

ASTA HACCP Guide

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Introduction

- The current ASTA HACCP guide is several years old and was in need of review.
- The new FSMA makes reference to several aspects within the HACCP program.
- This presentation is designed to give you information about the changes the ASTA team have made to the current guide, which will be published soon.



HACCP

- This is still the best global food safety system we have available today.
- The system can be flexible enough to cope with all types of food products.
- In being flexible it does not always define specific attributes that are relevant in each food sector, and thus sometimes flexibility can allow too much interpretation.
- For example
 - ‘Adverse health effect’
 - ‘All applicable hazards’
 - ‘Decision tree outputs’



HACCP shortfalls

- HACCP systems state that the application of the product should be taken into consideration.
- When herbs and spices are grown, dried, processed, cleaned, shipped etc. the application of the product is not always known, and this may be the case for various people in the supply chain.
- Thus when undertaking a HACCP study we recommend that the scope of the study and the intended application of the product is defined.



HACCP

- Adverse Health Effect
- Different people will have different definitions of an adverse health effect.
- This should be declared to allow the establishment of acceptable tolerances
- An example of a declaration could be - 'Any hazard that could make a person visit a doctor, hospital or a dentist'.
- In this example the inclusion of dentist sets a different standard for the size of stones and other physical contaminants that would be considered acceptable, a small stone may break a tooth but may not have any other health effect.



Farm to factory

- As a food ingredient producer you, or your overseas supplier, may be the first facility, whether it be a physical cleaning facility or a dehydration plant, in the supply chain that will carefully consider all potential food safety risks.
- Thus it is important that all potential hazard that could affect the raw material are considered in the HACCP plan and action to control those Hazards is taken.



Supplier questionnaires

- If questionnaires are to be used to collect data, as part of your HACCP study, then we recommend the use of open questions.
- They require more analysis upon return but they give much better data and thus allow a better risk assessment. E.g.
 - Closed – Do you have a pest control system
 - Open – Please explain how you control pest within your facility.



Pre requisite programme

- If there are no Good Manufacturing Practices or no Good Agricultural Practices in place then the number of potential hazards will be high.
- To make the HACCP study easier it is beneficial to put in place a number of system that affect both GAP and GMP systems.



Pre requisite programme

- As they should be in place before the HACCP study then they are called pre requisites.
- A full list of all pre requisite programme should be produced and shared with the HACCP team.



Agricultural and transport hazards



Understanding the supply chain and ensuring risk management can be a critical aspect to any HACCP or PRP program



ASTA HACCP guide

- A list of typical hazards for our industry has been developed.
- It is the minimal list we suggest is mentioned in all HACCP reviews.
- We suggest the positive mention of hazards that are considered not to be off concern, with a justification for why they are not in the study.
- Just leaving them unmentioned does not help in assessing whether that the risk has been covered.



Chemical hazards (examples)

- Pesticide Residues, fertilizers, antibiotics, other field chemicals
- Heavy metals, Pb, AS, Cd, Hg etc.
- Cleaning chemicals
- Mycotoxins – aflatoxin, ochratoxin A, etc.
- Facility pest control chemicals
- Allergenic materials (peanuts etc.)
- Food Additives, such as preservatives etc.
- Lab chemicals (especially if the lab is integral to the production building)



Physical hazards (examples)

- Glass, Hard Plastics & Ceramics
- Metal
- Stones and dirt
- Wood
- String / fibres
- Paint
- Pests and their droppings
- Soft Plastics



Microbiological hazards (examples)

- Pathogens found in spices
 - E coli
 - Salmonella
 - Bacillus cereus
 - Clostridium perfringens
 - Staphylococcus
 - Listeria may need consideration dependent upon application / demand



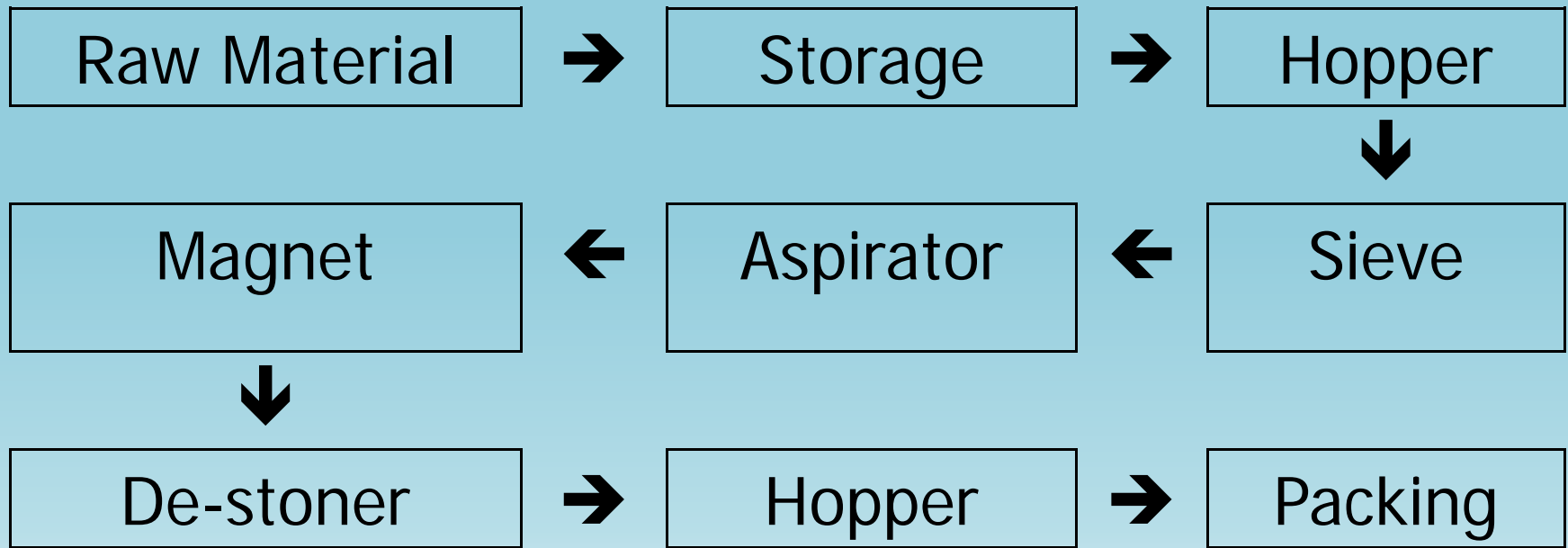
FSMA hazards

- The following hazards are specifically mentioned –
 - Pesticides
 - Allergenic materials
 - Radiological hazards
 - Unapproved and undeclared food colours and additives
 - Drug residues / Products of decomposition / Parasites



Process flow diagrams

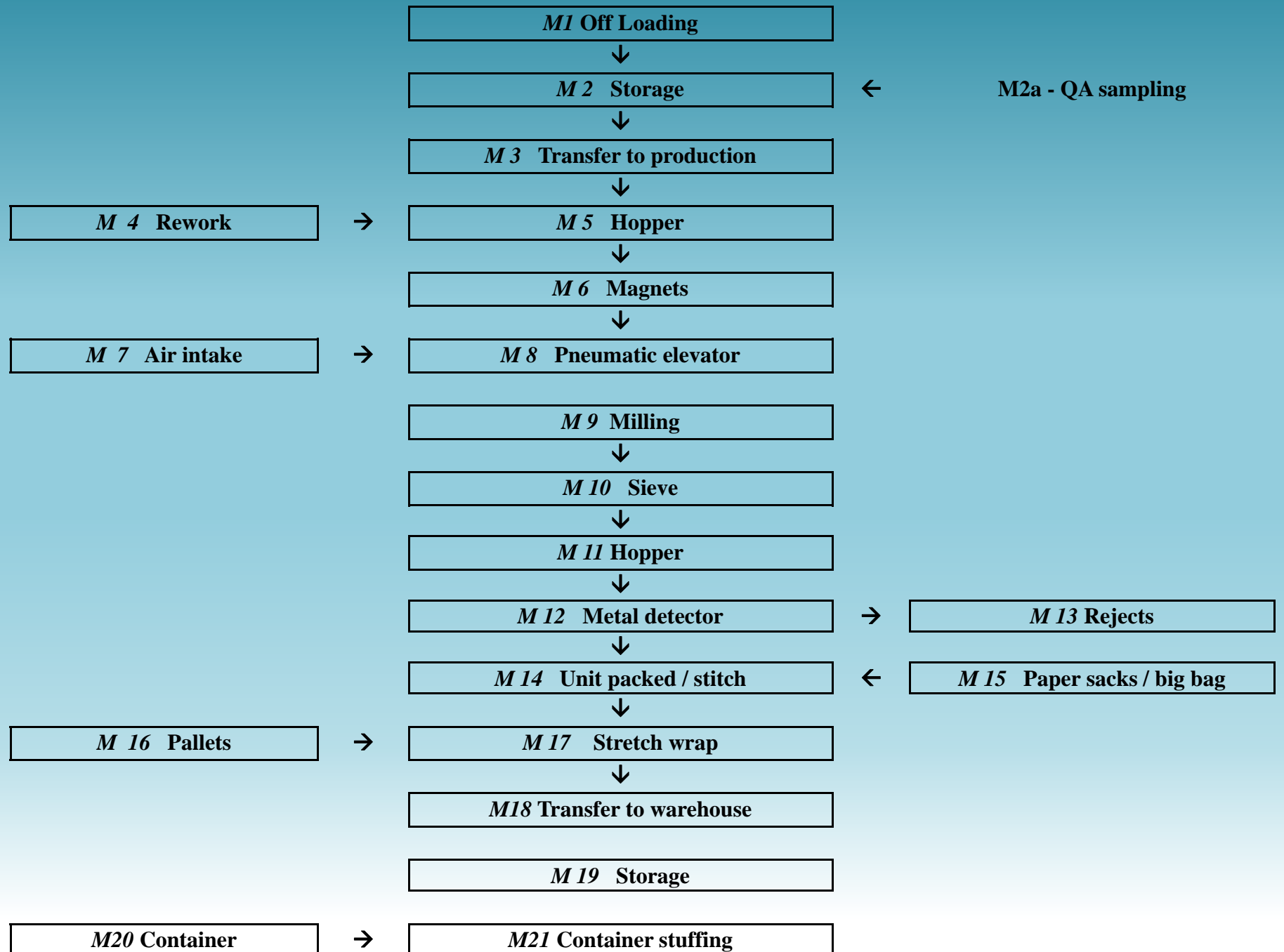
A simple flow diagram tends to concentrate on the main activities

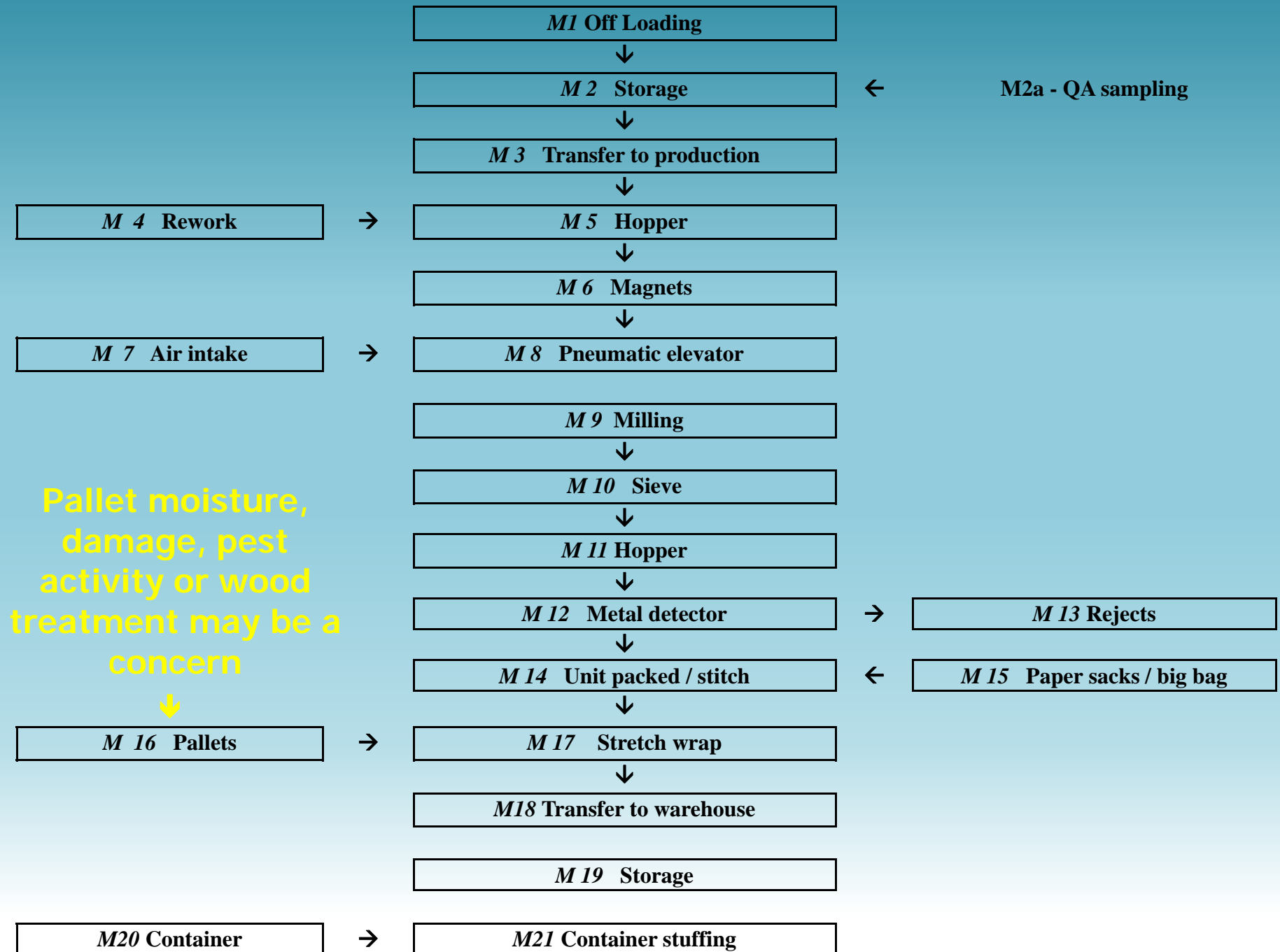


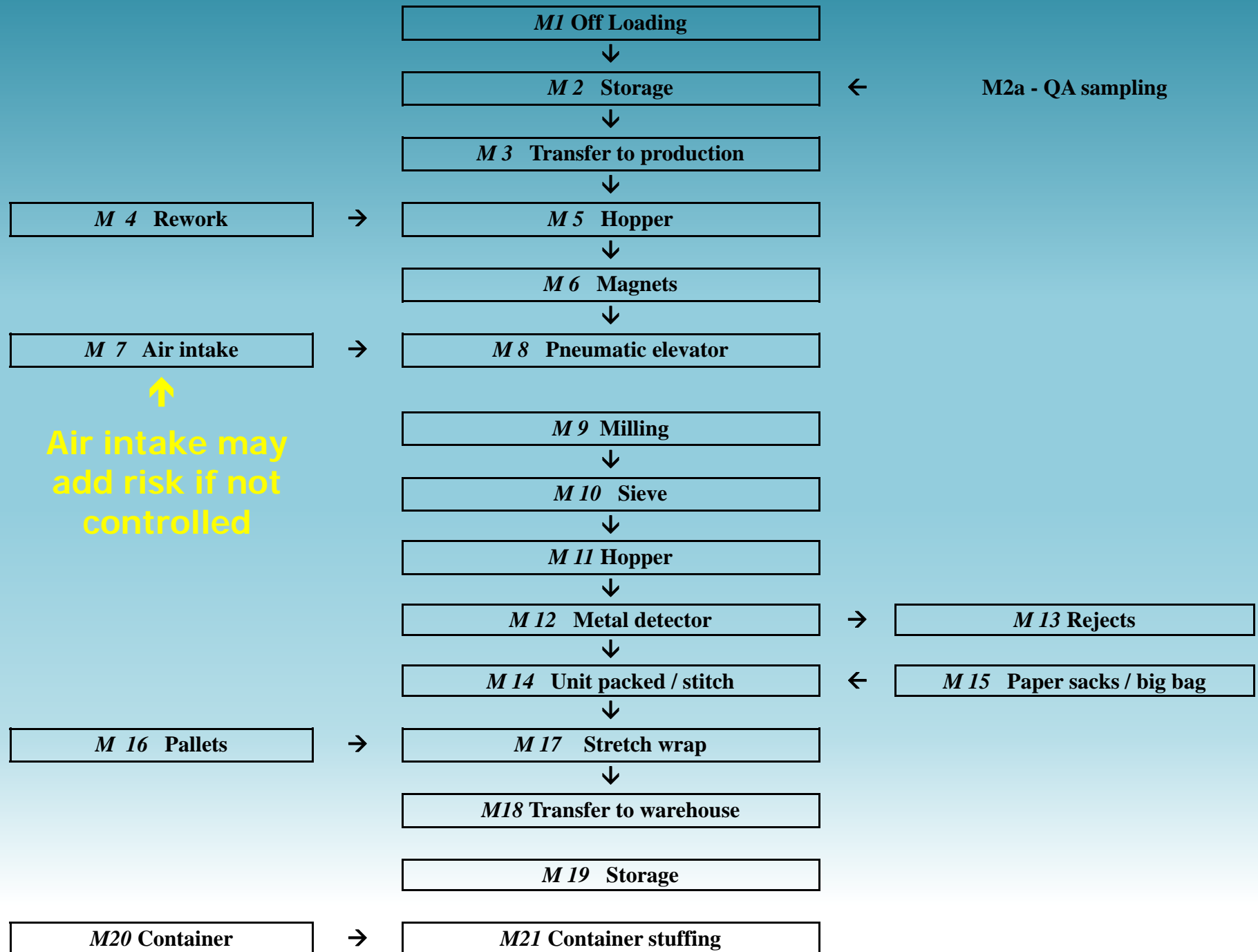
Process step diagram

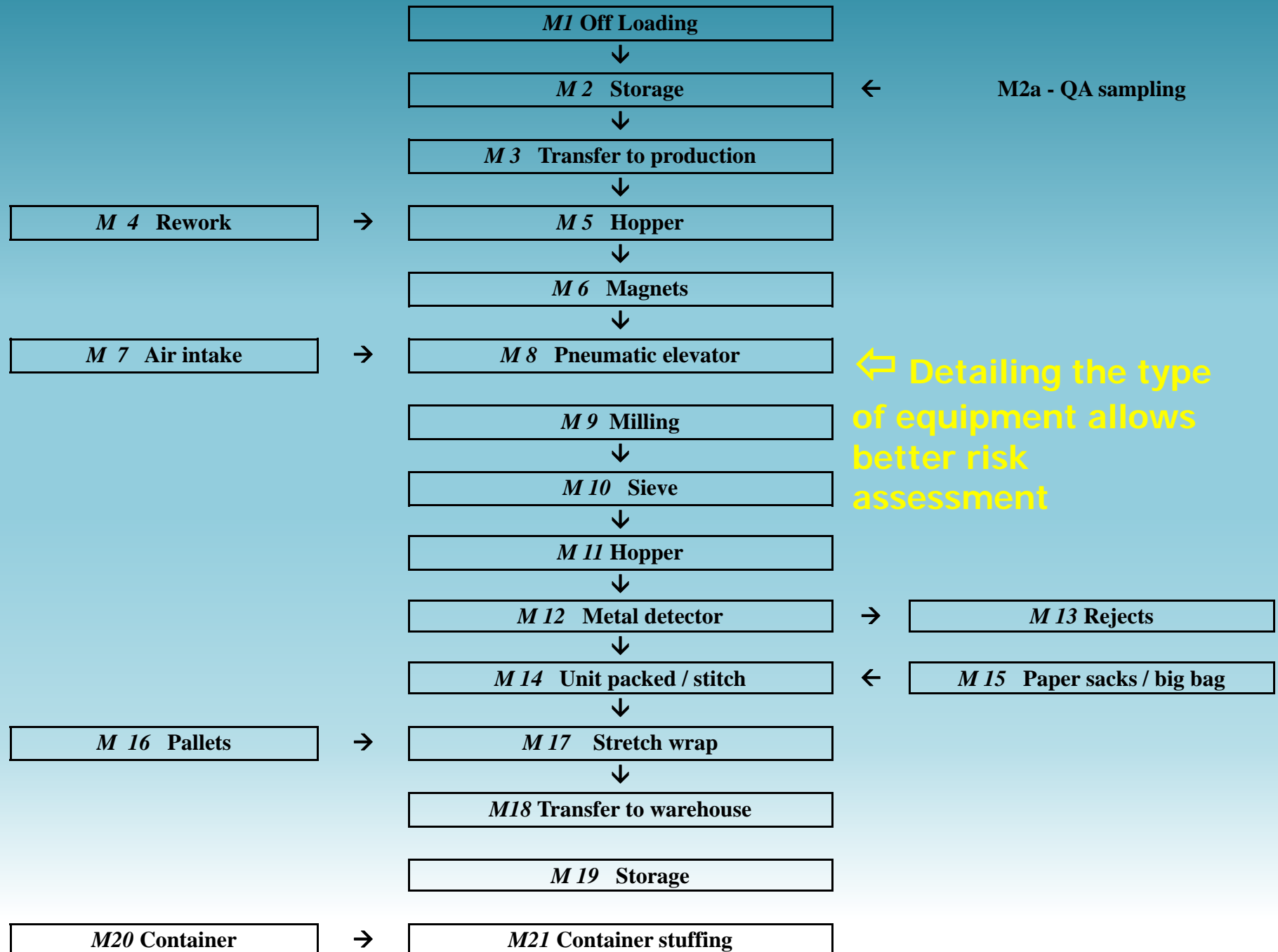
- A process step diagram considers all activities within the process flow that could have an impact on the product.
- A process step diagram should be used when doing a HACCP study.
- It also considers all input and outputs so that their risks can be assessed.











Detail provides
information



Risk assessment matrix

Physical

Process step	Glass	Hard P	Ceramics	Metal	Stones	Wood	Fibers	Paint	Pests	Pest Drop	Others
<i>M1</i> Off Loading	✗	✗	✗	✗	✗	✓	✓	✓	✓	✓	✓
<i>M 2</i> Storage	✓	✗	✗	✓	✗	✓	✗	✗	✓	✗	✓
<i>M 3</i> Transfer to production	✗	✗	✗	✗	✓	✓	✓	✗	✓	✓	✓
<i>M 4</i> Rework	✗	✓	✗	✓	✗	✓	✓	✗	✗	✓	✗
<i>M 5</i> Hopper	✗	✓	✗	✓	✗	✓	✓	✓	✗	✗	✗
<i>M 6</i> Magnets											
<i>M 7</i> Air intake											
<i>M 8</i> Pneumatic elevator											
<i>M 9</i> Milling											
<i>M 10</i> Sieve											
<i>M 11</i> Hopper											
<i>M 12</i> Metal detector											
<i>M 13</i> Rejects											
<i>M 14</i> Unit packed / stitch											
<i>M 15</i> Paper sacks / big bag											
<i>M 16</i> Pallets											
<i>M 17</i> Stretch wrap											
<i>M18</i> Transfer to warehouse											
<i>M 19</i> Storage											
<i>M20</i> Container											
<i>M21</i> Container stuffing											

This simple matrix allow a quick assessment to see if all hazards have been considered at the appropriate point.

Becomes very useful when reviewing the system for change.

Severity / Likelihood matrix

A simple matrix

Likelihood→ Severity ↓	Unlikely to occur	Likely to occur
Will cause serious harm	CP	CCP
Will cause minor damage	PRP	CP

The output from this assessment is to ensure that all high risk items are considered, via the decision tree, to see if they are CCP's

Severity / Likelihood matrix

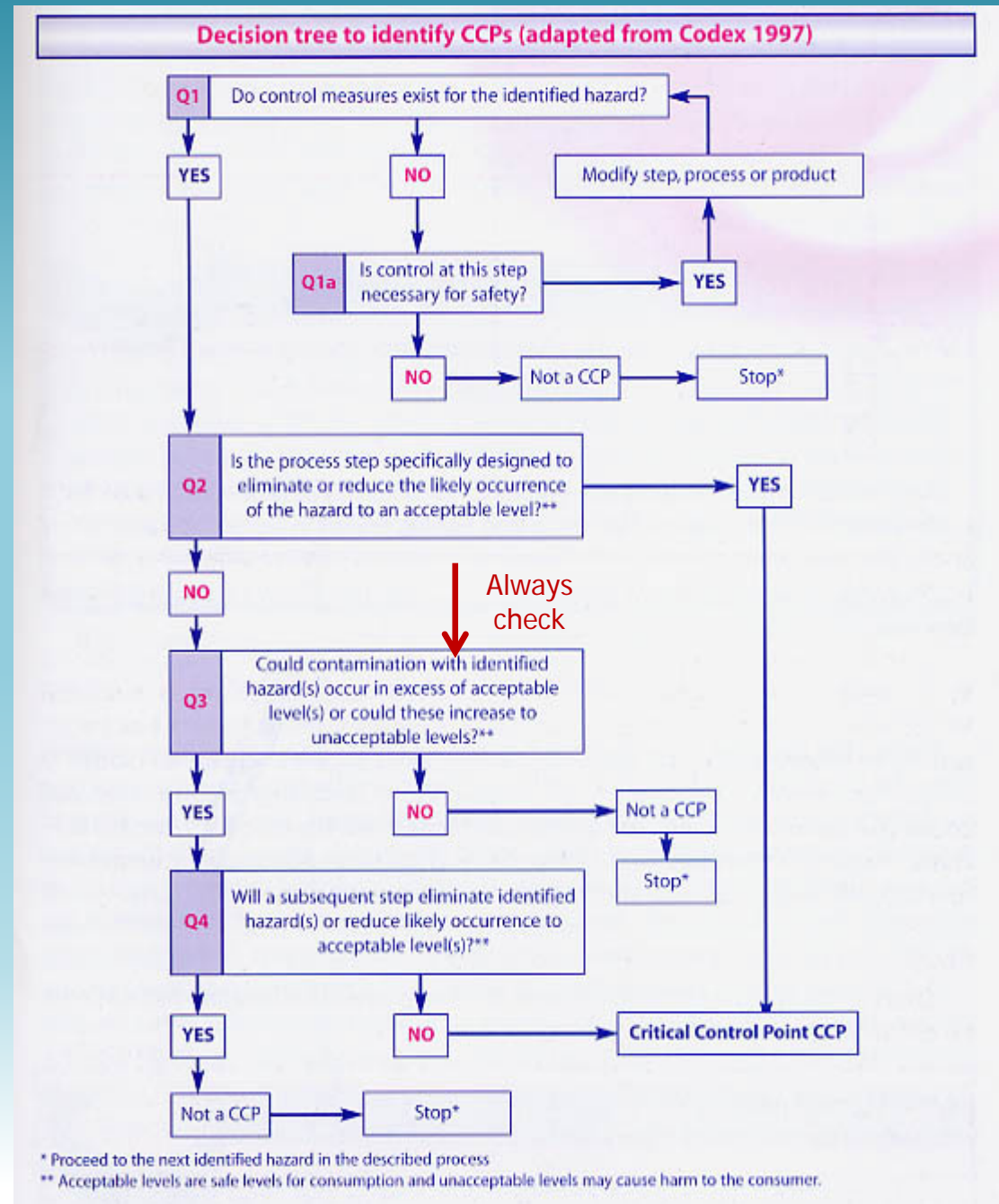
A more developed matrix

Likelihood→ Severity ↓	May occur within the next 12 months	Will occur within the next 6 months	Will occur within the next month
Would cause permanent health issues	CP	CCP	CCP
Would cause serious health issues	PRP	CP	CCP
Would cause minor health issues	PRP	PRP	CP

The format of this type of matrix can be modified using words that best reflect the facility, the process line, the HACCP team understanding or the make up of the team.

Decision tree

After Q2 has been asked, it is recommended that question 3 is also considered. This helps ensure that if Q2 decides that the process step is a CCP that it is made clear that recontamination **MUST** be avoided, or another process step put in place to manage that risk.



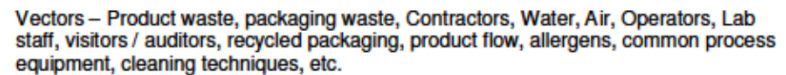
Vectors of cross contamination

Systems that can carry contamination from one area to another

- People
- Tools
- Air & water flow
- Equipment
- Recycled packaging
- Pest control contractor
- Waste disposal
- Process flow
- Storage bins / hoppers
- Product flow
- Laboratory sampling
- Cleaning activity
- Etc.



- Producing a facility schematic with all potential vectors for cross contamination can help ensure that the integrity of each area is maintained and thus cross contamination is both considered and minimised.



FSMA - records

- The New Food Safety Modernisation act gives the US authorities access to records.
- The details is still to be defined but it would be reasonable to expect that HACCP workings and CCP records would be classified a critical food safety records.
- These records are often needed in the local language, particularly for operator input, and thus it would be beneficial if suppliers made aware of this change in legislation were asked to keep these critical records in dual language, so that they could be submitted to the authorities, if requested, in a timely and user friendly manner.



Summary

- HACCP is a fantastic food safety tool
 - Assures food safety
 - Manages risk
 - Help quality development
- FSMA adds additional requirements to overseas suppliers
 - Encourage our supplier to review their HACCP plans in line with the new ASTA guidelines
 - Develop system for verifying /validating suppliers controls
 - Ensure data capture is comprehensive
- The time for action – is now.



We can not cover every risk – but we should cover the frequent and serious ones





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Thanks for listening