NICAS

Data Collection at the National Level

—— Monitoring Model Based

Zhijun Chen

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Content

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

Global Pesticide Residue Monitoring Programs(1)

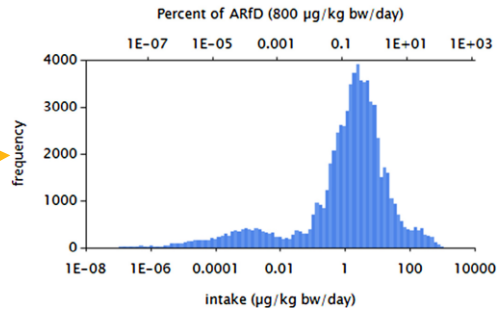
- FAO/WHO
  - Global Environment Monitoring System(GEMS/Food)
    - http://www.who.int/nutrition/landscape_analysis/nlis_gem_food/en/
- EU
  - Multi-annual Control Programme
    - http://ec.europa.eu/food/plant/pesticides/max_residue_levels/eu_multi-annual_control_programme_en.htm
- USDA
  - Pesticide 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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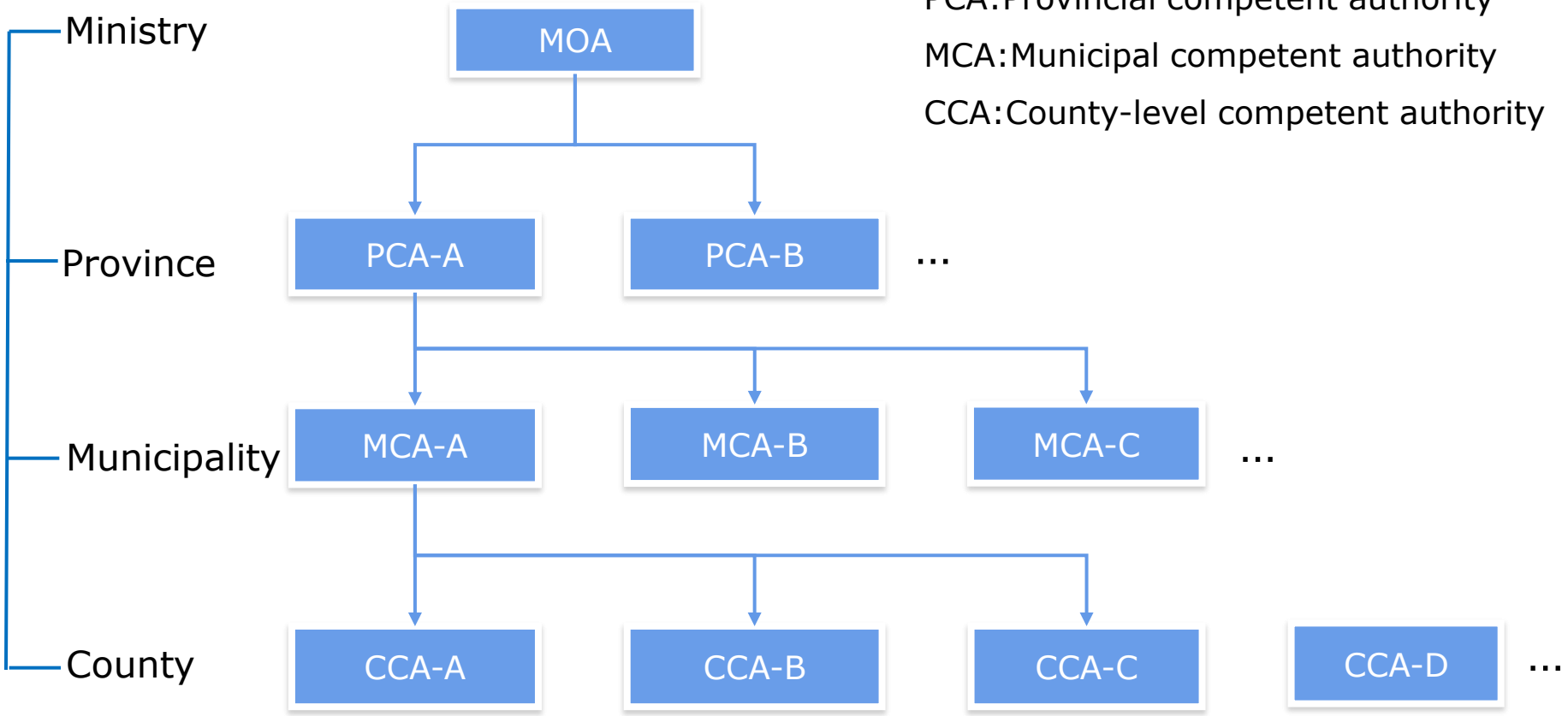
Management Layers

MOA:The ministry of agriculture

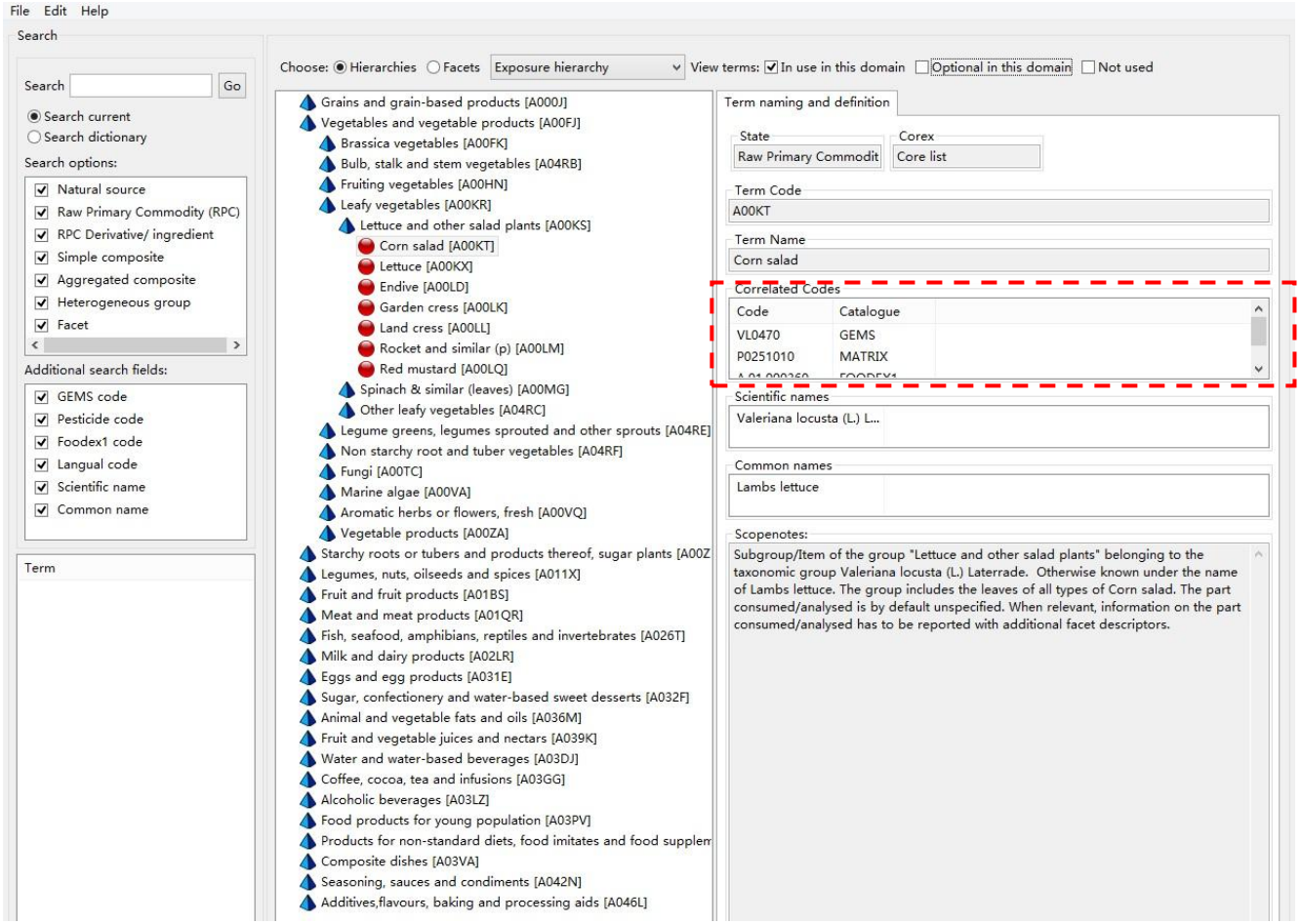
PCA:Provincial competent authority

MCA:Municipal competent authority

CCA:County-level competent authority



Food Category and Encoding



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

ICS 65.100
G 25

GB

中华人民共和国国家标准

GB 2763—2014

代替 GB 2763—2012

食品安全国家标准

食品中农药最大残留限量

National food safety standard--

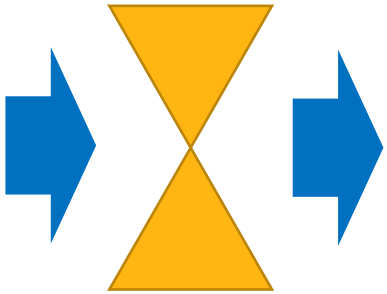
Maximum residue limits for pesticides in food

Extended Standard

MRL（mg/kg）

Food	Dichlorvos
Vegetables	
Leafy vegetables	0.2

GB 2763-2014



Food Category

MRL（mg/kg）

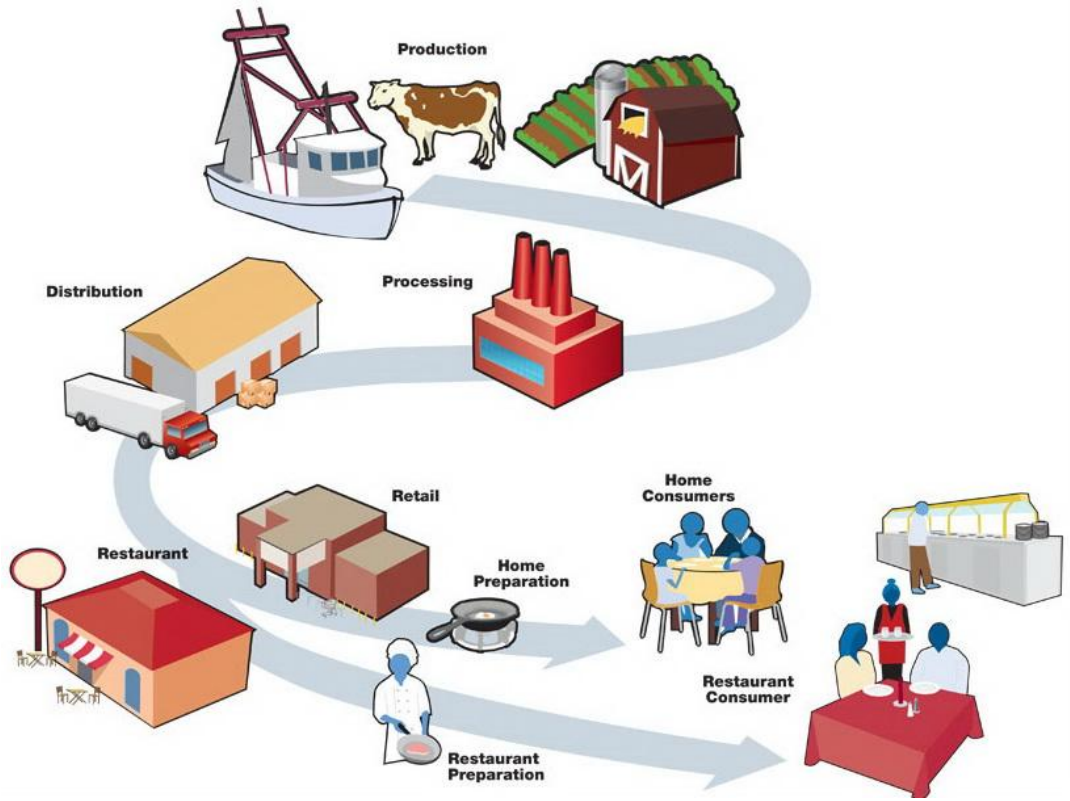
Food	Dichlorvos
Vegetables	
Leafy vegetables	
Spinach	0.2
Lettuce	0.2
Celery	0.2
…	

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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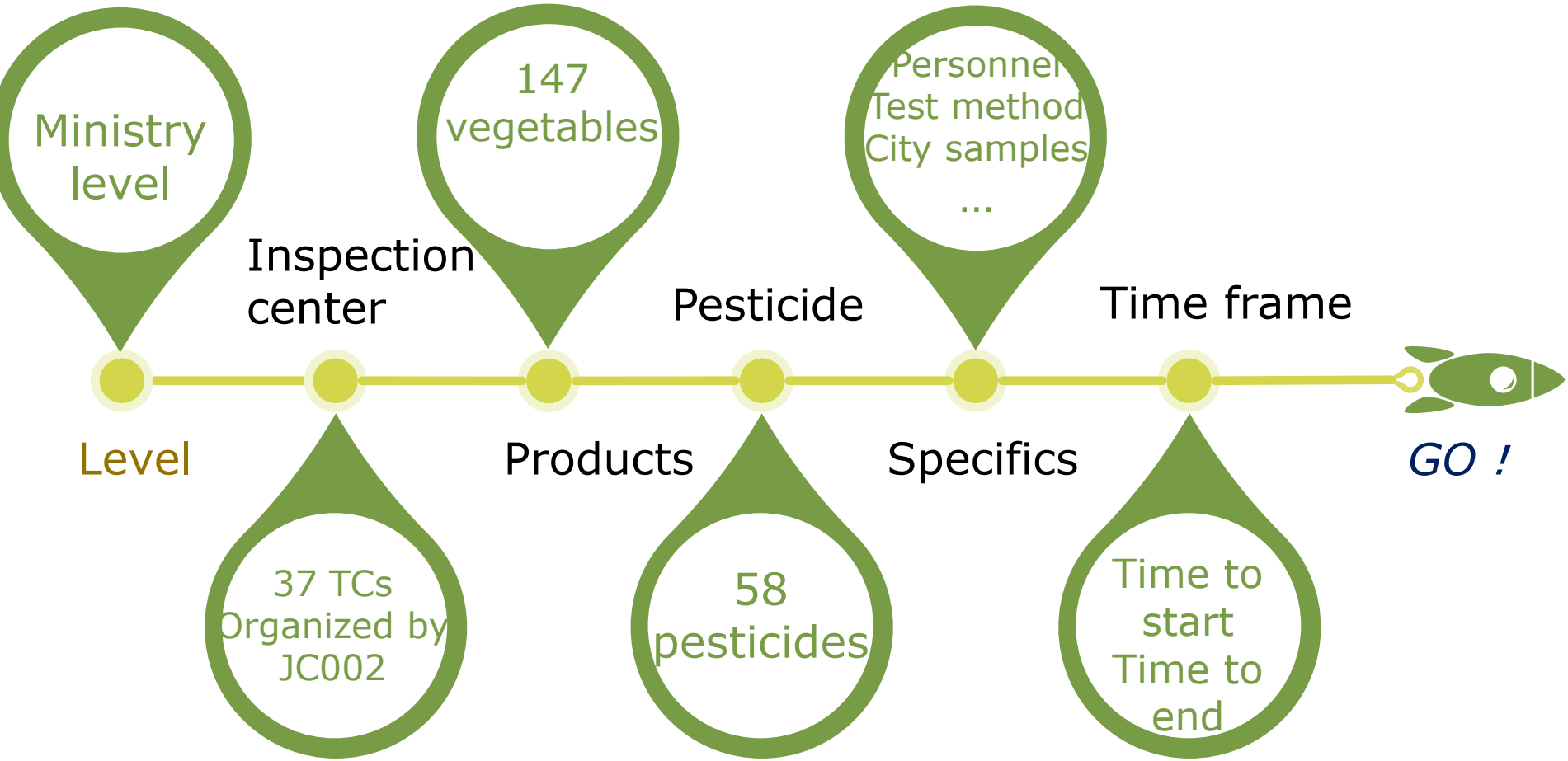
Purposes:

- 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


Ministry level
147 vegetables
Personnel
Test method
City samples
...
Inspection center
Pesticide
Time frame
Level
Products
Specifics
GO !
37 TCs Organized by JC002
58 pesticides
Time to start
Time to end

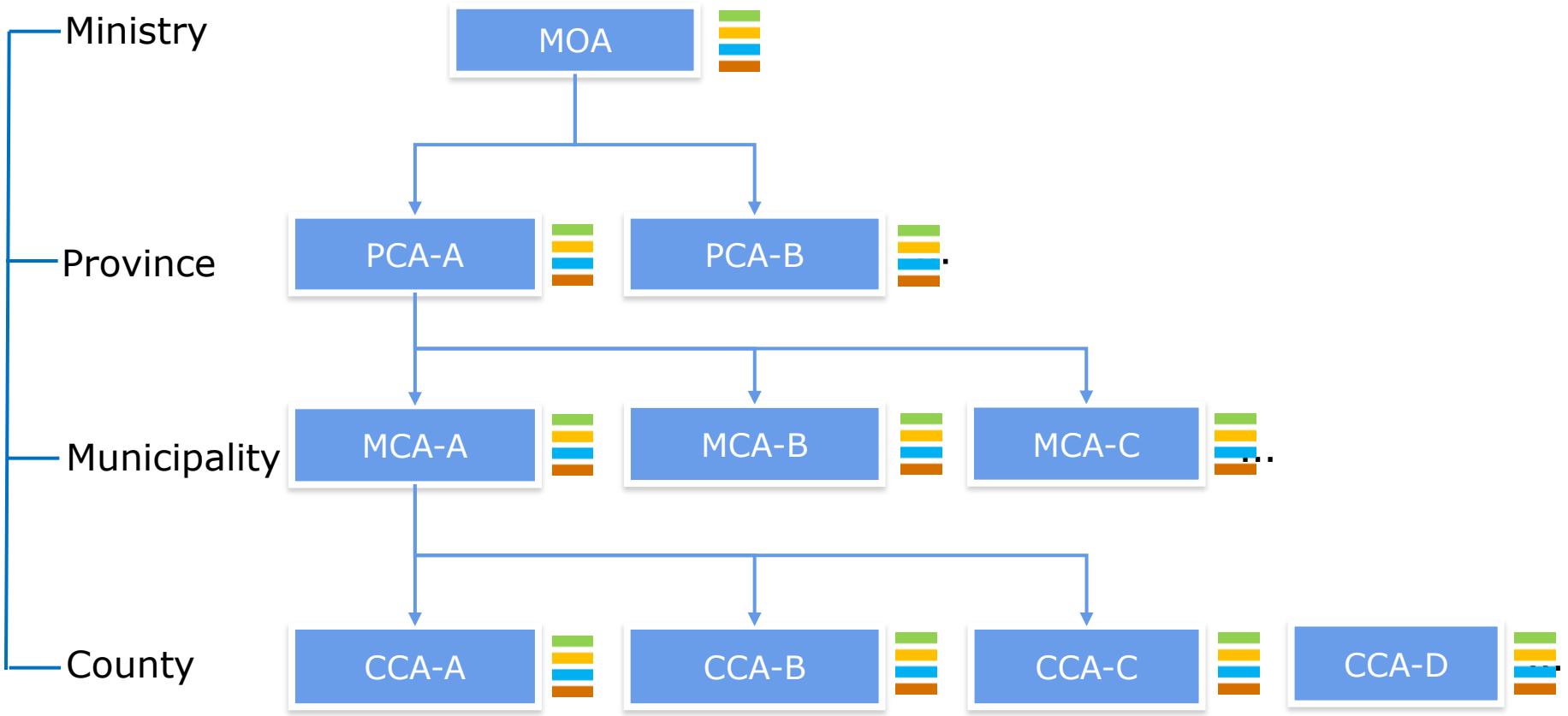
Types of monitoring programs

Routine monitoring

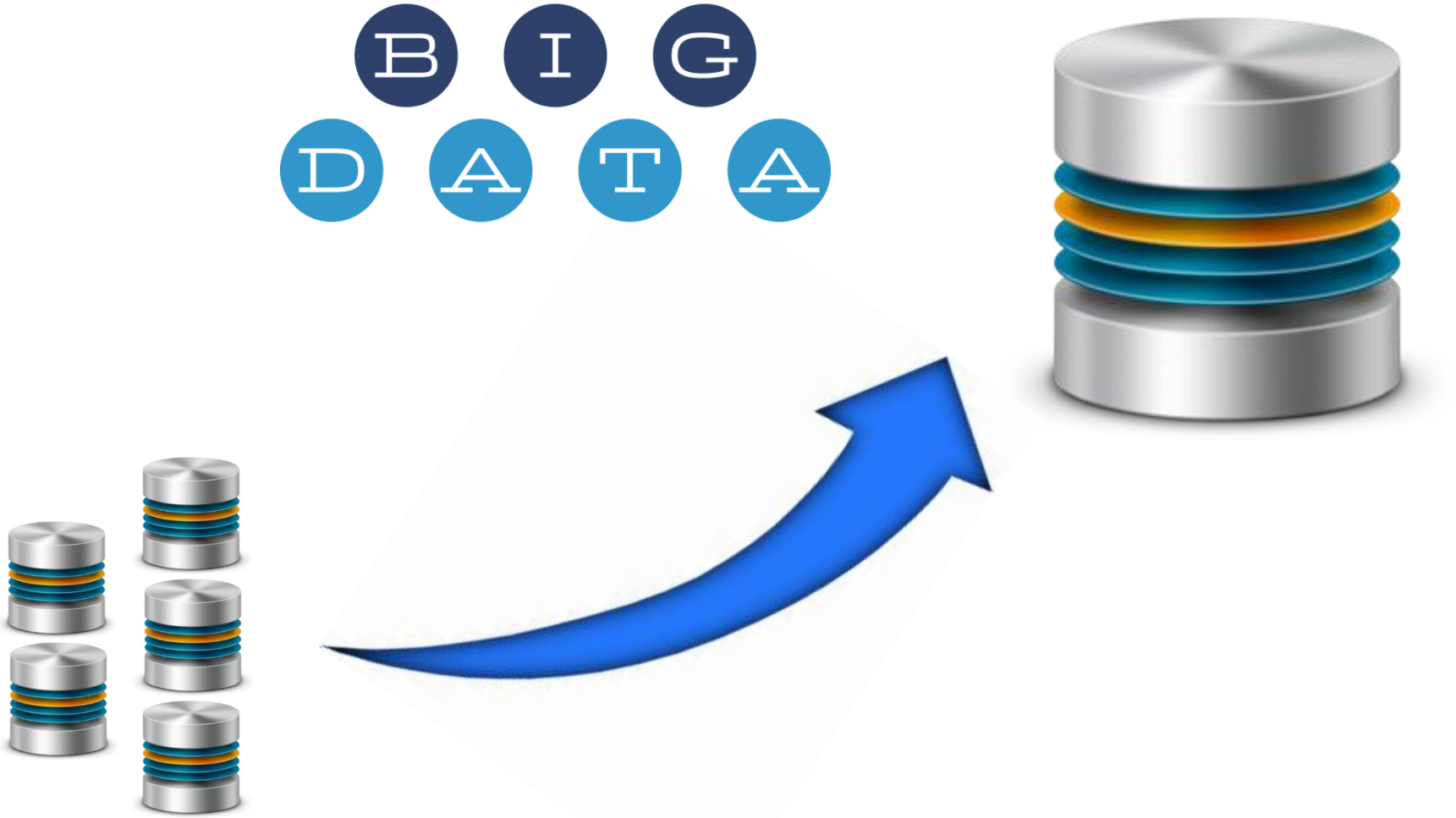
Special monitoring

Supervision and selective examination

Others


Ministry
Province
Municipality
County
MOA
PCA-A
PCA-B
MCA-A
MCA-B
MCA-C
CCA-A
CCA-B
CCA-C
CCA-D

监 测
Monitoring


B I G
D A T A

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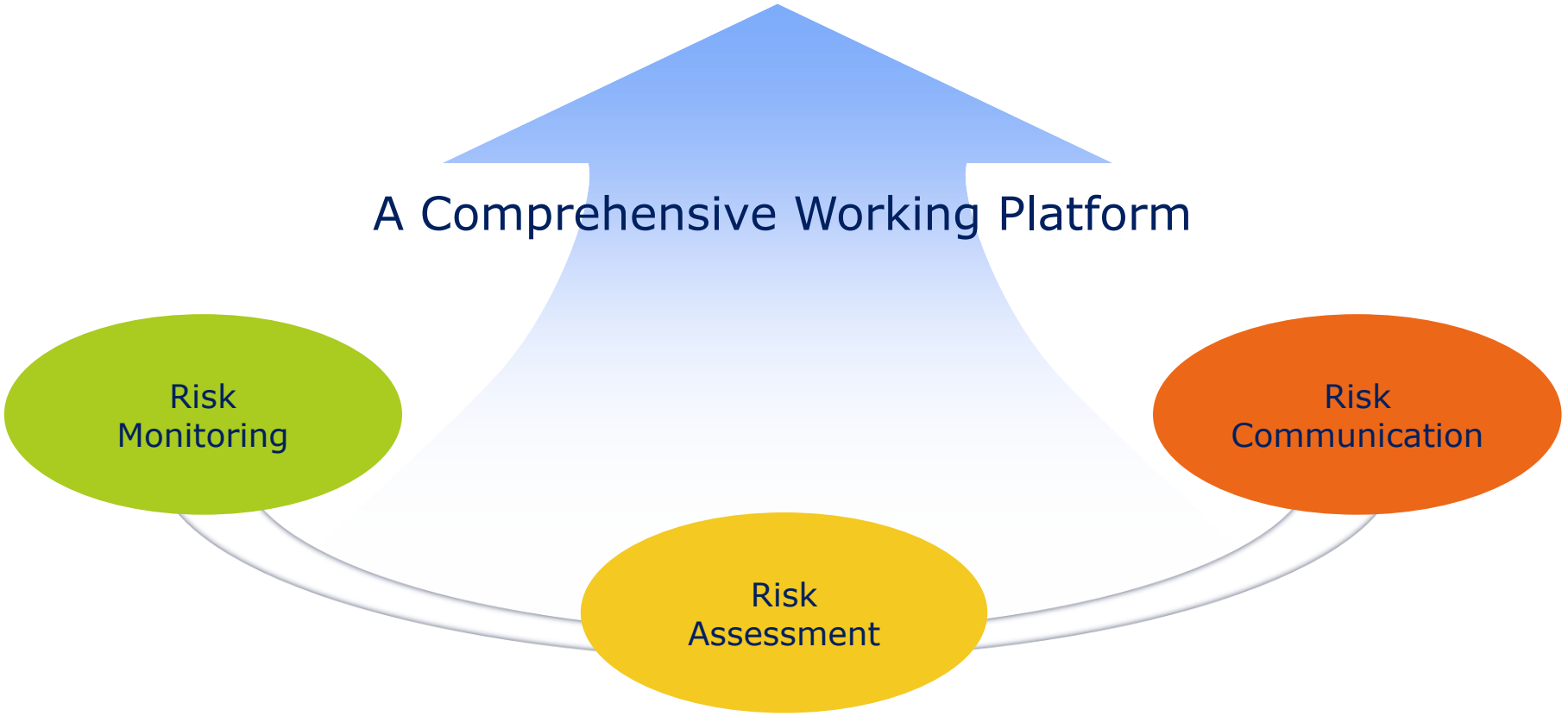
National Information Center of Agro-products Safety



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7人对兰州市七里河区定点屠宰场、农贸市场和牛羊肉批发市场的畜禽产品进行了随机采样。 ...

阅读全文>>

分类： 风险监测，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”主题日活动

6月20日，农业部在全国组织开展了主题鲜明、内容丰富、形势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： 风险监测，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

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风险监测

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

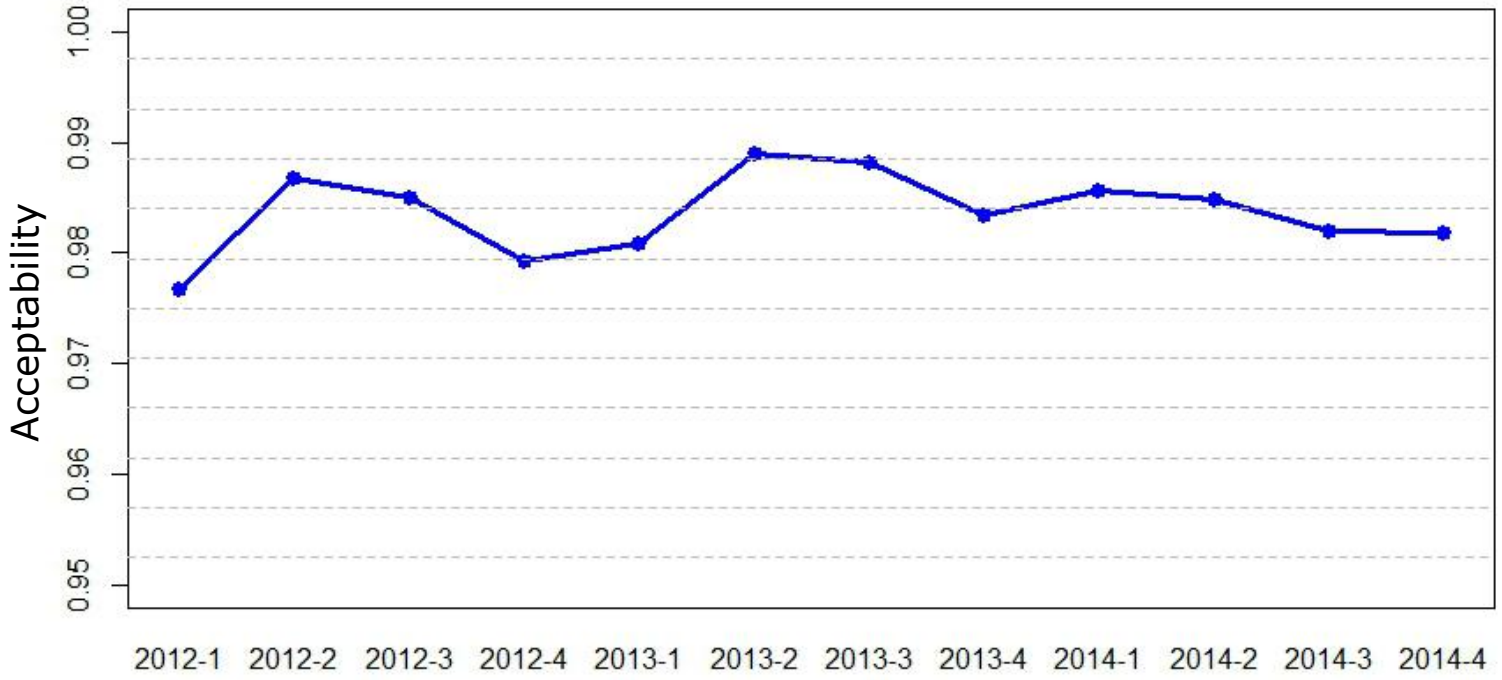
全选	上报单位	机构代码	总计	蔬菜	水果	食用菌	茶叶	畜禽	水产	最后上报时间
☐	农业部蔬菜品质监督检验测试中心（北京）	JC002	143	120	3	20	0	0	0	2012-05-11 13:50:59
☐	农业部食用菌产品质量监督检验测试中心（上海）	JC003	80	60	20	0	0	0	0	2012-05-09 11:08:10
☐	农业部茶叶质量监督检验测试中心（杭州）	JC004	332	0	0	0	332	0	0	2012-05-10 13:53:59
☐	农业部畜禽产品质量监督检验测试中心（北京）	JC005	100	0	0	0	0	100	0	2012-05-03 13:43:43
☐	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
☐	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
☐	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
☐	农业部热带农产品质量监检验测试中心	JC009	126	100	16	10	0	0	0	2012-05-21 11:06:51

Data reporting

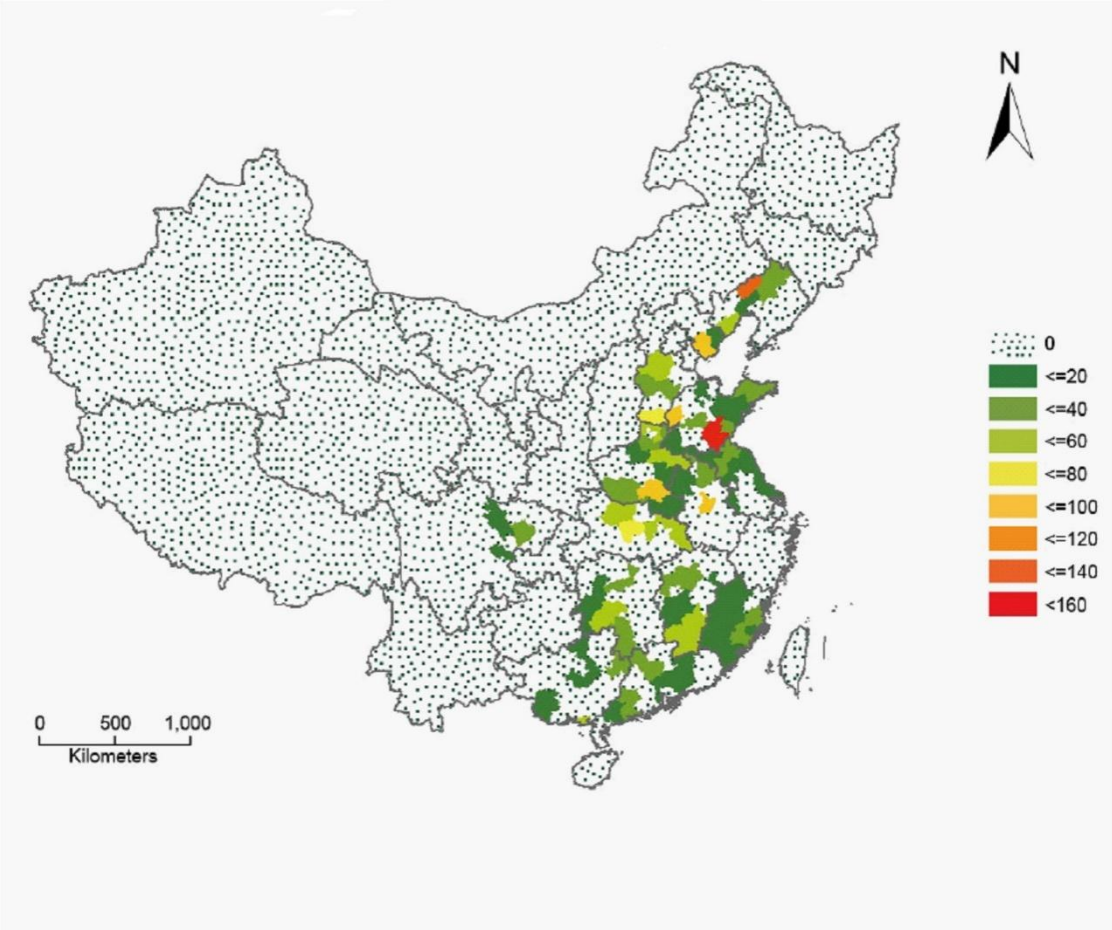
APP for Sampling

——Recording sample information and geographic coordinates

Preliminary Data Analysis

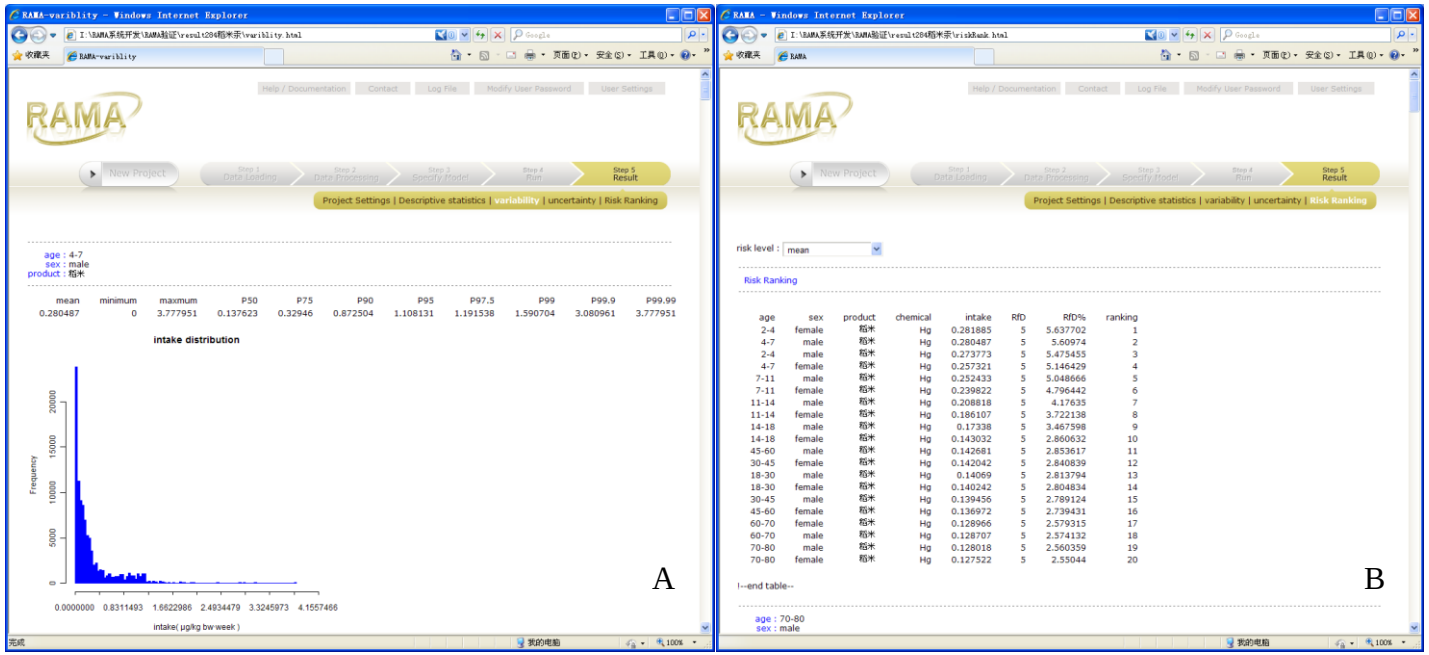

Acceptability
1.00
0.99
0.98
0.97
0.96
0.95
2012-1
2012-2
2012-3
2012-4
2013-1
2013-2
2013-3
2013-4
2014-1
2014-2
2014-3
2014-4

Application of geographic information system



RAMA

—— A Web—based Dietary Exposure Assessment Model




BIG
DATA
INFORMATION
PETABYTES
SEARCH
STORAGE
LARGE
ANALYSIS
MANAGEMENT
TECHNOLOGIES
SOFTWARE
SETS
MILLION
DEVELOPMENT
TECHNOLOGY
VOLUME
PROCESS
GOVERNMENT
RESEARCH
INTERNET
LEARNING
WORLD
EXABYTES
SIZE
SAN
NAS
SCIENCE
FUTURE
NEW
BILLION
PARALLEL
CRITIQUES
INITIATIVE
ECONOMIC
TERABYTES
DATABASES
PROCESSING
FRAMEWORK
BETWEEN
BUSINESS
EFFECTIVE
ANALYTICS
SIMULATIONS
VISUALIZATION
STATISTICS
DEFINITION
USING
MASSIVE
FACTOR
MANAGE
ONLINE
DAY
WORLDWIDE
SYSTEMS
MAKING
INTEGRATION
SOCIAL
YEARS
RESULTS
DRIVE
REPLICATION
HANDLE
SOURCES
CHALLENGES
LIMITS
COMPLEX
ANNOUNCED
PAST
CAPACITY
HAND
ONE
OUT
INCLUDE
NETWORKS
HYPOTHESIS
END
MOST
NEARLY
MAPREDUCE
STATE
CRITIQUE
PEOPLE
TRAFFIC
USE
CURRENTLY
APPROACH
MANY
RELATED
MARKET
TIME
SENSOR
VARIETY
WOULD
ANNUAL
NOW
USED
RELEVANT
PROJECT
DISTRIBUTED
PER
RECORDS
COST
PARADIGM
FUNDING
INSIGHT
TOOLS
CENTER
ARCHITECTURE
PROCESSES
APPROACHES
INTELLIGENCE
NATIONAL
FLOW
SECOND
PRIVACY
INTERNATIONAL
IMPLEMENTATION
BECOMES
ALGORITHMS
COMPANIES
HIGHER
DETERMINE
WELL
SET
DEPARTMENT
QUERIES
HIGH
USERS
AMOUNT
REAL
RATE
STRUCTURE
WORK
APPLICATIONS
INFRASTRUCTURE
TERMS
YEAR
PRIVATE
CAPABILITIES
SUCCESSFUL
NEEDED
USES
LESS
HUGE
COMPARED
EVERY
VARIOUS
BASED
TIMES
SHARED


农产品质量安全风险评估RAMA模型培训研讨会


农产品质量安全风险监测与风险评估培训研讨会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主管：农业部农产品质量安全监管局
主办：国家农产品质量安全风险评估专家委员会办公室
农业部农产品质量标准研究中心


“国家农产品质量安全监测信息平台”信息采集培训研讨会

Application of Monitoring model in Jiangsu Province

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.

Challenges

Information Security & Big Data Analytics

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 !