



NICAS

Data Collection at the
National Level
— Monitoring Model Based
Zhijun Chen



NICAS

Content

1. Monitoring Elements
2. Monitoring Model
3. Practice in China
4. Conclusions

Global Pesticide Residue Monitoring Programs(1)

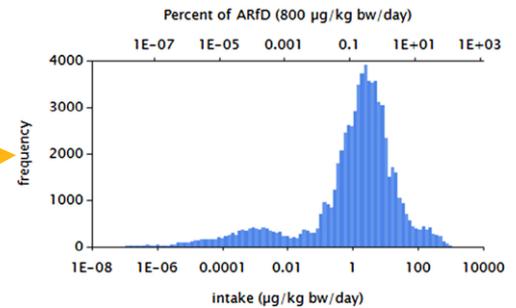
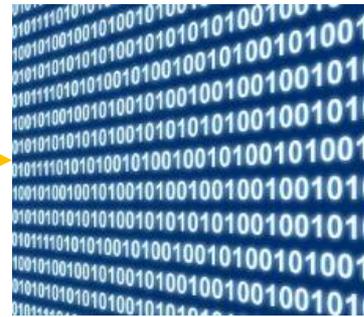


- FAO/WHO
 - Global Environment Monitoring System(GEMS/Food)
 - http://www.who.int/nutrition/landscape_analysis/nlis_gem_food/en/
- EU
 - Multi-annual Control Programme
 - http://ec.europa.eu/food/plant/pesticides/max_residue_levels/eu_multi-annual_control_programme_en.htm
- USDA
 - Pesticide Data Program (PDP)
 - <http://www.ams.usda.gov/AMSV1.0/ams.fetchTemplateData.do?template=TemplateC&navID=PDPOviewBox2Link1&rightNav1=PDPOviewBox2Link1&topNav=&leftNav=ScienceandLaboratories&page=PesticideDataProgram&resultType=&acct=pestcddataprg>

Global Pesticide Residue Monitoring Programs(2)

- China
 - National Food Safety Risk Monitoring Plans
 - <http://www.nhfpc.gov.cn/sps/s5851/list.shtml>
 - Risk Monitoring Program for Quality&Safety of Agricultural products
 - <http://www.jgj.moa.gov.cn/>

A Big Problem—How to collect data ?



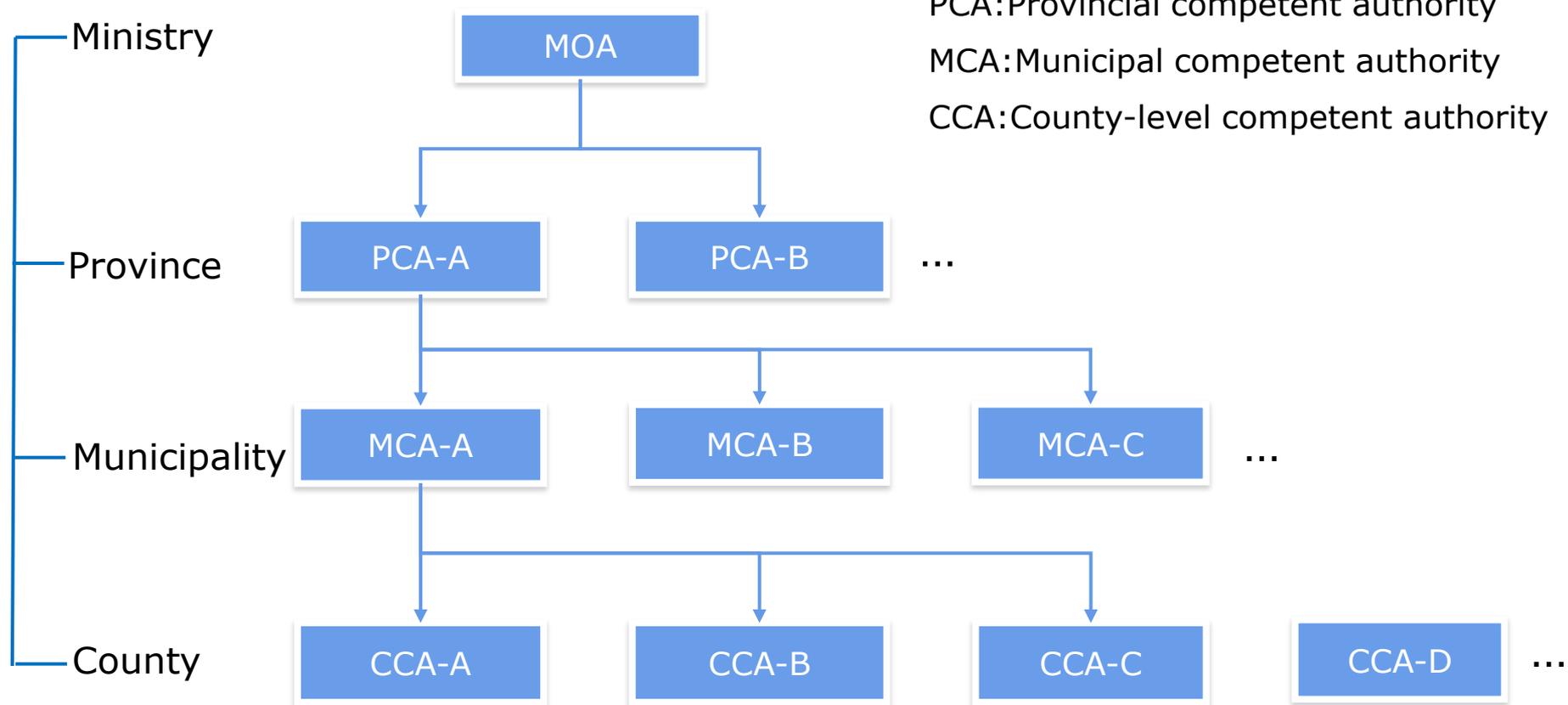


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Management Layers



Food Category and Encoding

File Edit Help

Search

Search Go

Search current
 Search dictionary

Search options:

- Natural source
- Raw Primary Commodity (RPC)
- RPC Derivative/ingredient
- Simple composite
- Aggregated composite
- Heterogeneous group
- Facet

Additional search fields:

- GEMS code
- Pesticide code
- Foodex1 code
- Langual code
- Scientific name
- Common name

Term

Choose: Hierarchies Facets Exposure hierarchy

View terms: In use in this domain Optional in this domain Not used

- ▲ Grains and grain-based products [A000J]
- ▲ Vegetables and vegetable products [A00FJ]
 - ▲ Brassica vegetables [A00FK]
 - ▲ Bulb, stalk and stem vegetables [A04RB]
 - ▲ Fruiting vegetables [A00HN]
 - ▲ Leafy vegetables [A00KR]
 - ▲ Lettuce and other salad plants [A00KS]
 - Corn salad [A00KT]
 - Lettuce [A00KX]
 - Endive [A00LD]
 - Garden cress [A00LK]
 - Land cress [A00LL]
 - Rocket and similar (p) [A00LM]
 - Red mustard [A00LQ]
 - ▲ Spinach & similar (leaves) [A00MG]
 - ▲ Other leafy vegetables [A04RC]
 - ▲ Legume greens, legumes sprouted and other sprouts [A04RE]
 - ▲ Non starchy root and tuber vegetables [A04RF]
 - ▲ Fungi [A00TC]
 - ▲ Marine algae [A00VA]
 - ▲ Aromatic herbs or flowers, fresh [A00VQ]
 - ▲ Vegetable products [A00ZA]
 - ▲ Starchy roots or tubers and products thereof, sugar plants [A00Z]
 - ▲ Legumes, nuts, oilseeds and spices [A011X]
 - ▲ Fruit and fruit products [A01BS]
 - ▲ Meat and meat products [A01QR]
 - ▲ Fish, seafood, amphibians, reptiles and invertebrates [A026T]
 - ▲ Milk and dairy products [A02LR]
 - ▲ Eggs and egg products [A031E]
 - ▲ Sugar, confectionery and water-based sweet desserts [A032F]
 - ▲ Animal and vegetable fats and oils [A036M]
 - ▲ Fruit and vegetable juices and nectars [A039K]
 - ▲ Water and water-based beverages [A03DJ]
 - ▲ Coffee, cocoa, tea and infusions [A03GG]
 - ▲ Alcoholic beverages [A03LZ]
 - ▲ Food products for young population [A03PV]
 - ▲ Products for non-standard diets, food imitates and food supplements [A03VA]
 - ▲ Composite dishes [A03VA]
 - ▲ Seasoning, sauces and condiments [A042N]
 - ▲ Additives, flavours, baking and processing aids [A046L]

Term naming and definition

State Corex

Raw Primary Commodity Core list

Term Code

A00KT

Term Name

Corn salad

Correlated Codes

Code	Catalogue
VL0470	GEMS
P0251010	MATRIX

Scientific names

Valeriana locusta (L) L...

Common names

Lambs lettuce

Scopenotes:

Subgroup/Item of the group "Lettuce and other salad plants" belonging to the taxonomic group Valeriana locusta (L) Laterrade. Otherwise known under the name of Lambs lettuce. The group includes the leaves of all types of Corn salad. The part consumed/analysed is by default unspecified. When relevant, information on the part consumed/analysed has to be reported with additional facet descriptors.

Pesticides Index

2 | A | B | C | D | E | F | G | H | I | K | L | M | N | O | P | Q | S | T | V | Z

2

- 2,4-D (20)
- 2-Phenylphenol (56)

A

- Abamectin (177)
- Acephate (95)
- Acetamiprid (246)
- Aldicarb (117)
- Aldrin and Dieldrin (1)
- Ametoctradin (260)
- Aminopyralid (220)
- Amitraz (122)
- Amitrole (79)
- Azinphos-Methyl (2)
- Azocyclotin (129)
- Azoxystrobin (229)

B

- Benalaxyl (155)
- Bentazone (172)
- Bifenazate (219)
- Bifenthrin (178)
- Bioresmethrin (93)
- Bitertanol (144)
- Bixafen (262)
- Boscalid (221)
- Bromide Ion (47)
- Bromopropylate (70)
- Buprofezin (173)

C

- Cadusafos (174)
- Captan (7)
- Carbaryl (8)
- Carbendazim (72)
- Carbofuran (96)
- Carbosulfan (145)
- Chlorantraniliprole (230)
- Chlordane (12)

Maximum Residue Limits



Extended Standard

MRL (mg/kg)	
Food	Dichlorvos
Vegetables	
Leafy vegetables	0.2

GB 2763-2014



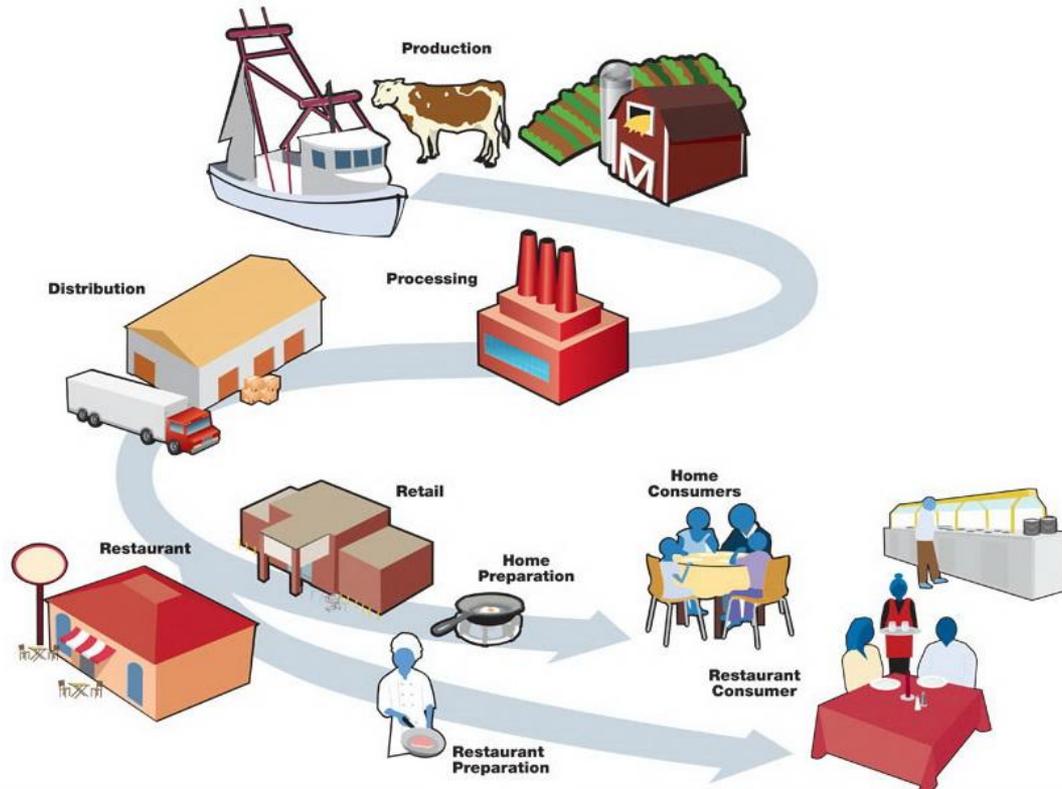
MRL (mg/kg)	
Food	Dichlorvos
Vegetables	
Leafy vegetables	
Spinach	0.2
Lettuce	0.2
Celery	0.2
...	

ES 2763-2014

Monitoring System—National Level

- Testing Center (TC)
 - More than 270 TCs
 - Categories involved include vegetables, fruits, tea, livestock, aquatic products, etc.
- Risk Assessment Laboratory (RAL)
 - 98 RALs of two types: specialized and regional ones
 - 13 categories involved, including vegetables, fruits, tea, livestock, dairy products, aquatic products, packing materials, etc.
 - Supervising their respective risk monitoring stations
- Risk Monitoring Station (RMS)
 - 145 RMSs
 - Responsible for sampling and reporting of risk-related information under the supervision of RAL

Monitoring links



From Farm To Table

Many others

- Time and season
- Sampling and testing personnel
- Test method
- Test instrument
- ...

Knowledge of monitoring elements

- Effective monitoring will only be successful if various monitoring elements can be accomplished. Thus, sufficient illustration on these monitoring elements will be very helpful to better understand the informatization essence of monitoring;
- New monitoring tasks can be customized through reconfiguration of monitoring elements;
- Encoding lays the foundation for management of monitoring elements by converting these elements into standardized, formatted code data that can be processed by computer;
- Encoding makes data consolidation possible as information from various monitoring levels, sectors and types will have the same data format.



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Content

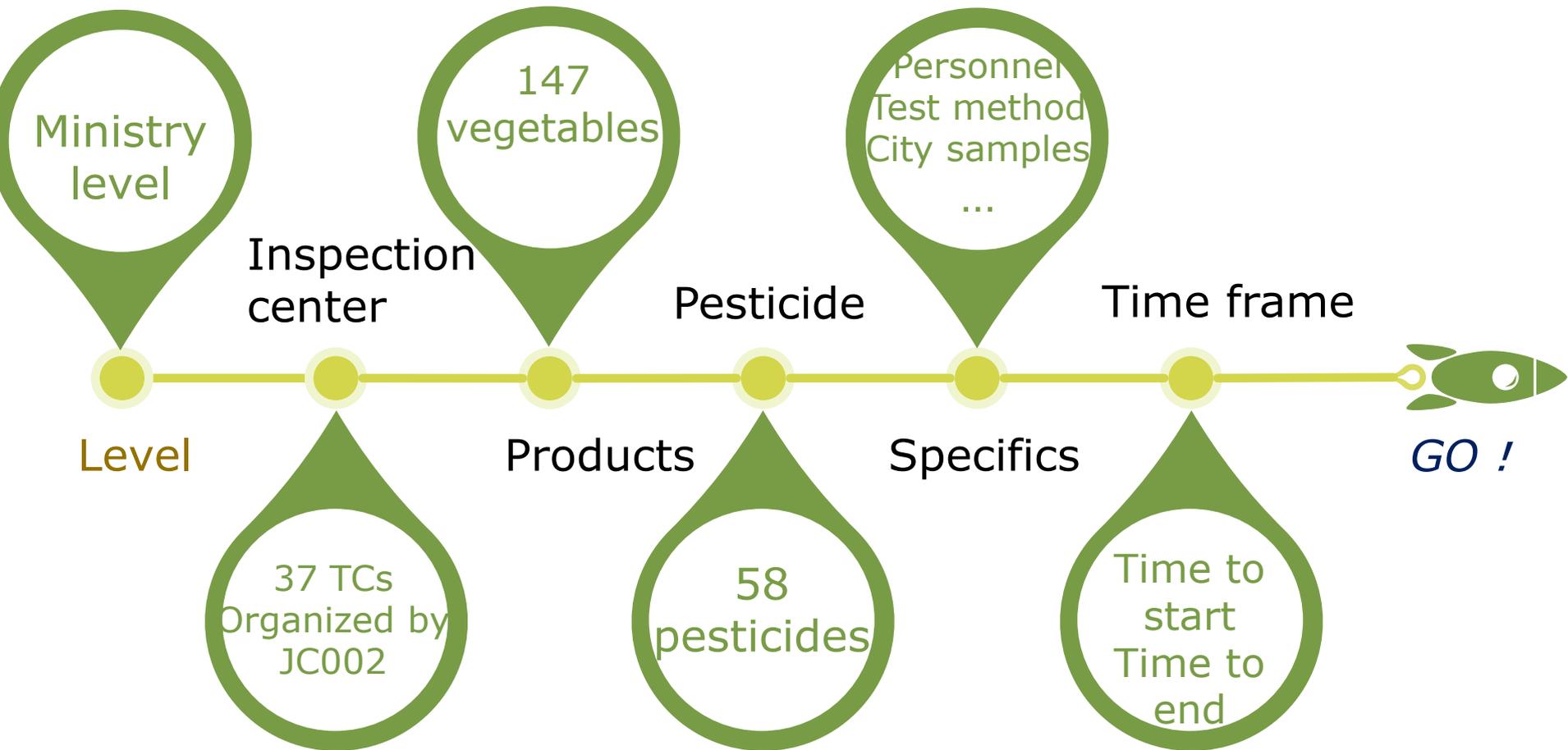
1. Monitoring Elements
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Purposes:

- Manage monitoring elements
- Standardize monitoring procedures
- Customize specific monitoring tasks by configuration of monitoring elements

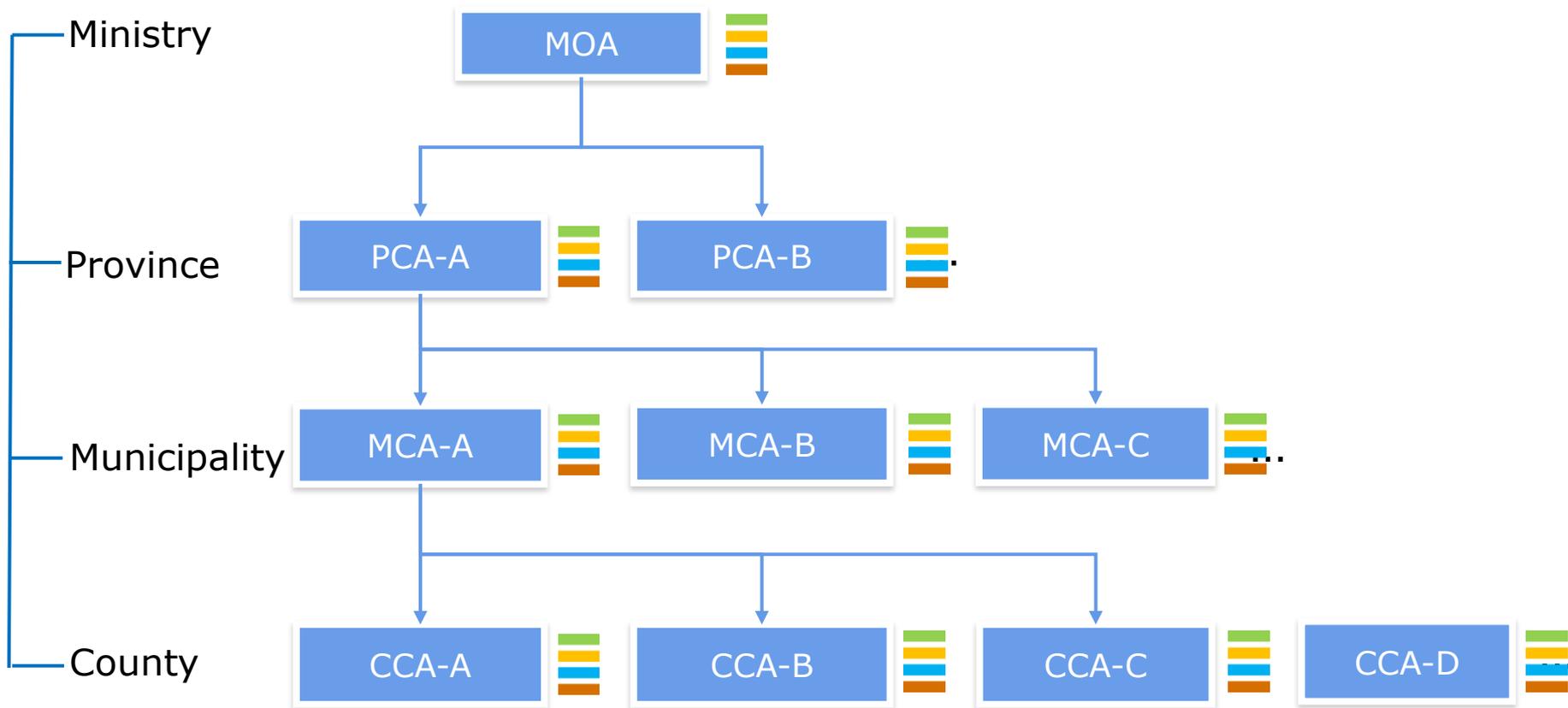
Example: MOA Routine monitoring of pesticide residue in vegetables

- Engaging 37 Quality Inspection Centers under MOA
- Organized by MOA Vegetable Quality Monitoring, Inspection and Testing Center (Beijing)
- Carried out quarterly, i.e. four times per year
- More than 100 cities randomly selected nationwide
- Involving 147 vegetables and 58 pesticides

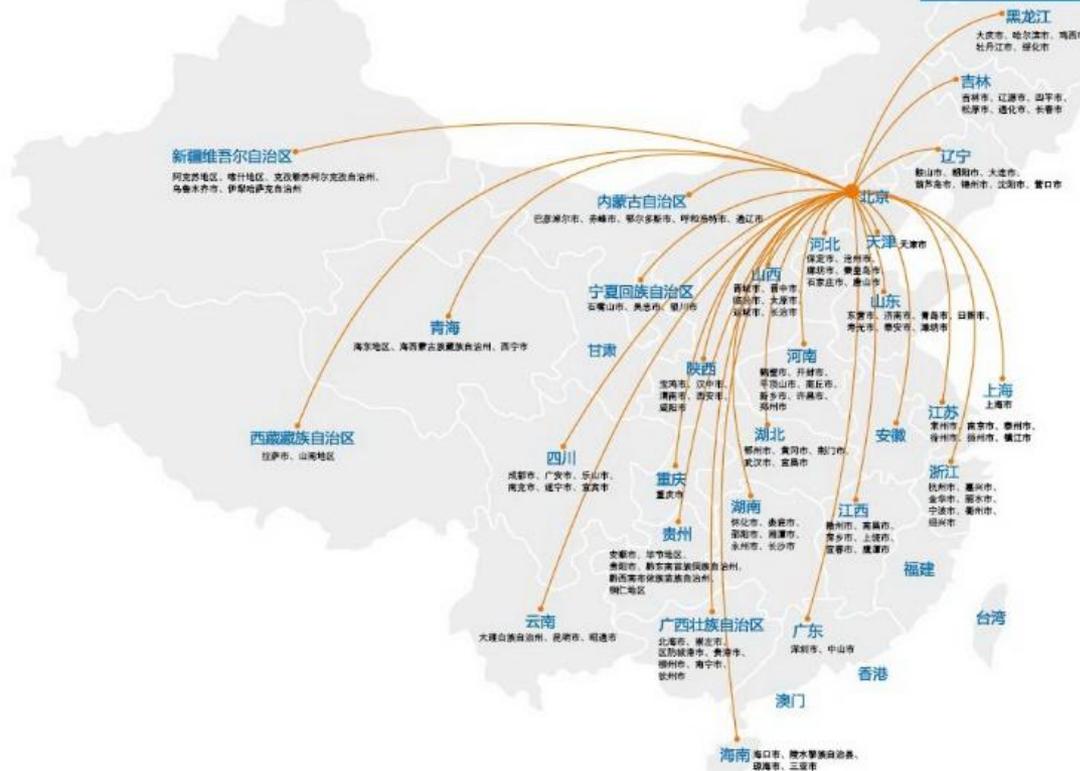


Types of monitoring programs

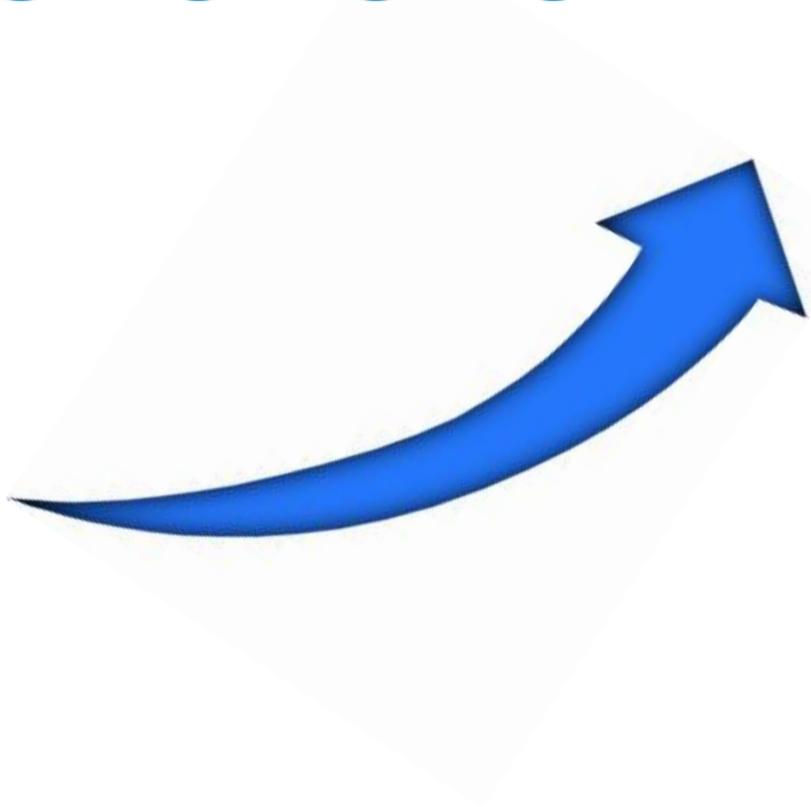
	Routine monitoring
	Special monitoring
	Supervision and selective examination
	Others



监测 Monitoring



B I G
D A T A





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National Information Center of Agro-products Safety

A Comprehensive Working Platform

Risk
Monitoring

Risk
Communication

Risk
Assessment

国家农产品质量安全监测信息平台

National Information Center of Agro-products Safety

新闻通报



2013.09 29

农业部畜产品安全例行监测在甘肃省兰州市七里河区采样

2013年1月9日，农业部畜禽产品质量安全监督检测实验中心副主任杨陵在甘肃省动物卫生监督所、市动物卫生监督所的陪同下一行人对兰州市七里河区定点屠宰场、农贸市场和羊肉批发市场的畜禽产品进行了随机采样。...

[阅读全文>>](#)

分类：风险监控, 例行监测, 新闻及通报

2013.09 25

农业部举办2013年“全国食品安全宣传周”主题活动

6月20日，农业部在全国组织开展了主题鲜明、内容丰富、形式多样的全国食品安全宣传周

2013.09 24

农业部发布2013年第二季度及上半年农产品质量安全例行监测信息

本网讯 根据《农产品质量安全法》的规定和《国务院办公厅关于印发2013年食品安全重点工作安排的通知》要求，2013年4-6月，农业部组织开展了第二季度全国农产品质量安全例行监测，共监测了31个省（区、...

[阅读全文>>](#)

分类：风险监控, 例行监测, 新闻及通报



2013.09 24

农业部发布第一季度农产品质量安全例行监测信息

本网讯 1-3月，农业部组织开展了全国农产品质量安全第一季度例行监测，共监测了31个

检索

请输入要查找的内容



快速入口



登录 Login

风险监控

按照农产品质量安全标准，对农产品加强监测，是保障农产品消费安全的重要措施。《农产品质量安全法》明确要求建立农产品质量安...

[了解详情 →](#)

风险评估

+

风险预警

+

标准与指南

+

政策与法规

+

关于平台

+

Monitoring Element Management

农产品质量安全综合管理系统 V2.0

修改密码 | 帮助 | 退出系统

欢迎你: JC001

当前位置: 上报数据概览

监测年份: 2012年 监测任务批次: 第2次监测

上报单位:

<input type="checkbox"/> 全选	上报单位	机构代码	总计	蔬菜	水果	食用菌	茶叶	畜禽	水产	最后上报时间
<input type="checkbox"/>	农业部蔬菜质量监督检验测试中心 (北京)	JC002	143	120	3	20	0	0	0	2012-05-11 13:50:59
<input type="checkbox"/>	农业部食用菌产品质量监督检验测试中心 (上海)	JC003	80	60	20	0	0	0	0	2012-05-09 11:08:10
<input type="checkbox"/>	农业部茶叶质量监督检验测试中心 (杭州)	JC004	332	0	0	0	332	0	0	2012-05-10 13:53:59
<input type="checkbox"/>	农业部畜禽产品质量监督检验测试中心 (北京)	JC005	100	0	0	0	0	100	0	2012-05-03 13:43:43
<input type="checkbox"/>	农业部水产品质量监督检验测试中心 (上海)	JC006	60	0	0	0	0	0	60	2012-05-02 16:39:45
<input type="checkbox"/>	农业部农产品质量安全监督检验测试中心 (南京)	JC007	135	100	20	15	0	0	0	2012-05-08 17:02:29
<input type="checkbox"/>	农业部肉及肉制品质量监督检验测试中心 (南昌)	JC008	100	0	0	0	0	100	0	2012-05-04 16:06:18
<input type="checkbox"/>	农业部热带农产品质量监督检验测试中心	JC009	126	100	16	10	0	0	0	2012-05-21 11:06:51

Data reporting

修改密码 | 帐户信息 | 帮助 | 退出系统

农产品质量安全数据上报系统 V2.0

欢迎你: JC002 当前位置: 数据填报

上报数据

- > 数据填报
- > 数据预览与上传

历史数据查询

统计分析

当前监测任务所属行业: 蔬菜 可切换为 --请选择--

监测任务: 2013年第一批次

* 样品编号: LXJC00220131010008

* 抽样地: 天津市 市辖区 河北区

产地: --请选择-- --请选择-- --请选择--

备注:

* 被抽样单位: 红星蔬菜厂 ✔

* 监测环节: 批发市场

* 产品: 大白菜 x

分类: 叶菜类 - 白菜类

抽样基数: (带单位数据,如:3kg)

检测结果

设置默认值 未检 未检出

1	倍硫磷	未检	mg/kg	未检	未检出	检出值	
2	甲霜灵	未检	mg/kg	未检	未检出	检出值	
3	克螨特	未检	mg/kg	未检	未检出	检出值	

APP for Sampling

—Recording sample information and geographic coordinates



Preliminary Data Analysis

农产品质量安全数据分析系统 V2.0

修改密码 | 帮助 | 退出系统

欢迎你: FX

欢迎你: JC002

当前位置: 蔬菜-报表统计

年份:

点击下载任意文件

1. 不同类型受检单位超标率情况

2. 批发市场蔬菜超标率情况

3. 生产基地蔬菜超标率情况

4. 超市蔬菜超标率情况

5. 各地区蔬菜超标率情况

6. 各地区批发市场外地蔬菜超标率情况

7. 各地区外地蔬菜超标率情况

8. 各类蔬菜超标率情况(12分类)

9. 各品种检测结果

文件下载

您想打开或保存此文件吗?

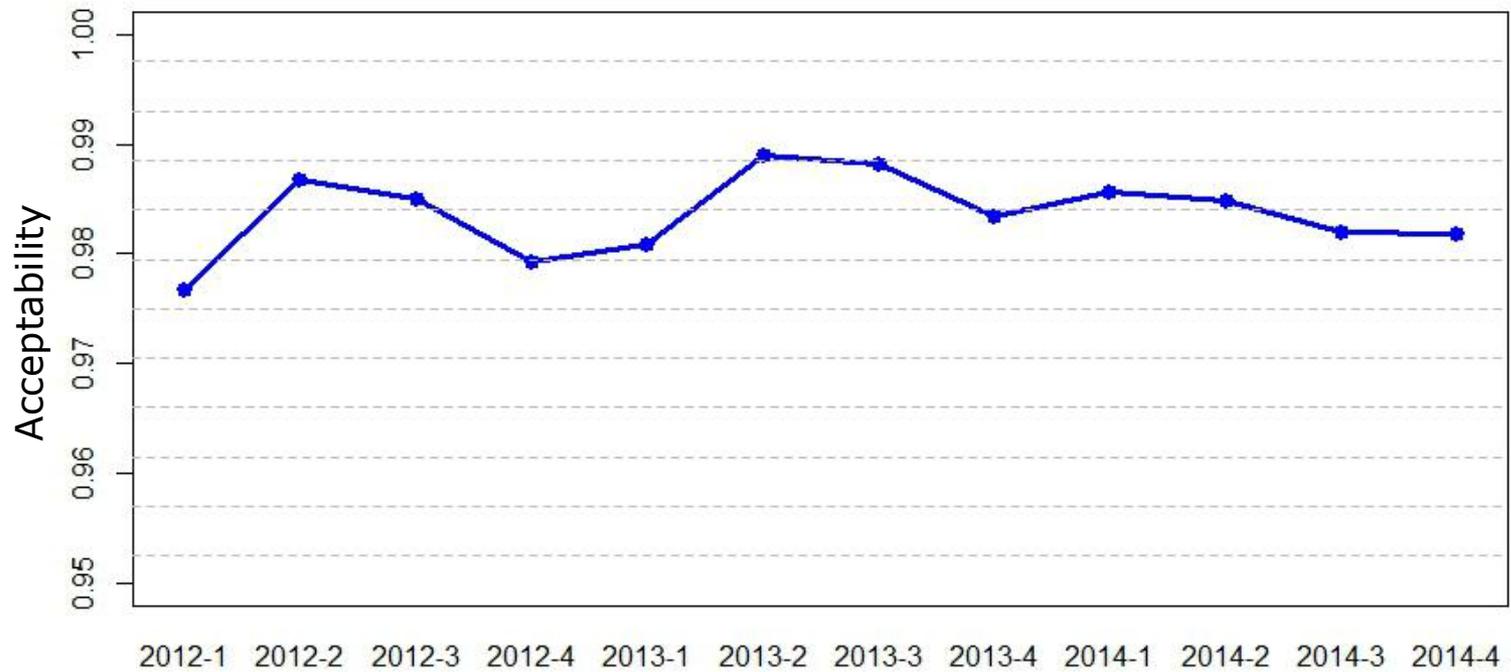
名称: 不同类型受检单位超标率情况.xls

类型: Microsoft Office Excel 97-2003 工作表, ...

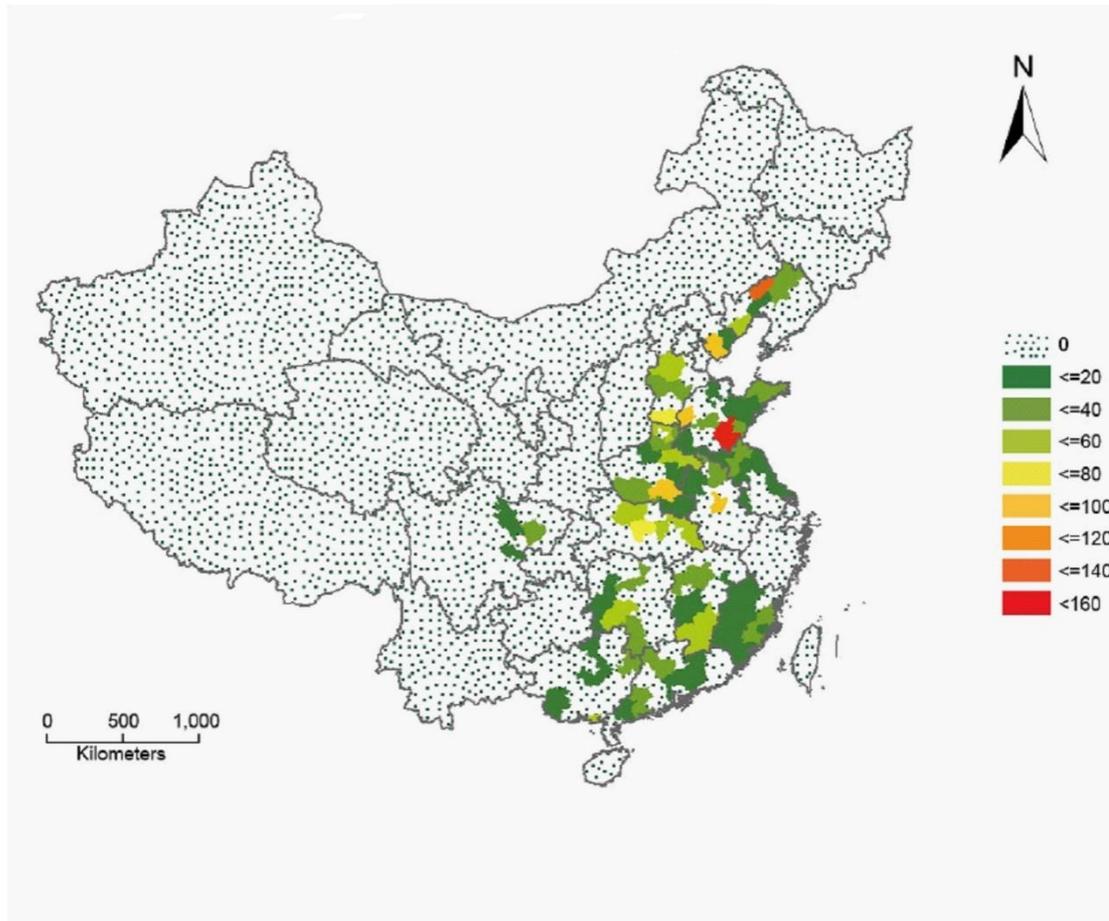
发送者: 192.168.7.201

打开(O) 保存(S) 取消

来自 Internet 的文件可能对您有所帮助,但某些文件可能危害您的计算机。如果您不信任其来源,请不要打开或保存该文件。有何风险?

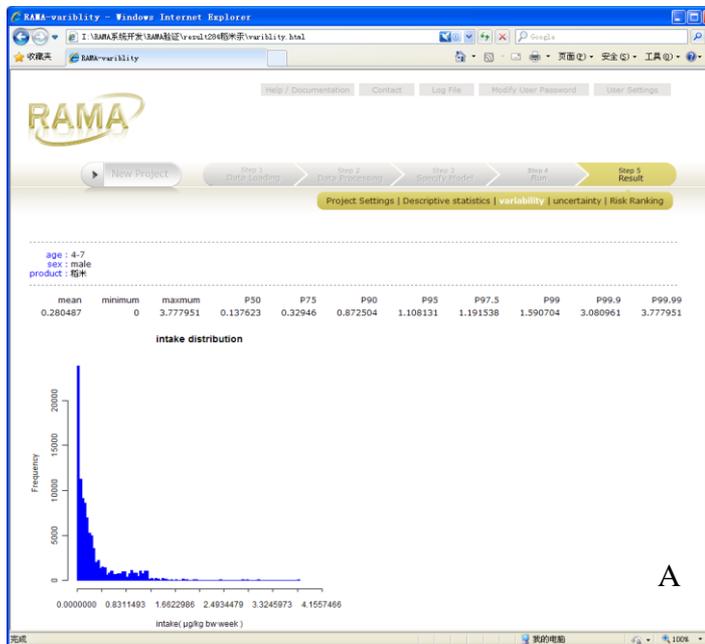


Application of geographic information system



RAMA

— A Web—based Dietary Exposure Assessment Model



RAMA

Help / Documentation Contact Log File Modify User Password User Settings

New Project Step 1 Data Loading Step 2 Data Processing Step 3 Specify Model Step 4 Run Step 5 Result

Project Settings | Descriptive statistics | variability | uncertainty | Risk Ranking

risk level : mean

Risk Ranking

age	sex	product	chemical	intake	RID	RID%	ranking
2-4	female	稻米	Hg	0.281885	5	5.637702	1
4-7	male	稻米	Hg	0.280487	5	5.60974	2
2-4	male	稻米	Hg	0.273773	5	5.475453	3
4-7	female	稻米	Hg	0.257321	5	5.146429	4
7-11	male	稻米	Hg	0.252433	5	5.048666	5
7-11	female	稻米	Hg	0.239822	5	4.795442	6
11-14	male	稻米	Hg	0.208818	5	4.17635	7
11-14	female	稻米	Hg	0.186107	5	3.722138	8
14-18	male	稻米	Hg	0.17338	5	3.467598	9
14-18	female	稻米	Hg	0.143032	5	2.860632	10
45-60	male	稻米	Hg	0.142681	5	2.833617	11
30-45	female	稻米	Hg	0.142042	5	2.840839	12
18-30	male	稻米	Hg	0.14069	5	2.813794	13
18-30	female	稻米	Hg	0.140242	5	2.804834	14
30-45	male	稻米	Hg	0.139456	5	2.789124	15
45-60	female	稻米	Hg	0.136972	5	2.739431	16
60-70	female	稻米	Hg	0.128966	5	2.579315	17
60-70	male	稻米	Hg	0.128707	5	2.574132	18
70-80	male	稻米	Hg	0.128018	5	2.560359	19
70-80	female	稻米	Hg	0.127522	5	2.55044	20

!-end table-

age : 70-80
sex : male

B



Application of Monitoring model in Jiangsu Province

江苏省农产品质量安全监测信息系统
江苏省农业委员会农产品质量安全监管局

首页 > 监测计划管理 > 监测方案管理

方案名称:

[+ 添加方案](#) 搜索

序号	方案名称	方案级别	监测类型	发布单位	发布时间	状态	
1	2014年全省第四次例行监测方案	省级	例行监测	江苏省农业委员会农产品质量安全监管局	2014-05-12	发布	查看 停用
2	样品分发测试方案	省级	例行监测	江苏省农业委员会农产品质量安全监管局	2014-05-09	发布	查看 停用
3	2014年全省苹果第二次例行监测方案	省级	例行监测	江苏省农业委员会农产品质量安全监管局	2014-05-08	发布	查看 停用
4	2014年全省猪肉第二次监督抽查方案	省级	监督抽查	江苏省农业委员会农产品质量安全监管局	2014-05-08	发布	查看 停用
5	2014年全省猪肉第三次普查方案	省级	普查	江苏省农业委员会农产品质量安全监管局	2014-05-07	发布	查看 停用
6	2014年全省猪肉第二次普查方案	省级	普查	江苏省农业委员会农产品质量安全监管局	2014-05-06	发布	查看 停用
7	2014年全省猪肉第二次风险方案	省级	专项	江苏省农业委员会农产品质量安全监管局	2014-05-06	停用	查看
8	2014年全省猪肉第二次例行监测方案	省级	例行监测	江苏省农业委员会农产品质量安全监管局	2014-05-06	发布	查看 停用
9	2014年全省牛肉第一次例行监测方案	省级	例行监测	江苏省农业委员会农产品质量安全监管局	2014-05-06	发布	查看 停用



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Basic Experiences (1)

- Informatization can significantly improve monitoring efficiency and provide information for decision making in risk management;
- Pesticide residue monitoring data can be consolidated across the nation by configuring monitoring elements via monitoring model;
- Attention should be given to how to properly handle the problem of sharing information with local government for the purpose of national-level consolidation of monitoring data.

Basic Experiences (2)

- Informatization process needs a well-designed top-level design, integrated planning and multi-step implementation;
- The information system needs to be operated and maintained by specialized agencies and professional technical teams;
- Stable funding support is required.



NICAS

Zhijun Chen

Center of Standards Research for
Agro-Products Quality, MOA

National Information Center for
Agro-products Safety

E-mail: zhijunchen@vip.126.com

Thanks for your attention!

陸平山梅花詩
有不明記澤苑
開靈閣着同來
人不知之由試寫
一枝寫之記之時
乙未八月十一日雨
蘇盦

