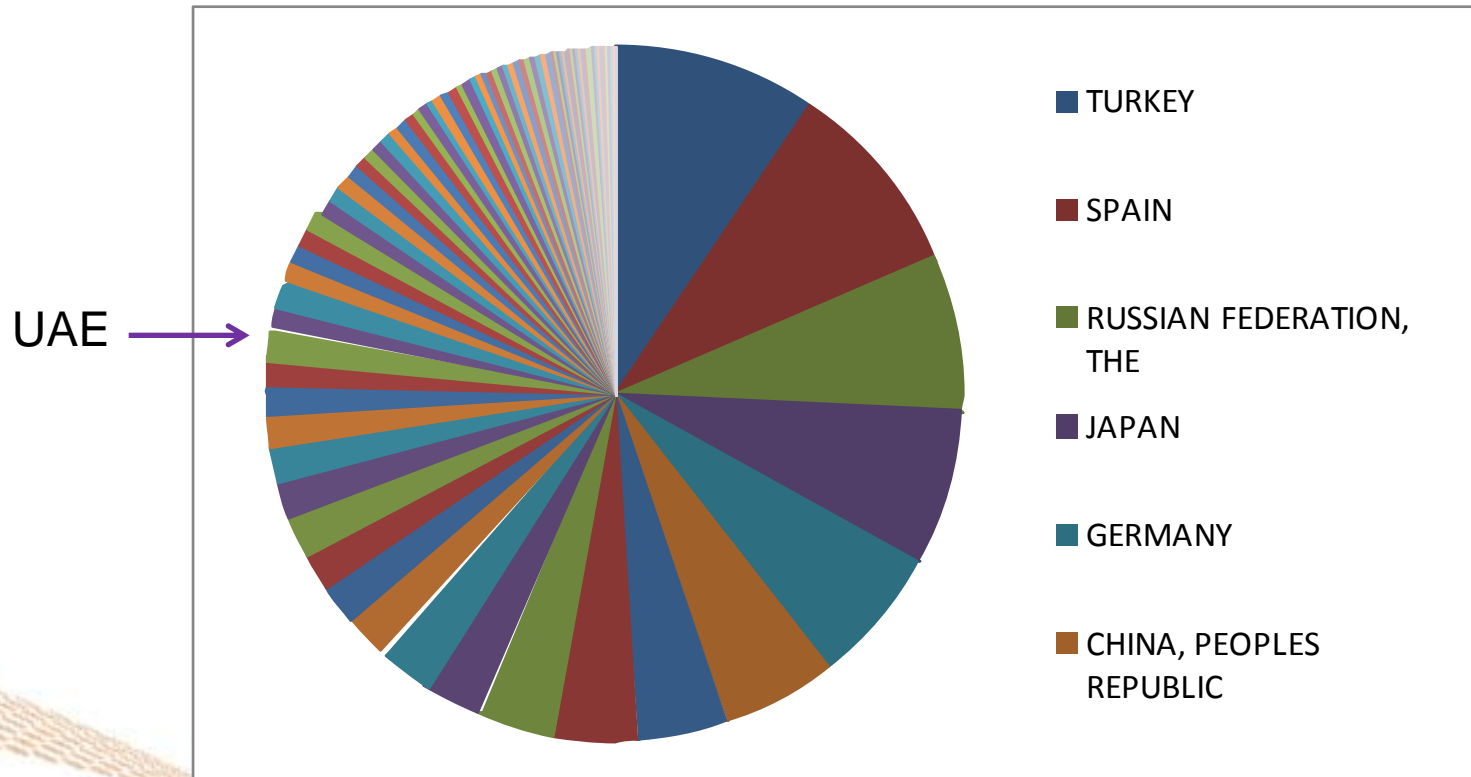


FAPAS 2012 lab/country distribution



UK 7th after Turkey
UAE 43rd out of 122

FEPAS 2012 lab/country distribution



UAE 21st out of 85 (followed by Saudi Arabia)

UK 31st

Global provision of vet drugs PT

Up to 43 countries per PT

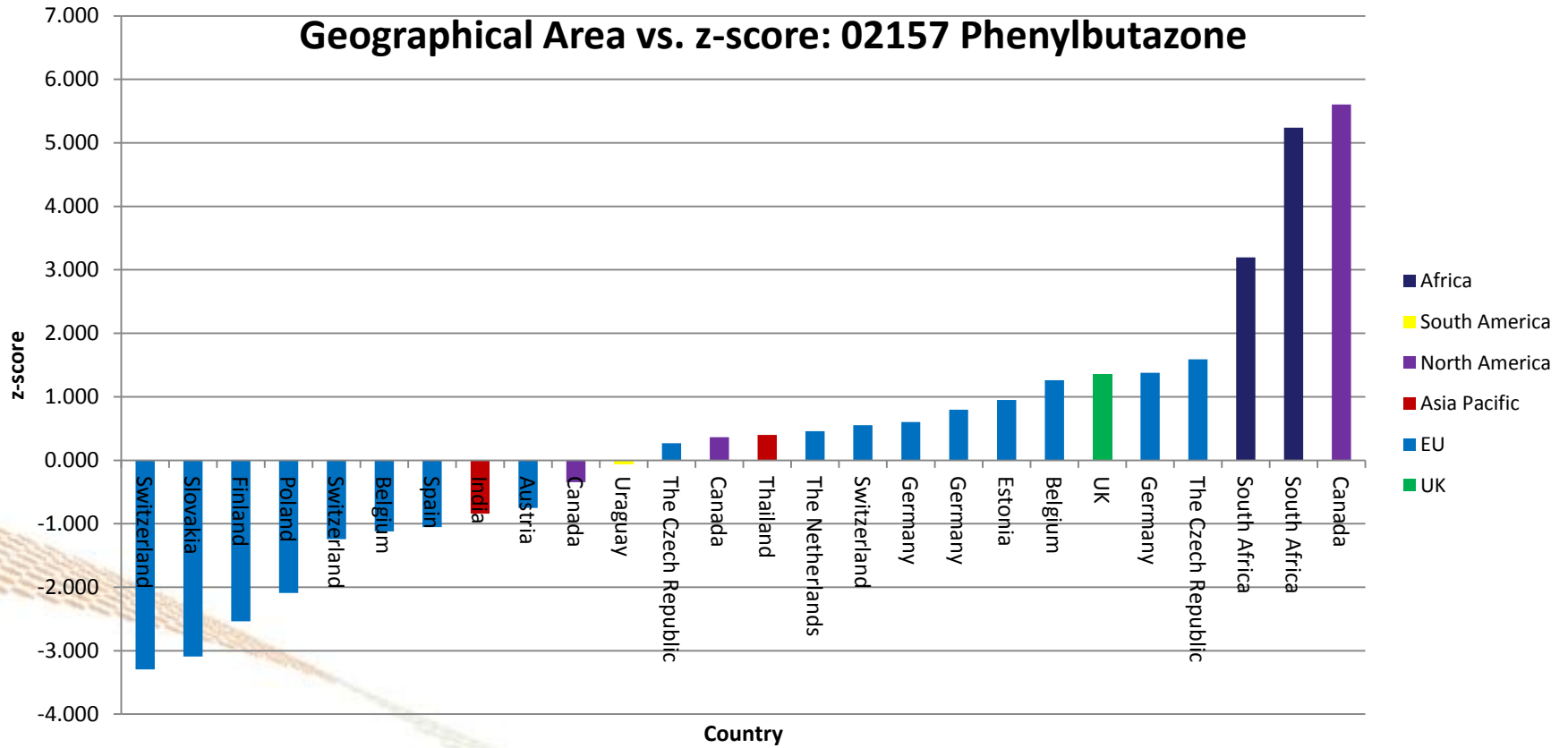
UK, EU, Africa, Middle East, Asia-Pac, S America,
N America

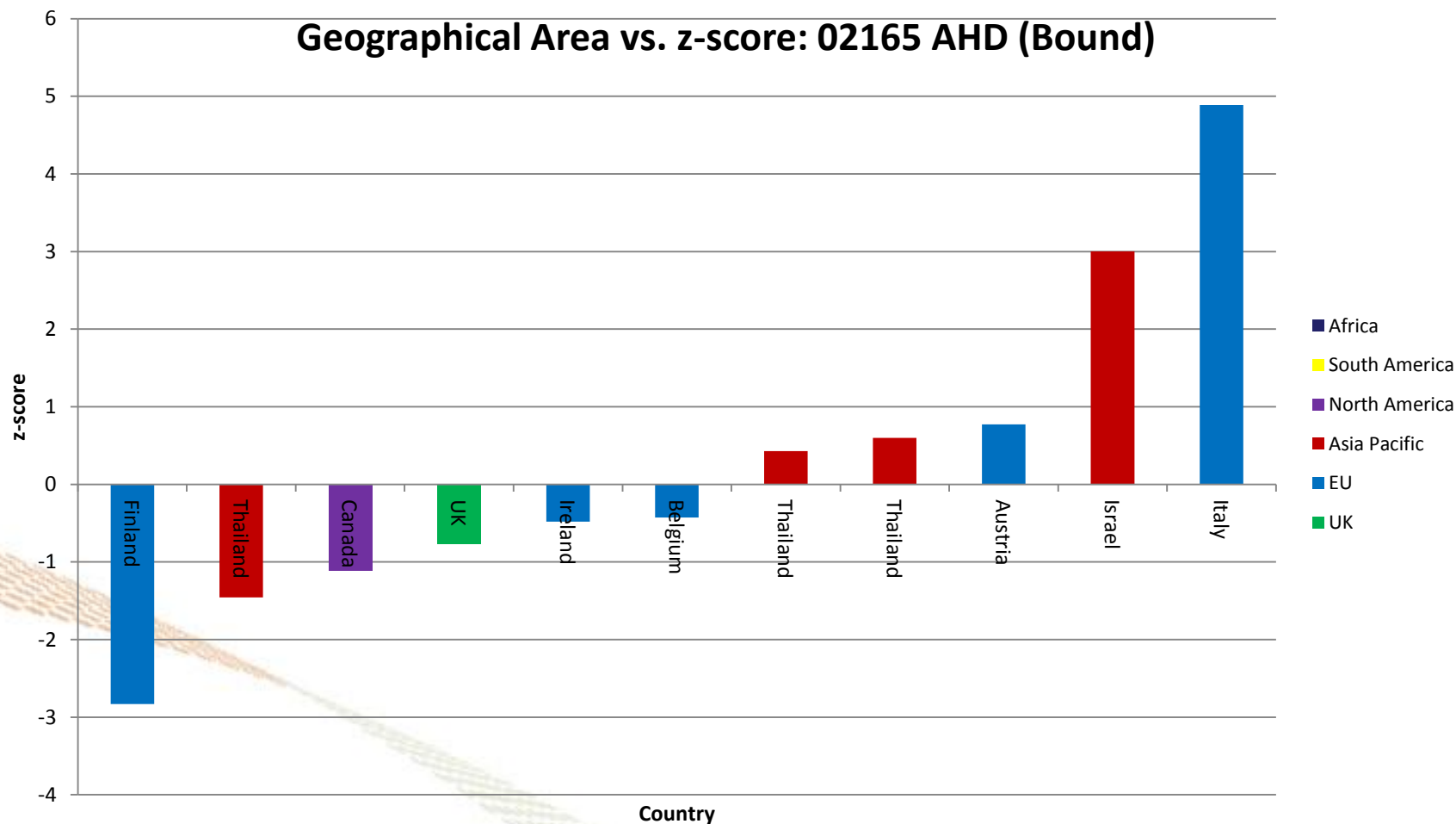
Customs

TM frozen (packaging), couriered

National requirements, e.g. Japan SEM

Stability during transport?





02155 bovine liver

Analyte	Spike value	Homog mean	Assigned value
fenbendazole	na	203	201
oxfendazole	500	323	207
fenbendazole sulfone	na	22.4	<i>12.4 #10</i>
total fenbendazole sulfone	na	NR	463

NB. Large reduction of oxfendazole to fenbendazole, plus slight oxidation to the sulfone

Other issues

Methods

LC-MS/MS

HPLC – conventional

ELISA

(Screening assays)

Contamination?

MG and other dyes

SEM

Human medication

Difficult to assess
prevalence in labs

Pesticides PTs

List 3 (fruit and vegetable) based on EU monitoring

200 compounds!

Limited coverage for some participants

19157 courgette – limited list (GC compounds only)

International standards

Standard methods for participants

Non-standard methods (in-house)

Accreditation of PT Scheme ISO/IEC 17043:2010

ISO 13528:2005 Statistics for PT (DIS currently
being circulated)

Thanks to...

GCC Organisers

FAPAS colleagues

FAPAS customers

www.fapas.com



f a p a s