

# Quality management at the Centre for Genetic Resources, The Netherlands

Theo van Hintum & Liesbeth de Groot

# Quality management at CGN

## ■ introduction

- the importance of PGR is undisputed
  - for food security and health
  - for economy
- The Netherlands is signatory of the CBD and ITPGRFA
  - Dutch government recognizes conservation of PGR as a legal task
- legal tasks → executed at appropriate quality level
  - requires quality management system (QMS)

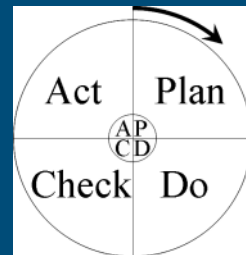


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# Quality management at CGN

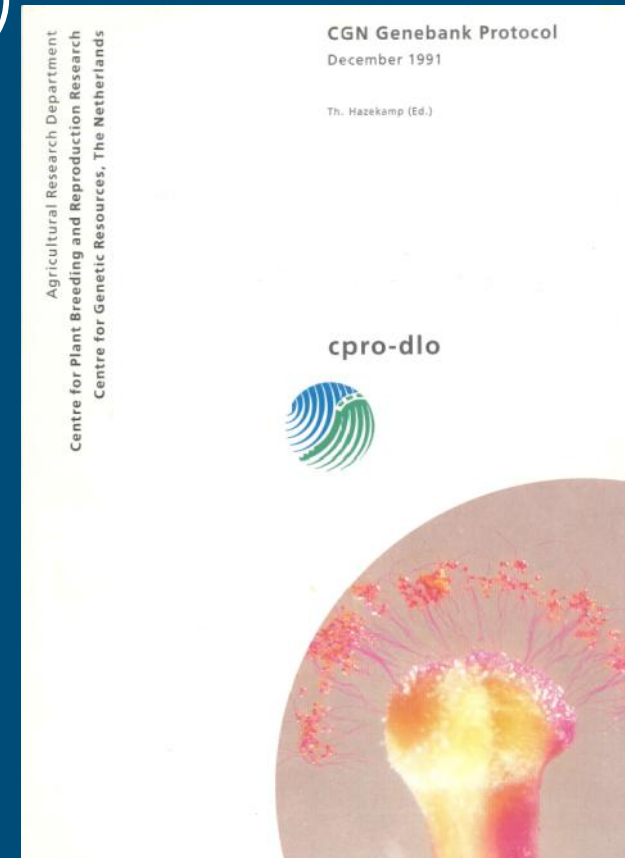
## ■ Quality Management System (QMS)

- formalized system that documents the organization, responsibilities and procedures required to achieve maximum effectiveness at the lowest overall cost to the organization
  - integrates the various internal processes within the organization
  - provides a process approach for project execution
  - enables identification, measurement, control and improvement of core business processes



# Quality management at CGN

- Quality Management System (QMS)
  - for CGN
    - documented all its procedures in CGN Genebank Protocol in 1991
      - one of the best distributed CGN publications



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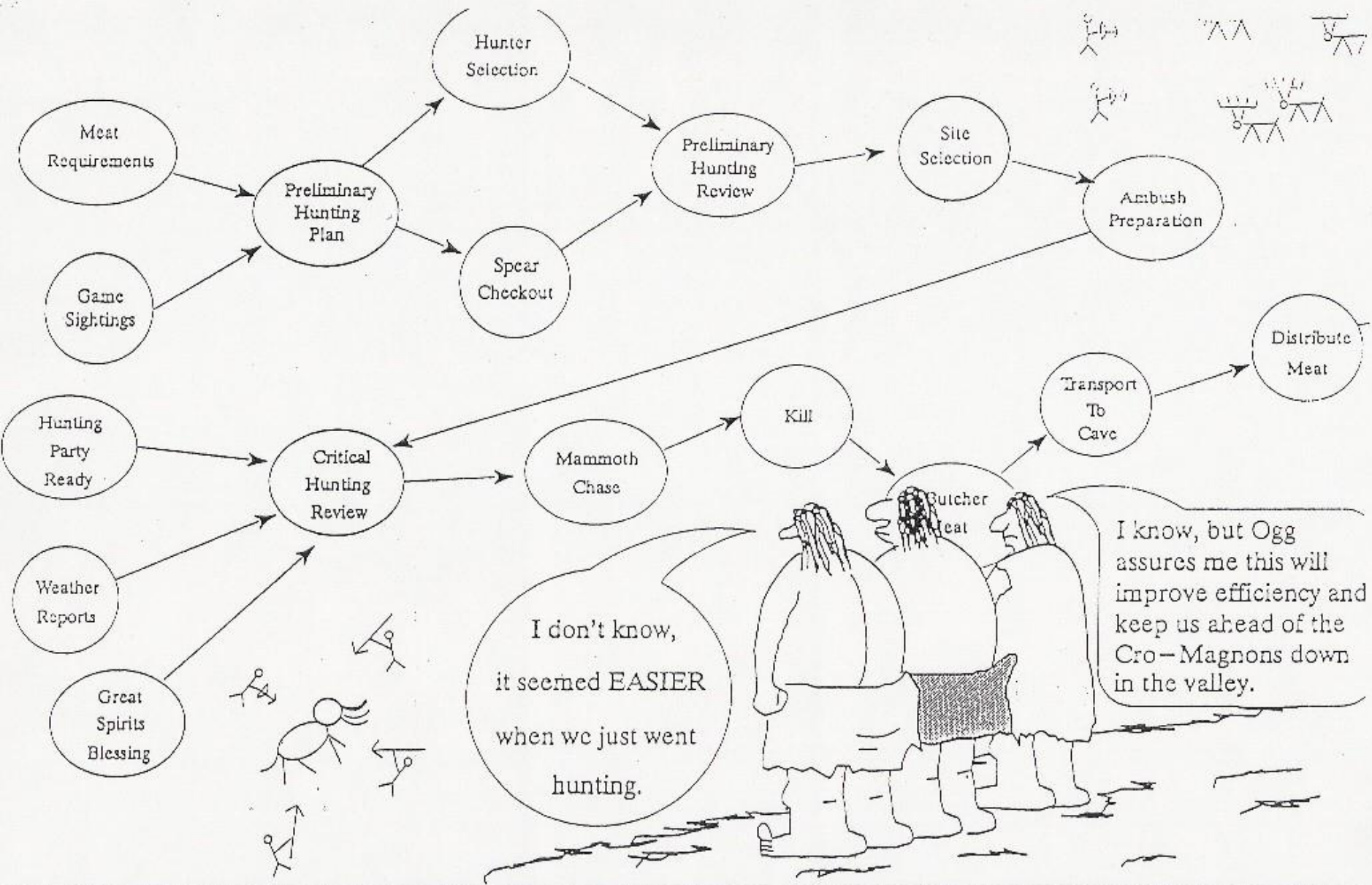
# Quality management at CGN

- Quality Management System (QMS)
  - for CGN
    - quality assurance (funding agency)
    - transparency (internal and external colleagues)
    - improvement of processes

# Quality management at CGN

## ■ implementation of QMS

- year 2004
- supported by commercial company
  - van Ravensteijn & Partners
- choice of QMS methodology
  - ISO9001:2000
- proper and detailed description of all aspects of the organization and operation
  - extensive discussions amongst staff
  - much writing



I don't know,  
it seemed EASIER  
when we just went  
hunting.

I know, but Ogg  
assures me this will  
improve efficiency and  
keep us ahead of the  
Cro-Magnons down  
in the valley.

WHY NEANDERTHAL MAN BECAME EXTINCT.



# Quality management at CGN

## ■ detailed description

- CGN Quality Manual consists of chapters on a/o
  - general management (policy, strategy, budget, project execution, etc.)
  - organization and staff (responsibilities, expertise, training, etc.)
  - measurement, analysis and improvement (specifying how the processes are monitored, how complaints are handled, and improvements are made)
  - sector specific parts describing all technical operations
    - acquisition of material
    - multiplication (with crop specific regeneration protocols)
    - seed management

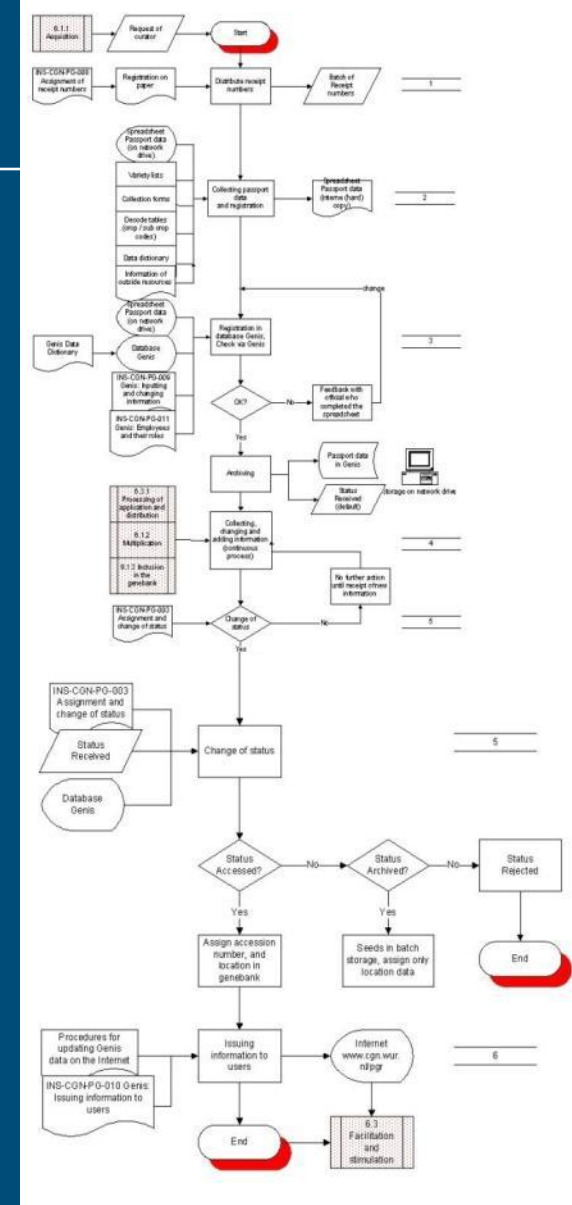
# Quality management at CGN



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# Quality management at CGN

- QMS example CGN-PGR
  - documentation components
    - relatively simple description
  - included processes
    - assignment of a receipt numbers
    - collection of passport data
    - registration in GENIS
    - adding and changing information
    - changing accession status
    - providing information via internet



# Quality management at CGN

- QMS example CGN-PGR
  - example of a 'instruction'
    - first page of 11

KWALITEITSMANAGEMENTSYSTEEM Centrum voor Genetische Bronnen Nederland		
INS-CGN-PG-016 INSTRUCTION FOR UPDATING GENIS DATA ON THE INTERNET		PGR ING-CGN-PG-016 Versie: 1 Pagina: 1 van 11 Afdte: 7/06/10

**INS-CGN-PG-016 INSTRUCTION FOR UPDATING GENIS DATA ON THE INTERNET**

**Introduction**  
Updating GENIS data on the Internet has a number of aspects:  
1 Creating the downloadable ZIP-files and the HTML-files that arrange access to them.  
2 Updating the MS Access database that supplies on-line searches with passport data.  
3 Updating the MS Access database that supplies on-line searches with evaluation data.  
4 Replacing files on the web server.  
5 Adding pictures that are accessible via thumbnails on the 'accession level' via the internet.

This document describes the procedures for these activities.

Introduction .....	1
Procedure for creating the downloadable GENIS files.....	2
Procedure for creating the downloadable GENIS files.....	2
Directory structure and required files.....	2
Element 1 - Creating the HTML files .....	3
Element 2 - Creating the downloadable passport files .....	3
Element 3 - Creating the downloadable trait files .....	4
Creating Excel files per crop .....	4
Procedure for creating the online searchable GENIS passport tables .....	5
Directory structure and required files.....	5
General structure of the procedure .....	5
Element 1 - Creating the mirror tables.....	5
Element 2 - Creating the MS Access database.....	5
Adding a new core selector.....	6
Procedure for creating the online searchable GENIS evaluation tables .....	Error!
Bookmark not defined.....	Error! Bookmark not defined.
Directory structure and required files.....	Error! Bookmark not defined.
Structure of the procedure .....	Error! Bookmark not defined.
Adding a new crop .....	6
Procedures for replacing files on the web server .....	7
Directory structure.....	7
General updating and back-up procedures.....	7
Specific updating procedures .....	8
Procedure for adding pictures on the web server.....	10

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20 December 2004

## ISO certification !!!

- first genebank in the world -



# Quality management at CGN

## ■ advantages QMS at CGN

- procedures are discussed and improved
  - in the process of creating the Quality Manual, we identified many gaps where no internal rules had been discussed or agreed, and no shared awareness on practices exist
  - based on feedback (users and audits) processes are improved
    - e.g. seed quality in 4°C of cabbage seeds (user bags) decreased faster than expected, now stored in -20°C
    - e.g. annually 3 users are asked feedback on web-site, this resulted in clear improvements

# Quality management at CGN

- advantages QMS at CGN
  - funding agencies and external collaborators have guaranties for the quality of the genebank
    - *raison d'être* for the QMS
  - easy introduction of new staff in procedures

# Quality management at CGN

## ■ disadvantages QMS at CGN

- costs of introduction: 15% of staff time in year before introduction
  - mainly staff capacity, analyzing processes, writing draft procedures and protocols, agreement and adoption
- maintenance costs: 5% of staff time while running the system
  - updating quality system, setting and reaching improvement targets
- increased bureaucracy
  - logging, reporting, approving, etc.



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# Quality management at CGN

## ■ staff appreciation

- existing operations improved by documenting
  - transparency and discussion of procedures is seen as having positive impact on quality
- quality vs. control system
  - performance indicators are seen as useful for monitoring the processes, not to rate performance
- bureaucracy
  - auditing process creates overhead (although the audits generate very useful feedback)
  - system tends to grow (currently CGN is reducing complexity)

# Quality management at CGN

## ■ staff appreciation

### ● culture of CGN staff

- openness
  - in acknowledging mistakes (and learning from them)
  - in evaluating own approaches (and changing them when appropriate)
- ambition for increased performance
- co-operative personalities - no lonesome cowboys

# Quality management at CGN

## ■ concluding remarks

- quality management systems pay off
  - long-term investments warrant close monitoring
- genebanks (like laboratory research) fit for QMS
  - many routine operations
- no escape from external requirements

Thank you for your attention

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