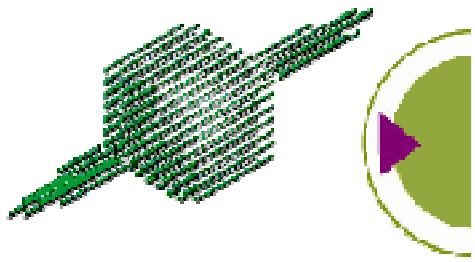


CONCEPTION AND MANAGEMENT OF CONTAMINANTS CONTROL PLAN FOR CEREALS





SOMMAIRE

INTRODUCTION

I – CONTROL PLAN CONCEPTION

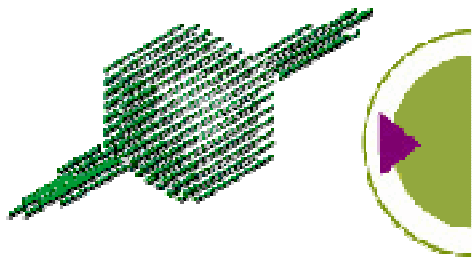
- ▶ CLIENTS EXPECTATIONS
- ▶ RISK STUDIES
- ▶ MEANS

II – CONTROL PLAN MANAGEMENT

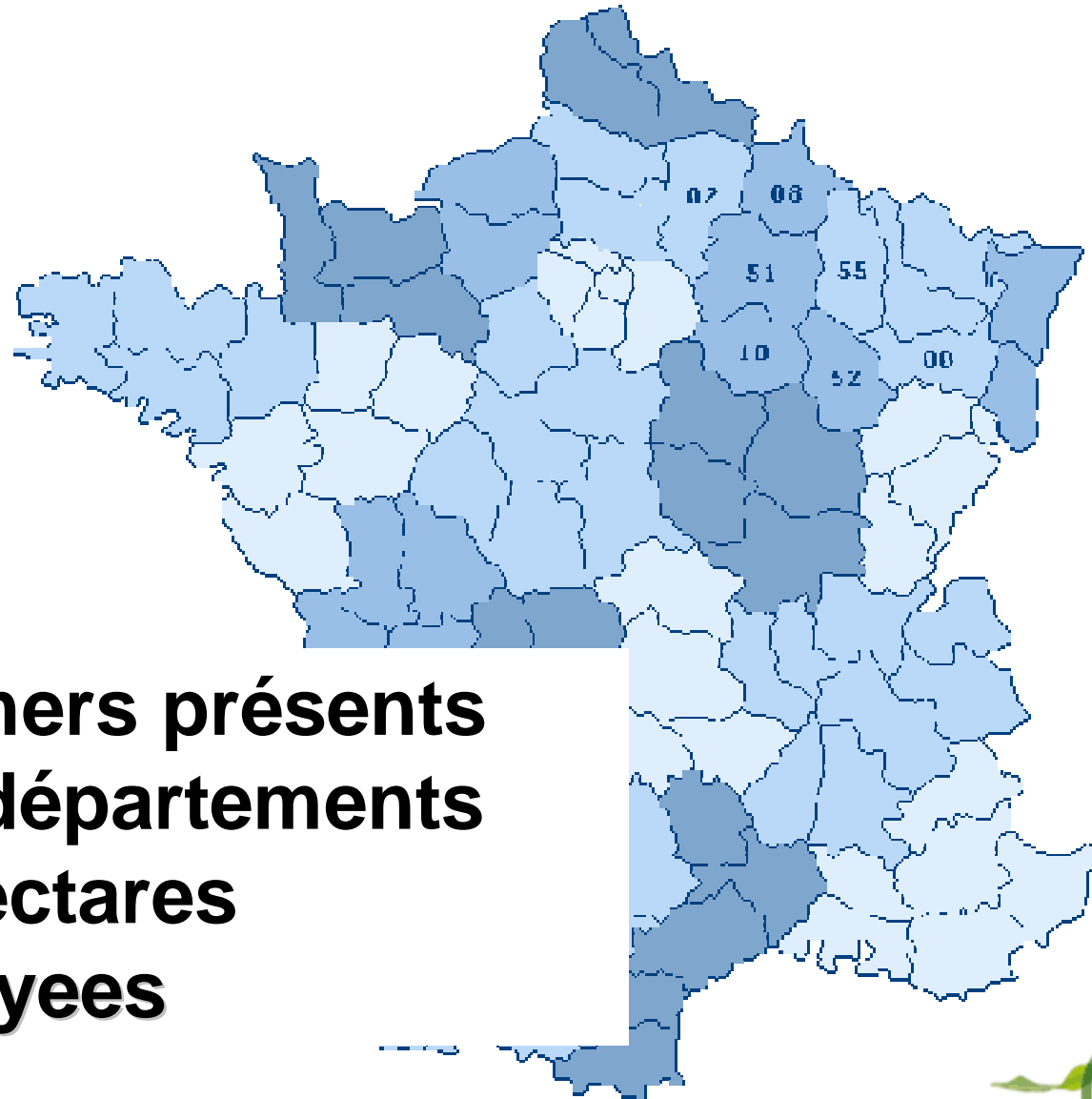
- ▶ SPECIES CONTROLLED
- ▶ CONTAMINANTS CONTROLLED
- ▶ MEANS

CONCLUSION



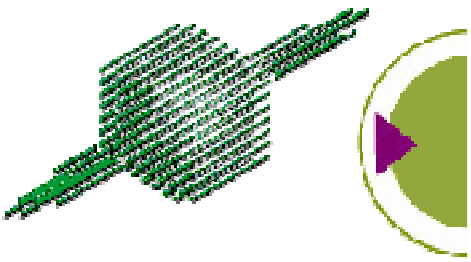


Champagne Céréales is a Coopérative



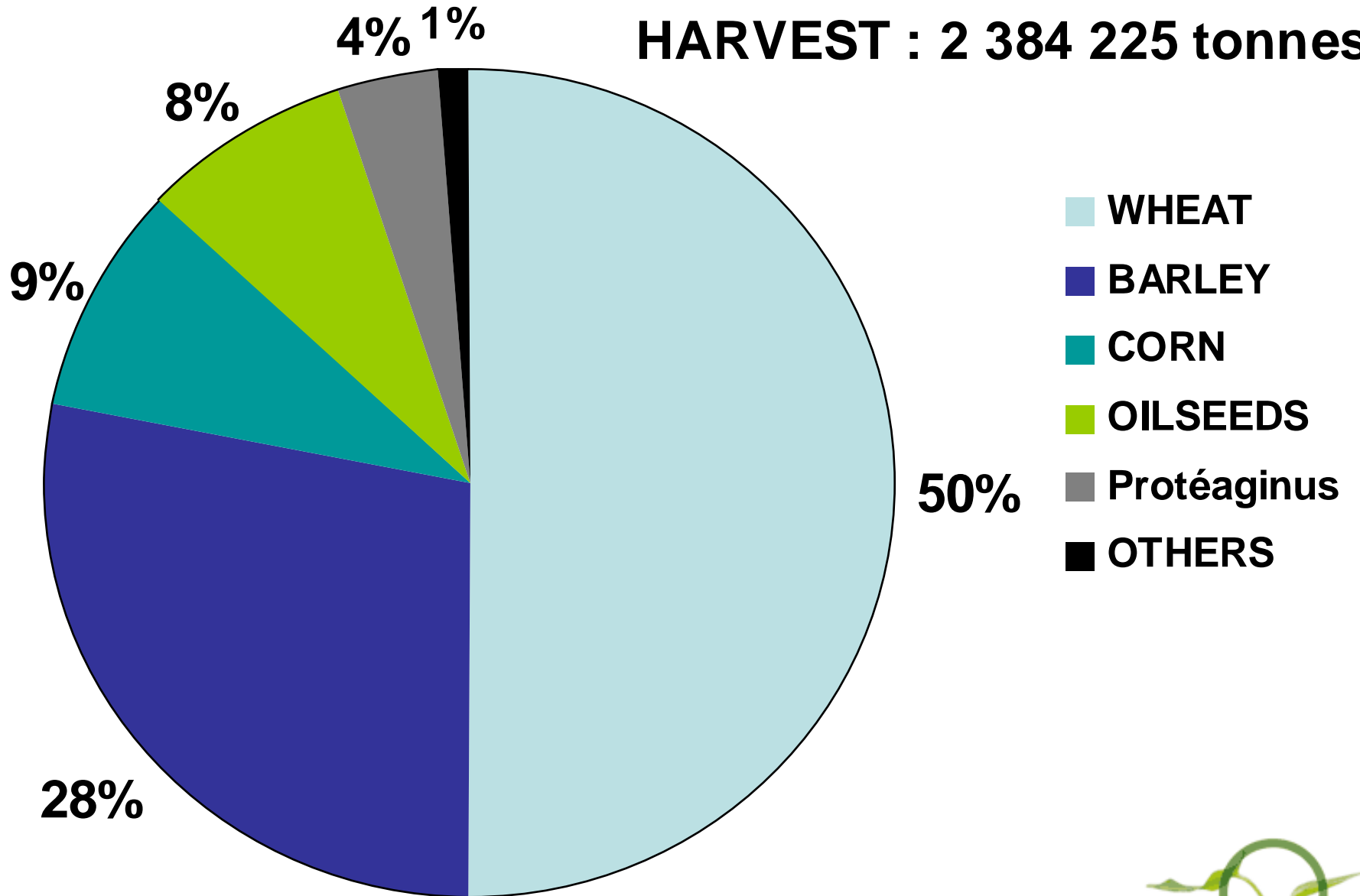
9200 farmers présents
in 7 départements
750 000 hectares
760 employees

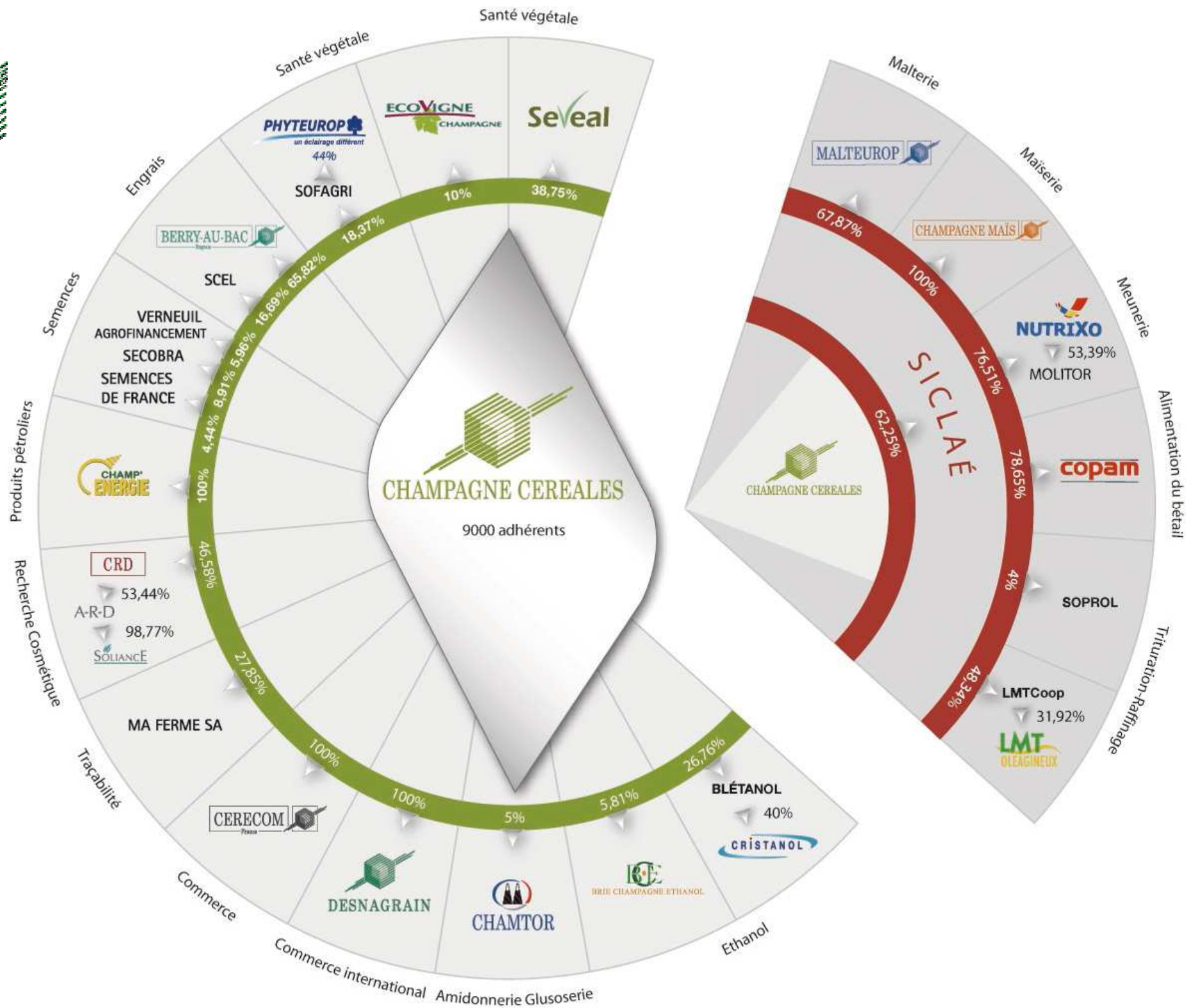
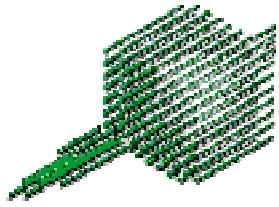


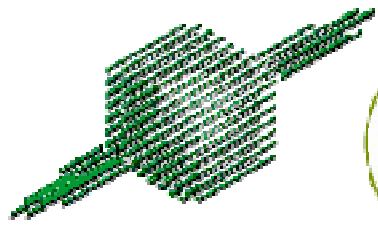


CROP 2005 - DISPATCHING

HARVEST : 2 384 225 tonnes







Champagne Céréales est une Coopérative dans un groupe



COOPERATIVE TURNOVER: 562 M€

▶ **1/3 FERTIZER, PESTICIDES AND SEEDS**

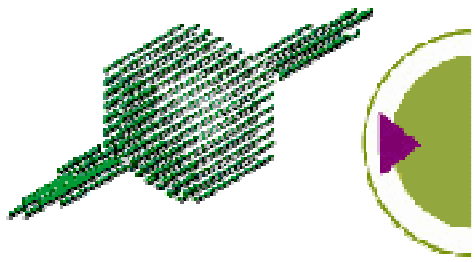
▶ **2/3 CEREALS, OILSEEDS AND PROTEAGINUS**



GROUP TURNOVER : 1.1Md€

▶ **GROUP EMPLOYEE : 1440**





I – Control plan Conception

What was the inputs used to determine what we must and can do !

1) CLIENTS EXPECTATIONS

- ▶ Clients of the clients
- ▶ Products
- ▶ Process

2) RISK STUDIES

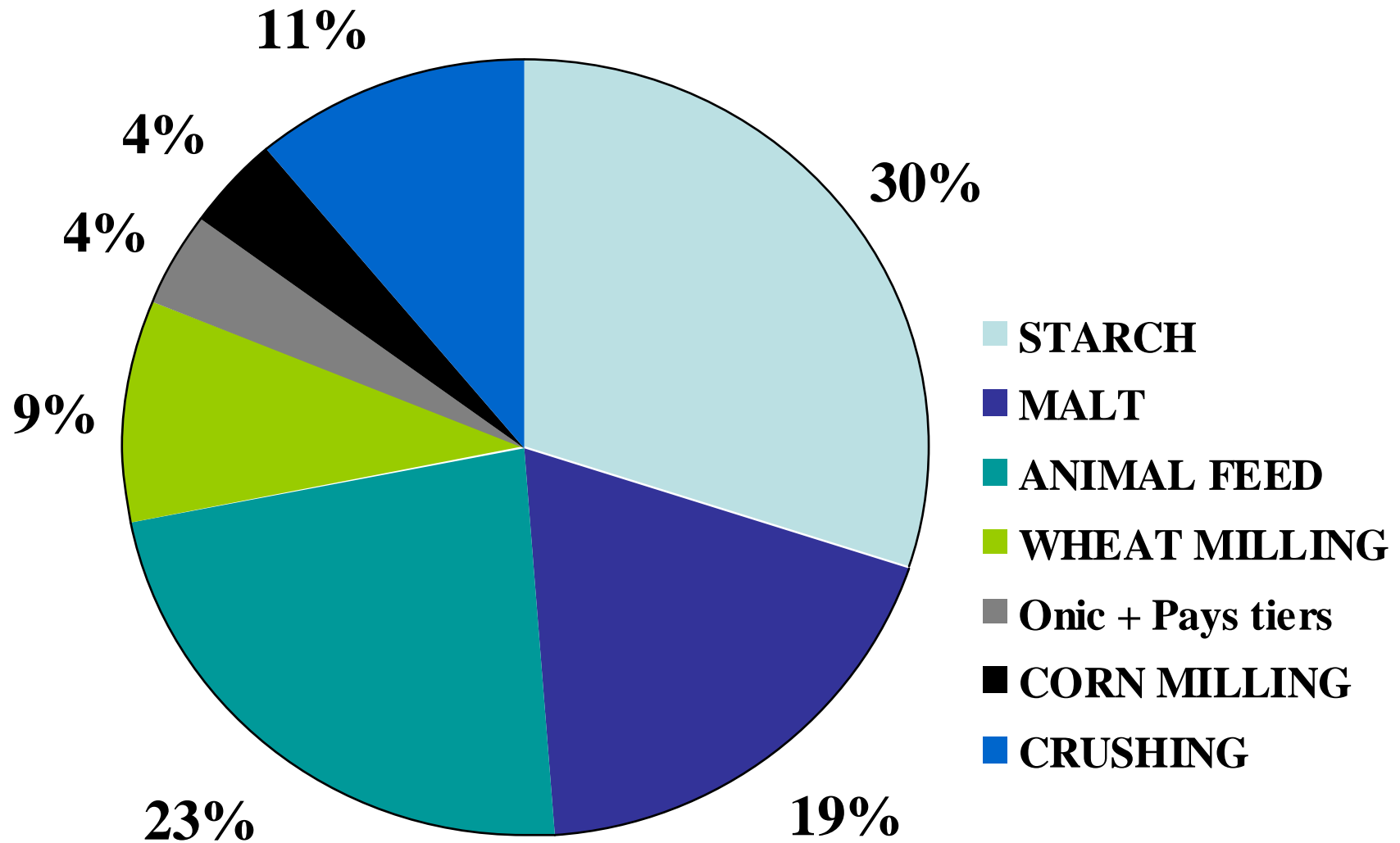
- ▶ HACCP for our sites
- ▶ Suppliers risks

3) MEANS

- ▶ Cost
- ▶ sampling
- ▶ laboratory



SALES DISPATCHING – CROP 2005



28 % IN THE GROUP PLANTS



I – Control plan conception



I – 1) Clients specifications or wishes give the start in 1996



▶ **Product purpose :**

- ▶ Animal feed (feed - petfood)
- ▶ Human food



▶ **Products :**

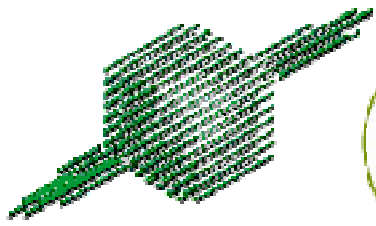
- ▶ Intermediary product (malt, gritz, strach)
- ▶ End products (whole grain for food, flour, oil)



▶ **Process :**

- ▶ « détoxifiant »
- ▶ Contaminants concentration





I – Control plan conception



2) Risks studies :

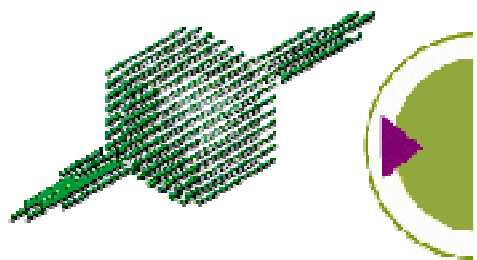
▶ **HACCP for our sites :**

▶ **SUPPLIERS RISKS :**

▶ PESTICIDES

▶ MYCOTOXINES





2°) HACCP- Dangers et stages

| Étapes \ Dangers | Insectes vivants | Résidus de produits phytosanitaires | Moisissures / Mycotoxines | OGM | Oiseaux / rongeurs |
|------------------------------------|------------------|-------------------------------------|---------------------------|-----------------|--------------------|
| Réception | | | | CCP n°9 | |
| Réception (si expédition de suite) | CCP n°1 | CCP n°2 | | | |
| Stockage | | | CCP N° 14 * | CCP n°10 | |
| Nettoyage | | | | | CCP n°12 |
| Conservation | CCP n°3 | | CCP n°7 | | |
| Désinsectisation | CCP n°4 | CCP n°5 | | | |
| Expédition | CCP n°6 | | CCP n°8 | CCP n°11 | CCP n°13 |



2°) HACCP study

LES POINTS DE CONTROLE DE NOS DANGERS

CHAMPAGNE CEREALES



CCP: danger Insectes vivants

CCP: danger OGM

CCP: danger résidus d'insecticides de stockage

CCP: danger oiseaux / rongeurs

CCP: danger moisissures / mycotoxines





I – Control plan conception



PRODUCTION EVALUATION :

▶ PESTICIDES :

- ✧ suppliers companies databases and legal informations
- ✧ Our clients benchmark
- ✧ Field Traçability informations

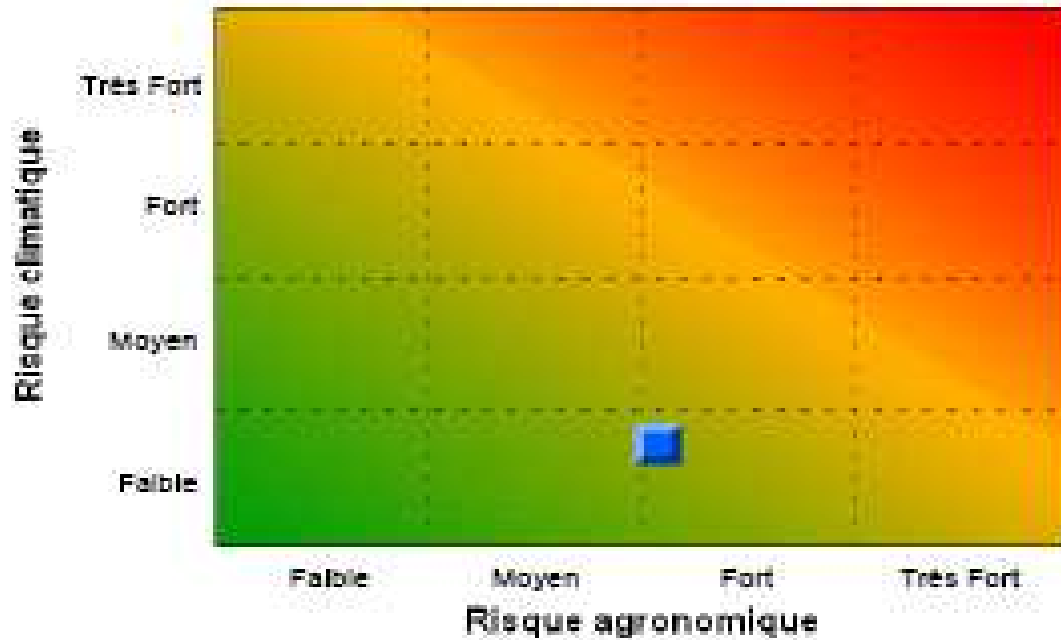
▶ Mycotoxins :

- ✧ Forecasting systems (DON in wheat)
- ✧ Our clients benchmark
- ✧ Professionnal databases



Qualimètre blé

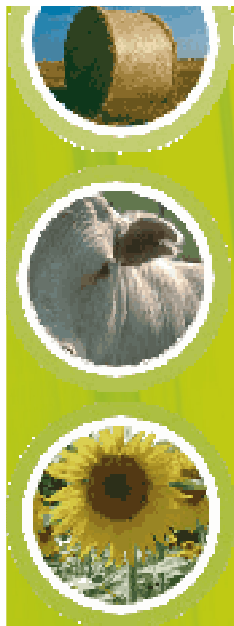
6542 ha



ESTIMATION DES NIVEAUX DE DON SUR LA ZONE

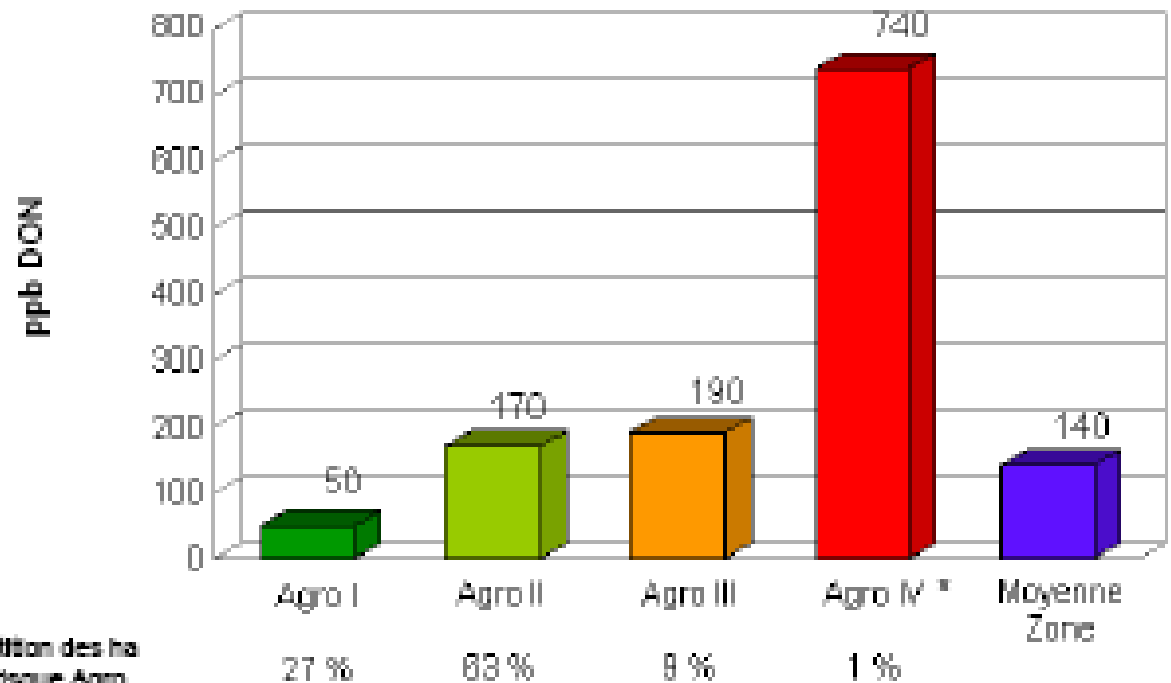
Le Qualimètre prévoit pour votre zone :

- un risque agronomique Fort
- un risque climatique Faible



Séminaire interr

Répartition des ha par risque Agro





I – Control plan conception



3) the means to do the control plan

▶ **Cost :**

- ▶ analysis by reference methods is expensive
- ▶ Budget is limited

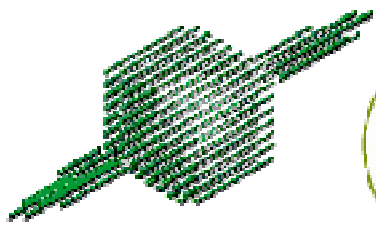
▶ **Sampling :**

- ▶ contaminants are frequently non homogeneous
- ▶ A representative sample need high frequencies of taking off and gives big volumes
- ▶ All the process are not adapted for the sampling

▶ **Laboratory :**

- ▶ laboratory must be able to realise the analysis in right time with recognized methods





II – CONTROL PLAN MANAGEMENT



1) Species controled :

- ▶ Barley
- ▶ Corn
- ▶ wheat
- ▶ Rapeseeds
- ▶ Sunflower seeds
- ▶ Peas





II – CONTROL PLAN MANAGEMENT

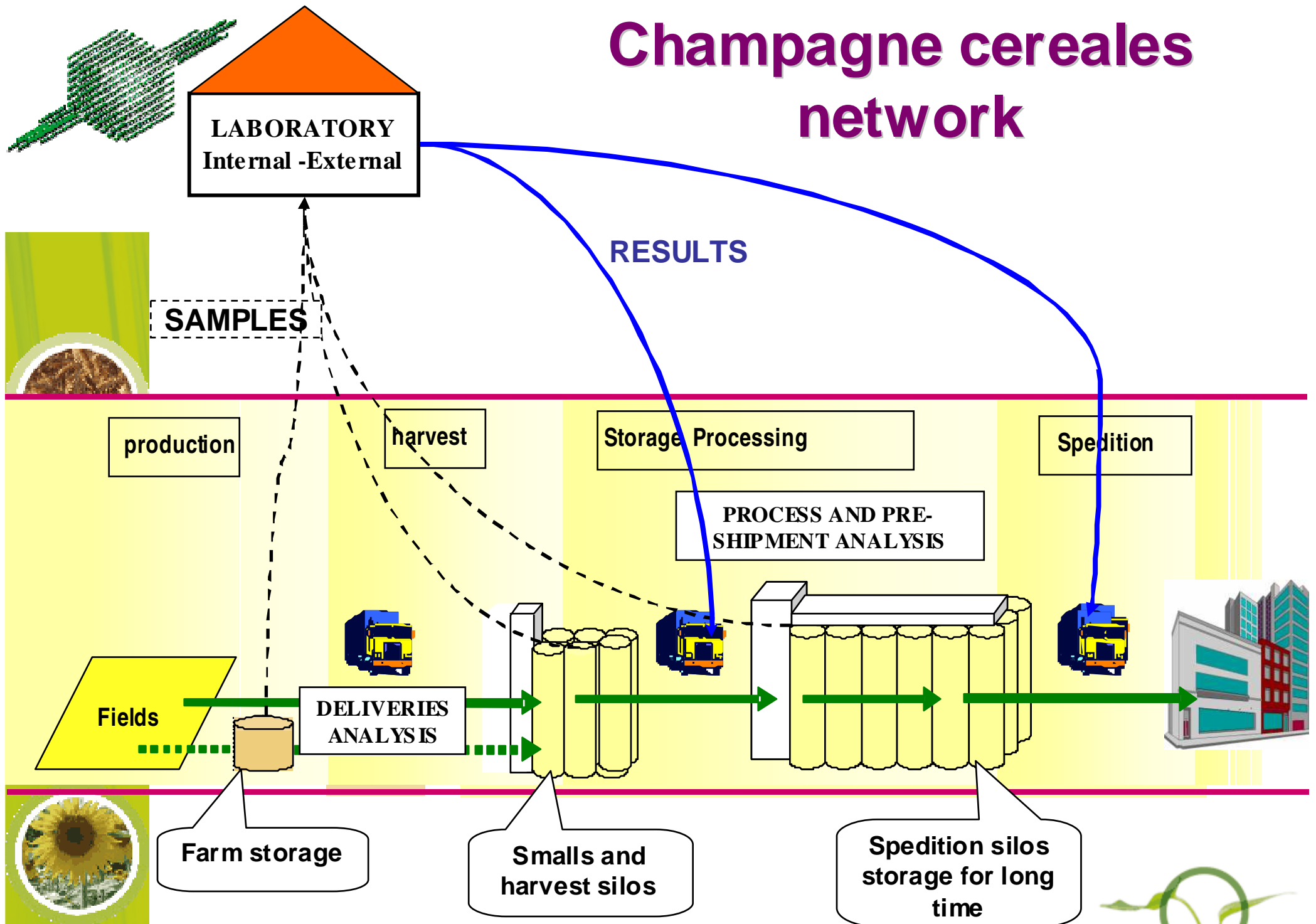


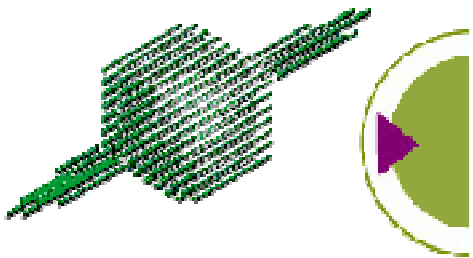
2) controled Contaminants :

- ▶ Mycotoxins
- ▶ Organo-chlorés
- ▶ Organo-phosphoré
- ▶ Pyrethrenoïdes
- ▶ Heavy metal
- ▶ Dioxine
- ▶ Radioactivity
- ▶ Spécific component



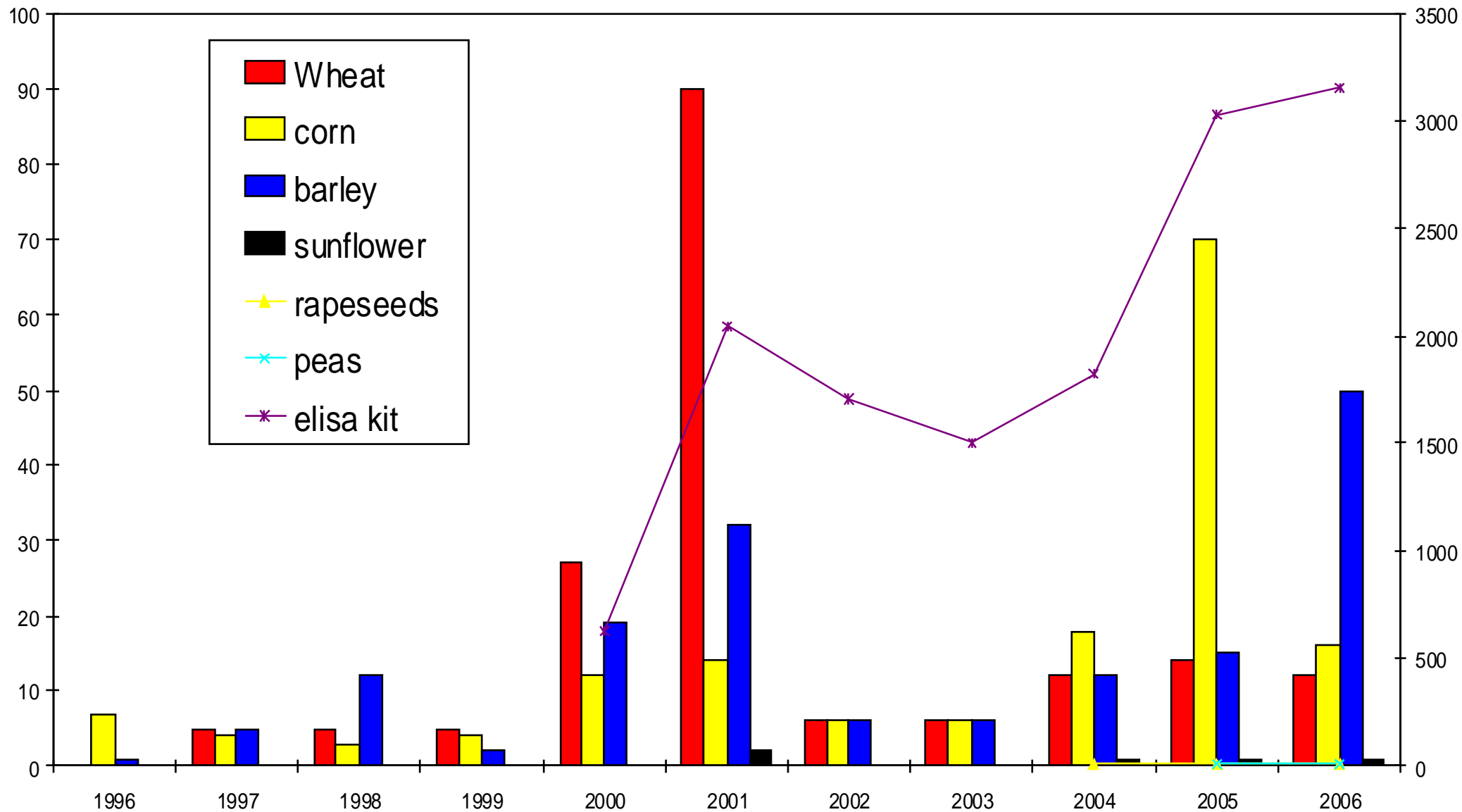
Champagne cereales network





Reference and elisa kit analysis/year

2 steps : screening by elisa kits and control with referenced methods





3°) HUMAN AND TECHNICAL MEANS :



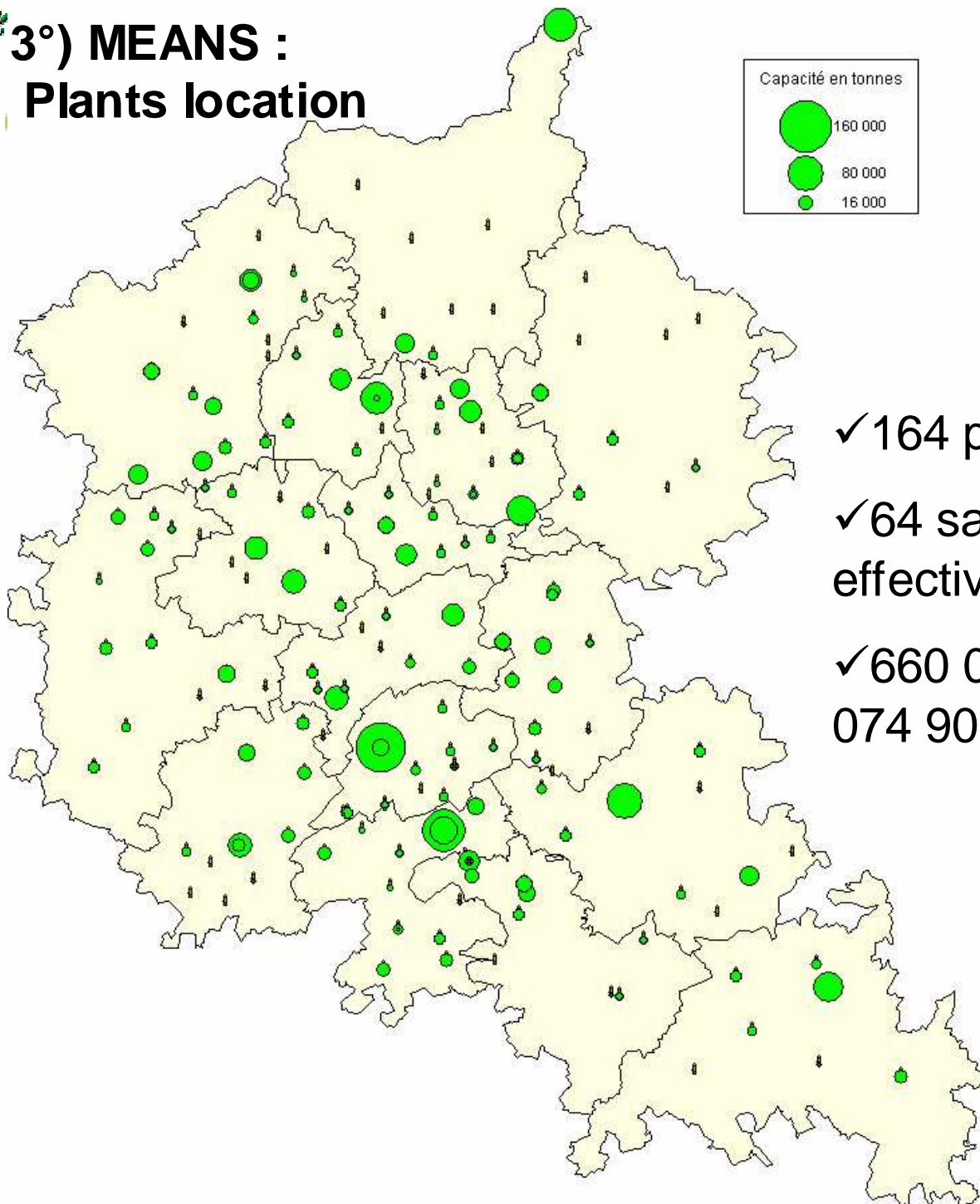
a) IMPROVE THE PREVENTION

- ▶ COLLECTING INFORMATIONS
- ▶ TRAINING EMPLOYEE
- ▶ BENCHMARKING



b) IMPROVE THE SAMPLING SYSTEM

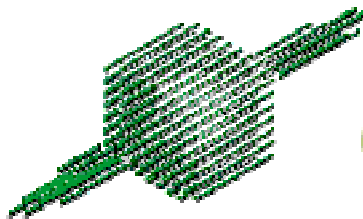
3°) MEANS : Plants location



✓ 164 plants

✓ 64 sampling systems
effective for june 2007

✓ 660 000 t capacity on 2
074 900 = 32%





CONCLUSION



1) WORKING MORE IN FORECASTING SYSTEM

- ▶ TRENDS ARE KNOWN EARLIER
- ▶ SEGREGATION OF UNCERTAIN LOTS

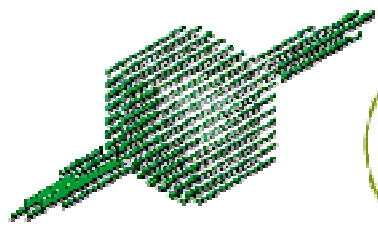


3) IMPROVE THE SAMPLING SYSTEM AND OUR PROCESS



4) ANALYTIC SYSTEMS FOR SCREENING

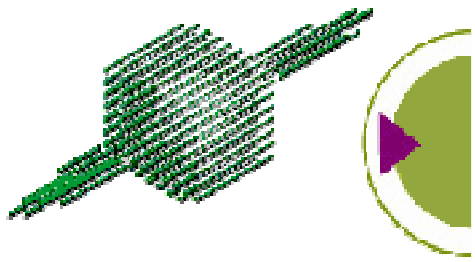
- ▶ FASTER
- ▶ CHEAP
- ▶ USABLE IN PLANTS



CONCLUSION

**BE VIGILANT TO CONSERVE A GOOD
BALANCE : RISK/COST/MEANS AND
GIVE THE INFORMATION TO THE
CLIENTS**





Thank you for your attention.

