



# Feed Responsibility Management System

GMP+ B 100

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**GMP+ Feed Certification scheme**



**History of the document**

Revision no. / Date of approval	Amendment	Concerns	Final implementation date
0.0 / 01-2015	New document		01-01-2015
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**Editorial note:**

All changes in this version of the document are made visible. This is how you can recognize:

- New text
- ~~Old text~~

The changes must be implemented by the participant latest at the final implementation date.

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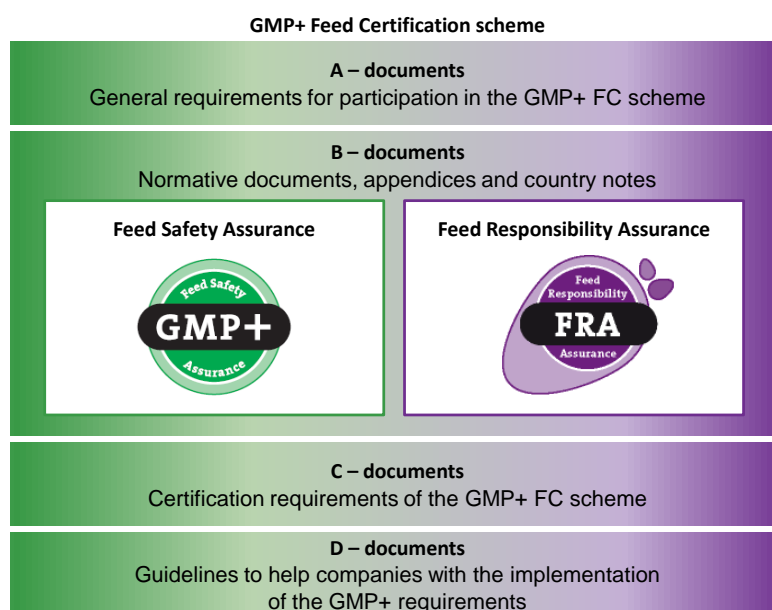
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# 1 Introduction

## 1.1 General

The GMP+ Feed Certification scheme was initiated and developed in 1992 by the Dutch feed industry in response to various more or less serious incidents involving contamination in feed materials. Although it started as a national scheme, it has developed to become an international scheme that is managed by GMP+ International in collaboration with various international stakeholders.



Even though the GMP+ Feed Certification scheme originated from a feed safety perspective, in 2013 the first feed responsibility standard has been published. For this purpose, two modules are created: GMP+ Feed Safety Assurance (focused on feed safety) and GMP+ Feed Responsibility Assurance (focused on responsible feed).

With the development of the GMP+ Feed Responsibility Assurance module, GMP+ International is responding to requests by GMP+ participants. The animal feed sector is confronted with requests on working responsibly. This includes, for example, the use of soy (including soy derivatives and soy products) and fishmeal which are produced and traded with respect for humans, animals and the environment. In order to demonstrate responsible production and/or trade, a company can get certified for the GMP+ Feed Responsibility Assurance. The main goal of the GMP+ Feed Responsibility Assurance module is to facilitate GMP+ participants in meeting these market requirements for responsibly produced feed.

## 1.2 GMP+ FRA Framework & plugin market initiatives

Within the GMP+ Feed Responsibility Assurance module, various market initiatives can be facilitated. GMP+ International created the 'GMP+ FRA Framework' in which these market initiatives can be plugged in.

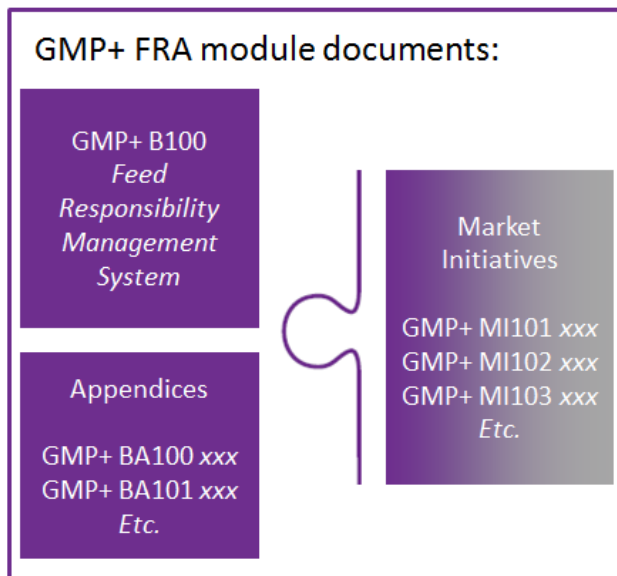
This basic framework consists of the following elements:

1. *Feed Responsibility Management System:*
  - Management system
  - Prerequisite program
  - Risk assessment and control
  - Purchasing / sourcing
  - A material accounting system for the control of one or more supply chain model.
2. *Certification System:*
  - Third party certification (by approved certification bodies)
  - Qualified auditors
  - Clear rules for audit and certification
  - Supervision (compliance audits) and integrity program.



The market initiatives of chain partners regarding responsible feed production and/or trade can be integrated in ('plugged in') this GMP+ FRA framework and together it becomes a complete standard with several scopes.

Below a visual of how the GMP+ FRA framework in combination with market initiatives is organised in documents in the GMP+ FRA module:



The GMP+ B100 *Feed Responsibility Management System* contains the requirements for the Feed Responsibility Management System and is used to control the requirements of a market initiative in one (or more) of the GMP+ MI documents.

The GMP+ MI documents therefor contain a reference to the GMP+ B100 *Feed Responsibility Management System* and contain the scope(s).

All these documents are available via the website of GMP+ International ([www.gmpplus.org](http://www.gmpplus.org)).

This document is referred to as GMP+ B100 *Feed Responsibility Management System* and is part of the GMP+ FRA module.

### 1.3 Scope and application

The GMP+ B100 *Feed Responsibility Management System* contains requirements for the assurance of responsible feed production and trade. The document contains various system requirements as well as the supply chain models used for the handling of responsible feed. With these requirements, the GMP+ participant can ensure the production and/or trade of responsible feed.

This document is applicable for all types of companies (for example traders / feed material processors / compound feed producers, etc.) and all types of feed.

The GMP+ B100 *Feed Responsibility Management System* must always be used in combination with one or more GMP+ MI documents. The GMP+ MI documents contain the responsibility requirements as set by the market initiative. In these documents the scope and the accompanying requirements are stated for which a GMP+ participant can get certified.

In principle, the GMP+ B100 *Feed Responsibility Management System* in combination with GMP+ MI document(s) can be used:

- a. in combination with a GMP+ Feed Safety Assurance standard, or:
- b. in combination with an equivalent feed safety standard (see GMP+ BA10 for equivalent schemes), or:
- c. 'stand-alone',

unless stated differently in the GMP+ MI document(s) for which the GMP+ participants wants to get certified.

#### Guidance

*A company which, for example, is GMP+ FSA certified for the production of feed and wants to demonstrate the use of responsible feed ingredients can apply both standards in combination. A combined application is quite simple to achieve because of the similar structures of the documents. The company should be alert to completeness in the application of a second standard or should check whether any extra measures are necessary for the second activity.*

#### 1.4 The structure of this document

After the general chapters (1-3) containing the introduction, normative references and terms and definitions, chapter 4 describes the system requirements of this standard. Chapters 5 describes the various supply chain models that are available in the market and gives requirements for application and documentation in a material accounting system. These five chapters provide the basis for assuring responsible feed production and/or trade.

##### Guidance

*Guidance has been included for a number of requirements in this standard. This guidance is in a separate light green box starting with the word 'Guidance'.*

*The guidance does not include mandatory requirements or conditions but is intended only as an aid to the better understanding of the requirement. The box also often contains information which is useful for auditors. In order to clearly distinguish between the guidance boxes and the mandatory requirements, the guidance boxes will preferably make no use of the word 'must'. This is, by the way, not always the case. Where the word 'must' or 'should' is nevertheless used it must read as guidance relating to the requirements set.*

*Note: In contrast to the green boxes, the white boxes do contain conditions. These conditions must be regarded as details of the conditions above these boxes.*

#### 1.5 Exclusion of requirements

It is possible that certain requirements do not apply to a participant. A participant may exclude these requirements. Exclusions must, however, be justified and recorded. The exclusions may in any event not lead to the participant supplying feeds or services which do not comply with the requirements as laid down in this standard.

No requirements may be excluded because the participant finds them to be not relevant such as because customers do not ask for them or because compliance with these requirements is not a legal obligation or because the company is too small.



## 2 Normative references

### 2.1 GMP+ documents

In addition to the requirements in this document, the participant shall comply with the relevant requirements laid down in the GMP+ A documents. These documents can be found on the GMP+ International's website ([www.gmpplus.org](http://www.gmpplus.org))

### 2.2 Statutory compliance

In addition to the requirements of this standard the participant shall also verify and ensure that his production, trading, storage and/or transport of responsible feed are in accordance with the applicable legal and (if relevant) GMP+ FC scheme requirements.

**Guidance**

*If the participant also exports to another country it is important that he ensures that his product complies with the relevant regulations in that country.*

### 3 Terms and definitions

In addition to the terms and definitions mentioned in *GMP+ A2 Definitions and Abbreviations* of the GMP+ FC scheme the following terms are used in this document:

Term	Description
Area mass balance	A supply chain model that combines mass balance and book&claim. Collectors/traders that buy feed material on the regular market can purchase 'responsible feed material production credits' directly from growers. These credits must however originate from growers that operate in the same area as the feed material is sourced. The certificates from the purchase area are administratively connected to the delivery of feed from that area via a mass balance model.
Book & claim	The supply chain model book & claim represents the trade of credits through a credit trading platform, where the certificates are separated from the physical flow of feed.
Market initiative	A market party that laid down in a GMP+ MI document (sector specific) requirements regarding responsible feed. These market initiative requirements are assured via the GMP+ B100 <i>Feed Responsibility Management System</i> .
Mass balance	A supply chain model where the participants must ensure that the output of certified responsible feed supplied to customers does not exceed the input of certified responsible feed received at the location. The participant is allowed to buy both certified responsible feed and un-certified feed.
Material Accounting system	The internal mechanism which an organization uses to track data related to responsible feed. This could be a database.
Segregation	A supply chain model where the certified responsible feed is kept physically separate from the un-certified feed throughout the entire supply chain.
Supply chain model	A model which describes how responsible feed is handled within the feed supply chain. These supply chain models describe the flow of responsible feed and what each individual link in the chain must control in order to deliver responsible feed.
Responsibility data	Data, passed along the supply chain, with relevant information about the status of the product. Examples are: - information about the country and area of origin of the responsible feed - the used supply chain model These data must be recorded in the material accounting system and controlled within the Feed Responsibility Management System where relevant for the status of the feed.

## 4 System requirements

This chapter contains requirements for the system that must be implemented by the participant to assure the responsibility requirements as set by the market initiative (in a GMP+ MI document).

### Guidance

*Participants that already have a GMP+ certificate for Feed Safety Assurance (GMP+ FSA) will recognize a lot of these general requirements as they are also part of GMP+ Feed Safety Assurance. For convenience, the names of the paragraphs correspond with the relevant paragraphs and chapters in the GMP+ FSA standards.*

*As there may be slight differences, the participant is requested to thoroughly check if all requirements in this chapter are already covered and take action if needed.*

### 4.1 Management system

#### 4.1.1 Management responsibility

Management must be aware of its responsibility for the production of responsible feed.

Management must:

- a. Make the organisation aware of the responsibility regarding responsible feed and of compliance with the requirements of this GMP+ standard, the obligations of the relevant legislation and the requirements of the customer.
- b. Record specific policy objectives with respect to responsible feed in writing in a statement of policy.
- c. Demonstrate its responsibility and involvement in the development and introduction of the management system to responsible feed.
- d. Ensure that resources and manpower are available. Management must itself determine what resources are necessary and ensure that these resources are also available. There must at least be compliance with the requirements of this standard.
- e. Assess at least once per 12 months whether the management system is still suitable and effective.

#### 4.1.2 Management representative

Top management will appoint a representative who, irrespective of other responsibilities, will have the responsibility and authority:

- a. to establish a management system and to implement it and maintain it in accordance with this standard, and
- b. to report to top management on the results of the management system and any need for improvement, and
- c. to ensure that the awareness of the production and/or trade of responsible feed is promoted throughout the whole organization.

#### 4.1.3 Requirements for the management system

The participant must establish, document, implement and maintain a management system in accordance with the requirements of this standard. The management system must be modified in accordance with changing legislation and in accordance with other developments related to responsibility.

The participant must determine and document the scope of the management system by establishing which products, activities and locations are covered within the scope of the system. The scope must in any event include all products and all activities related to the products for which the participant is responsible.

The participant shall determine:

- a. The part of the chain for which the participant is responsible. This begins where the responsibility for the previous link (the supplier) ends and ends where the responsibility for the following link in the chain begins.
- b. Responsible feed (in specifications) which are produced, stored and/or traded.
- c. Activities relating to the production and/or trade of responsible feed. This includes activities which are outsourced to third parties.
- d. Relevant locations. These include those locations where the relevant administrative work is carried out.

If a participant decides to outsource an activity which can have an influence on the production and/or trade of responsible feed, the participant must ensure that this activity is also carried out in accordance with the requirements of this GMP+ standard.

The participant must also describe all other relevant activities and/or products which are not related to responsible feed. The participant must ensure that these activities cannot cause any negative influence on the responsible feed.

#### Guidance

*The scope of the management system contains the following elements, among others:*

- a The selection of suppliers and the purchase of responsible feed ingredients.*
- b All transport and storage activities for which the participant is responsible.*
- c All other process steps which are purchased or controlled by the participant such as planning, purchasing, (interim) storage, internal transport, sales and packaging.*

*The structure of the management system relates specifically to the organization of the participant and contains, in any event, the information required in this GMP+ standard.*

*The description of all activities may result in the participant having to apply a second or perhaps a third standard in addition to this standard. In the event of any doubt it is advisable to consult the certification body or seek more information on the website of GMP+ International ([www.gmpplus.org](http://www.gmpplus.org)).*

4.1.4 Documentation and registration

The participant must draw up and implement procedures and instructions which include the requirements of this standard.

The documentation of the management system must in any event contain the following elements or must refer to them:

- a. Description of the scope of the management system as required in chapter 4.1.3.
- b. All relevant permits, registrations and certificates in accordance with national and international legislation
- c. All the procedures, instructions, registration forms and suchlike which are required for this standard and/or which are necessary for the management system.
- d. All details relating to process, handling, audits and inspections and all other reports which are required for this standard. This register must be set up and maintained as evidence of compliance with the requirements and of the effective operation of the management system.

These documents, instructions, forms, etc. must have a clear structure.

Guidance:

*Relevant permits, registrations or certificates may, for example, include the statutory permits for collection, storage & transshipment, trade or export.*

*Procedures etc. may be part of a structured and/or certified quality management system (for example GMP+ FC scheme or ISO-9001). In addition, these procedures may be part of a national regulation or a sector or company regulation in which comparable control is ensured. These same procedures may of course be used as far as they are required in this GMP+ standard.*

*The layout and structure of the documentation which is necessary and which is required in this standard such as (documented) procedures, instructions, forms, documenting of data, etc. may be harmonized with the nature of the activities to be assured, the size of the company and the level of training and expertise of the employees.*

The documents and data must be controlled. They must be archived and retained in the correct fashion.

This means that the documentation:

- a. Must be kept up to date
- b. Must be approved and assessed at least every year by the authorized person.  
In this assessment attention must in any event be paid to any changes to the legislation and/or changes to the GMP+ FRA module.
- c. Must always be available and must be understandable to the members of the staff who have to implement the requirements of the procedure.
- d. Must be amended if changes have taken place which have a direct effect on the activities of the participant.

The participant must ensure that all documentation and data:

- a. Is retained for a period of at least 3 years unless a longer retention period is prescribed by law.
- b. Are kept such that any deterioration in the condition or damage to the documentation and data is prevented.
- c. Are stored in such a way that they can be retrieved in full and with ease.
- d. Are fully legible.

**Guidance:**

*Documentation may also be made available, administered and archived in digital form.*

*The aim is for the participant to show that procedures have been implemented which guarantee continual agreement with (amended) legal provisions and any other information which is relevant to the feeds collected, stored and/or traded by the participant.*

*Where documents are part of a manual, the participant may decide, for example, only to sign the table of contents with the current version numbers of the individual documents.*

## **4.2 Prerequisite programme**

### **4.2.1 Personnel**

All employees must be aware of their responsibility for producing / trading responsible feed.

There must be:

- a. an organization chart, and/or
- b. a description of the tasks of individual employees (or a task description for a group of employees in the same job) and proof of the qualifications of the employees (even if these are temporary employees).

This is only necessary for relevant functions within the framework of the management system.

All relevant employees must be demonstrably aware of their tasks, responsibilities and authority. This information must be modified if considerable changes occur.

**Guidance**

*If task descriptions provide sufficient insight into the company organisation then it is not necessary to include an organizational chart in the personnel dossier.*

*Examples of qualifications might be education or training, diplomas and a list of professional experience.*

Employees who carry out activities which may have an influence on the production and/or trade of responsible feed must be competent to carry out those activities.

Their level of competence will depend on their relevant education, training courses and experience. The participant must have sufficient personnel with the skills and qualifications necessary for the production and/or trade of responsible feed.

The participant must:

- a. Establish the skills required by employees for their work regarding the production and/or trade of responsible feed.
- b. Offer training or take other measures to meet these needs.
- c. Maintain personnel dossiers of training courses, education, skills and experience.

The above also applies to temporary personnel.

### 4.2.2 Identification and traceability

Products must be traceable in all stages of production and/or trade so that, where applicable, they can immediately be withdrawn from the market specifically and precisely and/or the customers can be properly informed. The participant must, for this purpose, set up and describe an internal traceability procedure.

The participant must take suitable measures to ensure that the products can be traced effectively during each of the stages referred to above for which the participant is responsible. The participant must maintain a register for this purpose with respect to purchase, production and delivery which can be used effectively to trace products from reception to delivery.

The participant must have the necessary information available within 4 hours unless the competent authorities have established a shorter period of time.

See D2.4 *Guideline for Traceability* (specifically Appendix IV) for more information about setting up an internal traceability procedure.

The participant must record at least the following details of all products and services:

- a. the name and address details of the suppliers and customers
- b. delivery date
- c. type of product or service
- d. number of products
- e. batch number if applicable.
- f. transport/ distribution details (if the participant is responsible for transport)

The participant must also establish whether it is necessary to record other details.

If the participant is using one of the supply chain models from chapter 5, the records regarding traceability needs to be expanded so it covers all the requirements of the material accounting system (see paragraph 5.1)

**Guidance**

*The batch number can also be designated using the batch number of the manufacturer, a reference number, an own batch number or other number.*

*If the participant stores products as a service then he should consider suppliers and customers as the originators.*

**4.3 Risk Assessment**

The participant must ensure that one or more written procedures based on the HACCP principles have been established, implemented and maintained to control risks related to the production and/or trade of responsible feed (such as uncontrolled mixing / substitution between certified and uncertified material).

The following HACCP principles are involved:

1. Conduct a hazard analysis.
2. Identify critical control points (CCPs)
3. Establish critical limits for the CCPs
4. Establish and implement a monitoring system for the CCPs
5. Define corrective actions
6. Validate and verify the HACCP plan
7. Document and register the HACCP plan

Even though HACCP is normally used to control feed safety risks, there are also risks involved in the production and/or trade of responsible feed. In the case of this standard, the risk of uncontrolled mixing or substitution between responsible feed and non-responsible feed need to be identified and controlled by the means of a HACCP plan.

In order to apply the HACCP principles successfully, the participant must first comply with a number of requirements including:

- Establish a HACCP team
- Specify products and processes including their use
- Establish and implement a prerequisites programme (See paragraph 4.2).

**Guidance**

*See GMP+ D2.1 'Guideline HACCP GMP+' on the website of GMP+ International for a guidance for the application of the HACCP principles. The focus of this document is on feed safety, but can be used for feed responsibility as well.*

*The result of the application of HACCP principles can be recorded in a so-called HACCP plan. A HACCP plan is a document which is drawn up in accordance with the HACCP principles.*

*Compound feed producers must take into account the risk of mixing/substitution of responsible and non-responsible feed when rework is used in the production process.*



## 4.4 Purchasing requirements

### 4.4.1 Selection of suppliers

The participant must ensure that purchased feeds and any other products and services comply with the specified purchasing requirements. The participant must select and assess (potential) suppliers and choose suppliers who are able to provide feeds and/or services which comply with the specified requirements.

The participant shall establish and maintain an up-to-date record of all suppliers of responsible feed material, including:

- a. Identification of the supplier (e.g. name, address, other relevant information).
- b. The suppliers certificate number (for example GMP+ registration number).
- c. The scope of the supplier's certificate.

The participant shall verify the validity and scope of the supplier's certificate at least every 6 months or when entering into a purchase contract.

The participant must assess all suppliers each year. Criteria must be established for selection, assessment, approval and evaluation.

### 4.4.2 Verification of incoming products

The participant shall check the supplier invoice and supporting documentation to ensure that:

- a. The products are in compliance with the supplier documentation.
- b. The used supply chain model is stated.
- c. The certificate number is stated. (for example GMP+ registration number)

### 4.4.3 Services

If a participant outsources activities to third parties (for example subcontracts for storage, transport or other services), the participant must ensure that the third party complies with the requirements in this standard.

**Guidance:**

*Third parties, for example, have to make sure that the risk of uncontrolled mixing or substitution between responsible feed material and non-responsible feed material is managed according to the requirements set out in the used system / scope.*

## 4.5 Informing the customer & delivery requirements

### 4.5.1 Inform the customer about the status of the feed

The participant must demonstrably inform the customer about the status of the feed. The participant must make clear to the customer which of the scopes the feed complies with.

**Guidance:**

*There are multiple options for the participant to demonstrably inform about the status of the feed. For example:*

- a. Lay down in a contract with the customer which scope the feed complies with.*
- b. Inform the status of the feed on the delivery slip.*
- c. State that a certain feed recipe complies with the requirements of the specific scope.*

The participant is free to choose how to communicate to the customer about the status of the feed. The following requirements apply:

- a. The status of the feed must contain a clear reference to the applied scope
- b. The status of the feed must be communicated to the customer on delivery at the latest
- c. Only participants that are certified according to the applicable scope are allowed to make a statement about the status of the feed.
- d. Informing the customer is only required if the feed is delivered to customers who request feed that is compliant with a specific scope.

#### 4.5.2 Delivery requirements

The participant shall ensure that all invoices issued for deliveries supplied according to the requirements of this standard, include the following information:

- a. Identification of the participant (e.g. name, address, other relevant information), including the participants GMP+ registration number.
- b. Identification of the customer (e.g. name, address, other relevant information)
- c. Date when the document was issued
- d. Description of the sold products
- e. Quantity of the sold products
- f. The supply chain models that are used (see chapter 5 ). The participant must include the percentage of volume/weight of each of the used supply chain models for that specific delivery.

If the invoice is not included with the shipment of the product, the participant shall include the information stated above in the transport documentation. If a separate transport document is issued, this transport document should be containing information that links the transport document to the invoice.

**Guidance**

*To create a link between the transport documentation and the invoice, the participant can for example use an identification number of that specific delivery on both documents.*

## 4.6 Verification and improvement

### 4.6.1 Complaints

The participant must document a procedure for handling complaints. This procedure must in any event describe the registration of relevant aspects of the complaint and the associated measures taken.

A procedure for recording and handling complaints must at least consist of:

- a. The registration of the complaint
- b. the examination of the source of complaint
- c. registration of the measures taken as a result of the complaint
- d. registration of communication with the customers in question.

#### 4.6.2 Internal audit

The participant must have a procedure for the internal audit.

This procedure means that the participant draws up and implements a programme of planned audits to check that the management system functions properly and that it is also effective. During this internal audit, the following must be assessed in any event:

- a. compliance with the requirements and conditions of this standard
- b. compliance with the participant's procedures
- c. compliance with the relevant legal provisions

The programme must ensure that all relevant activities are audited at least once per year (= every 12 months).

All personnel carrying out internal audits must be competent for this by training or education (internal or external), or experience.

The results of the internal audit must be formally reported to the people with the responsibility for the area which is covered within the audit. All the aspects must be documented where the company operations or activities are not in compliance with the operational requirements. Such nonconformities must be corrected. The audit report must be signed by a person authorised to do so when the nonconformities are resolved.

#### Guidance

*The checklist which is available on the website of GMP+ International ([www.gmpplus.org](http://www.gmpplus.org)) can be used during the internal audit.*

#### 4.6.3 Assessment of the management system and improvements

The participant must establish, collect and analyse suitable data at least once per year:

- a. in order to show that the management system is suitable and effective, and
- b. to assess whether improvement in the effectiveness of the management system is possible.

A procedure must be drawn up for this.

The result of the analysis partly forms the input for the management review (see section 4.1.1)

The input for such an assessment must in any event contain:

- a. Verification of the prerequisites programme
- b. Verification of the hazards analysis.
- c. Evaluation of the level of knowledge of the personnel
- d. The results of the supplier assessment
- e. Analyses of complaints
- f. The implementation of legislation and regulations
- g. The results of internal and external audits
- h. Changes which have an influence on the management system.

The assessment will in any event contain information on:

- a. The extent to which the management system can be applied
- b. The possibilities and chances of improving the management system.

Also, a participant who operates as a service provider, must during the internal audit verify whether there is compliance with any additional requirements from the originator.

## 5 Supply chain models

This standard provides various supply chain models. The requirements for application of these supply chain models are explained in this chapter. In the scope of the GMP+ MI document is laid down which supply chain models can be used.

All supply chain models are documented via the material accounting system. The general requirements regarding the material accounting system can be found in paragraph 5.1. All additional requirements regarding the material account system are described in the paragraph of the applicable supply chain model.

The following supply chain models are stated in these paragraphs:

Paragraph	Supply chain model
5.2	Segregation
5.3	Mass balance
5.4	Area mass balance
5.5	Book & claim

### Guidance

*This chapter is a generic chapter used for all FRA scopes (for various types of companies). As a result of this, there can be requirements stated that are not relevant for the participant applying this standard. In that case these requirements can be skipped.*

*For example there is a reference to conversion factors in the material accounting system. This is only relevant for producers/processers of feed materials.*

### 5.1 Material accounting system

The participant shall identify and document all processing steps involving a change of material volume or weight. This can be based either on determining the actual quantity of each subsequent fraction, or on specifying conversion factor(s) for each processing step. Where it's not possible to measure each processing step, quantities for the complete process may be used.

### Guidance

*For example, if a certified crusher purchases responsible soy, it will transfer the x amount of soy into a number of fractions (for example soy expeller and soy oil). Within the material accounting system, the participant can use either actual quantities or conversion factors to transfer responsible input to responsible output.*

The participant shall set up a material accounting system for recording data related to this standard, including input quantities received and output quantities sold to customers. The material accounting system should at least include the following information for both input and output:

- a. Product description
- b. Quantities of certified product (by volume or weight)
- c. The supply chain model used

The participant shall draw up annual volume summaries providing quantities (volume or weight) for each product type and system. This volume summary should include the following:

- a. Inputs received
- b. Inputs used for production (if applicable)
- c. Inputs still in stock
- d. Outputs still in stock
- e. Output supplied

If conversion factors are used, the participant shall specify and document the methodology for calculating the conversion factor(s). The participant ~~and~~ shall ensure that conversion factors are updated when there are changes to the production process. This shall be done ~~and~~ at least once a year.

**Guidance**

*A material accounting system has a clear link with a tracking and tracing system. Participants that already use a GMP+ tracking and tracing system (required in the GMP+ FSA module), will find it easy to comply with these requirements.*

**5.2 Segregation**

The participant shall ensure that the responsible feed material supplied to customers has been physically segregated from non-responsible feed material at the physical location. This includes any other stage under the control of the participant.

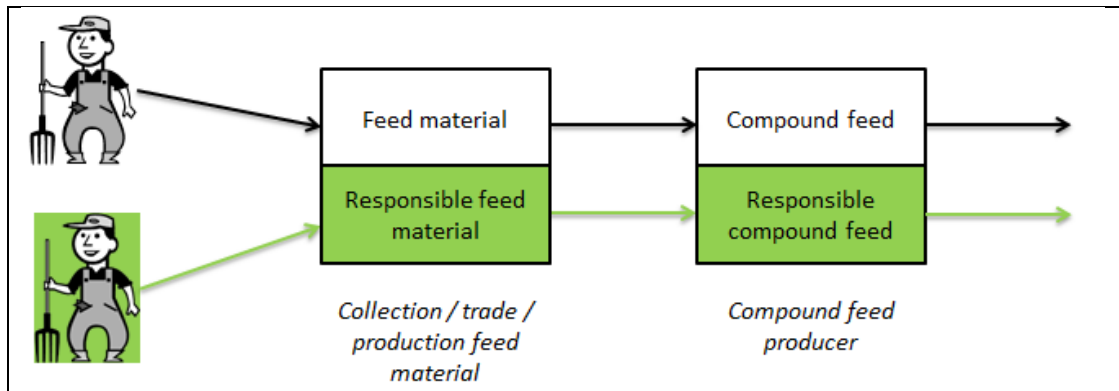


Fig. 1: Schematic overview of Segregation (simplified)

**Guidance**

*With the segregated system, the participant can be certain that the material originates from certified farms. This system is however not a Identity-Preserved (IP) system, so it is not designed to provide traceability back to a specific farm.*

## 5.2.1 Purchasing

Responsible feed material can be sourced from suppliers that also use the supply chain model segregation.

When the participant is purchasing feed via multiple supply chain models, the participant shall ensure that inputs to each supply chain model complies with the purchasing requirements in the relevant GMP+ MI document.

## 5.2.2 Processing

The participant shall have an effective system in place that is designed to ensure no intermixing between segregated responsible feed material and non-segregated responsible feed material.

### Guidance

*Such a system may include for example allocation adjustments (e.g. that the first flow of product through the system following a change from responsible feed material to non-responsible feed material, should be classified as non-responsible) or other systems. Flushing the processing or storage equipment between flows of responsible feed material and non-responsible feed material can be used as such a system, but physical cleaning is not a requirement for this standard.*

## 5.2.3 Material accounting system

### Input

The participant shall record the responsibility data and the quantity (volume or weight) of all responsible segregated input material in the material accounting system, but only after it has gained legal ownership of the input material and has ensured the supporting documentation contains the right information. This data shall be recorded as 'output units'.

Where the processing/manufacturing process generates co-products and by-products, the participant shall record the quantity (volume or weight) by using separate categories for these co-products and by-products. In this case conversion factor(s) for the processing unit or actual measured output quantities should be used.

### Output

The participant shall deduct the quantity of data supplied to the customers from their material accounting system based on the actual physical material supplied.

### Allocation of responsibility data

The participant shall ensure that allocation of data to customers is consistent with the actual physical product delivered.

### 5.3 Mass balance

The participant shall ensure that the output of responsible feed material supplied to customers does not exceed the input of responsible feed material received at the location, using either a continuous accounting system or a fixed inventory period.

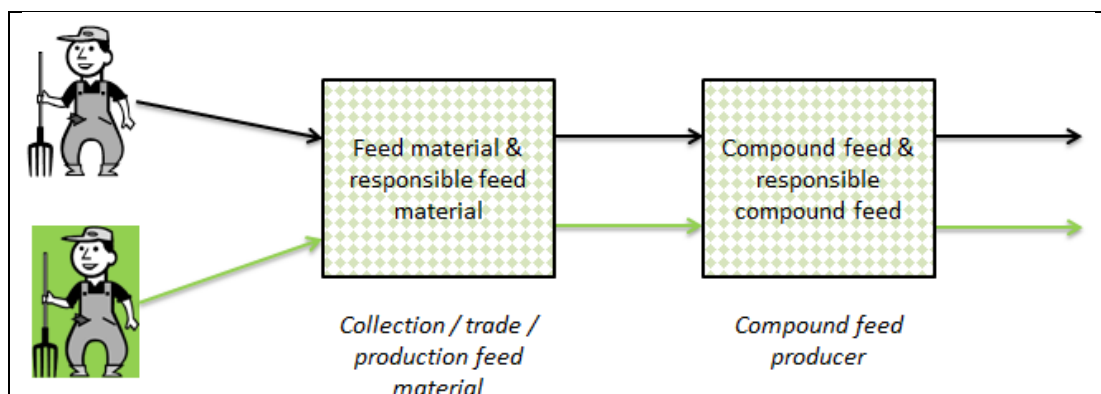


Fig. 2: Schematic overview of Mass balance (simplified)

#### 5.3.1 Purchasing

With mass balance, the participant is allowed to blend non-responsible feed material with responsible feed material. It is therefore also allowed to purchase non-responsible feed material from suppliers. Responsible feed material can be sourced from suppliers that also use the supply chain models mass balance and directly from certified growers.

When the participant is purchasing feed via multiple supply chain models, the participant shall ensure that inputs to each supply chain model complies with the purchasing requirements in the relevant GMP+ MI document.

#### 5.3.2 Material accounting system

##### Input

The participant shall record the quantity (volume or weight) of all responsible input material in the material accounting system, but only after it has gained legal ownership of the input material and has ensured the supporting documentation contains the right information. This data shall be recorded as 'output units'.

Where the processing/manufacturing process generates co-products and by-products, the participant shall record the quantity (volume or weight) by using separate categories for these co-products and by-products. In this case conversion factor(s) for the processing unit or actual measured output quantities should be used.

Where additional responsibility data is associated with the mass balance inputs received, this data shall remain linked, combined and recorded in the material accounting system using separate categories for each identical group of sustainability data.



Output

Where the processing/manufacturing process generates co-products and by-products, the participant shall deduct the quantity of data supplied to customers from the respective co-product and by-product categories in the material accounting system. The participant shall not apply data generated from the production of one co-product or by-product to a different co-product and by-product.

Where additional responsibility data is associated with the mass balance inputs received, the participant shall deduct the quantity of data supplied to customers from the relevant category of linked data in the material accounting system.

The participant shall not supply responsibility data to customers for other feed materials. In bulked products, the responsibility data shall only be applied to the proportion of the related feed material.

Allocation of sustainability data

The balancing of input and output of responsibility data shall be implemented as a part of the material accounting system. Records of responsibility data available for allocation to outputs are clearly visible to relevant staff and maintained updated at all times.

The participant shall allocate responsibility data to customers using either a continuous balancing system or a fixed inventory period.

Guidance

*Within the mass balance system it is possible to allocate the sustainability status from one batch to another as long as the participant doesn't sell more responsible feed than purchased.*

5.3.3 Continuous balancing system

Where a continuous balancing system is in operation, the participant shall ensure that the quantity of physical mass balance material inputs and outputs (in volume or weight) at the physical location are monitored on a real-time basis.

The participant shall ensure that the quantity of material (volume or weight) at the physical location is at least the same as the quantity of responsible feed material (volume or weight) available for allocation to outputs in the material accounting system. The participant shall ensure that the material accounting system is never overdrawn. Only responsibility data which has been recorded in the material accounting system shall be allocated to outputs supplied by the participant.

Responsibility data is valid for 24 months from the date it was first recorded in the material accounting system. If the participant does not allocate the available quantity of responsibility data to outputs within 24 months, the data shall expire and shall be deducted from the material accounting system.

5.3.4 Fixed inventory period

Where a fixed inventory period is in operation, the participant shall ensure that the quantity of mass balance material inputs and outputs (volume or weight) are balanced within a fixed inventory period which does not exceed one year (12 months).

The participant may overdraw data when there is evidence that purchases are under contract for delivery within the inventory period, to cover the output quantity supplied.

Responsibility data which has not been allocated to output material at the end of the inventory period can be carried over and recorded in the material accounting system for the following inventory period. Carried-over responsibility data is valid for 24 months from the date of the inventory. If the participant does not allocate the available quantity of responsibility data to outputs within 24 months, the data shall expire and shall be deducted from the material accounting system.

The participant shall ensure that the material accounting system is not overdrawn at the time of the inventory. Only responsibility data which has been recorded in the material accounting system within the inventory period (including the carried-over from the previous inventory period) shall be allocated to outputs supplied within the inventory period.

5.4 **Area Mass Balance**

The area mass balance model is a combination of mass balance (par. 5.3) and book&claim (par 5.5). Collectors/traders that buy feed material on the regular market can purchase ‘responsible feed material production credits’ directly from growers. These credits must however originate from growers that operate in the same area as the feed material is sourced. The certificates from the purchase area are administratively connected to the delivery of feed material from that area via a mass balance model. Therefore, the volume of responsible feed material that is shipped from a specific area can never exceed the volume of credits bought from the growers in that same area.

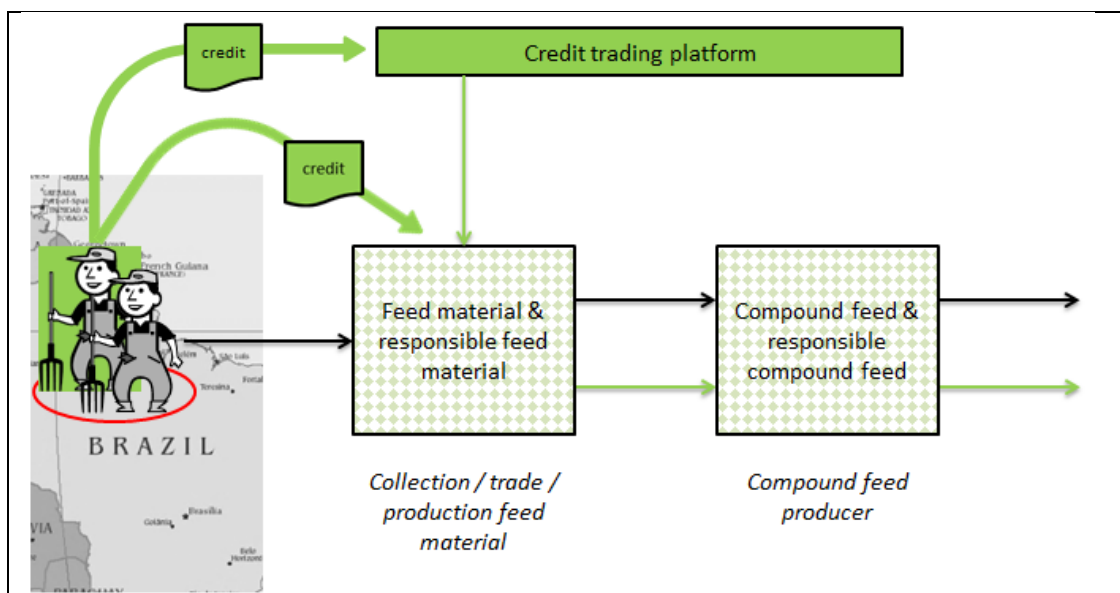


Fig. 3: Schematic overview of Area mass balance (simplified)

**Guidance**

*Area is defined as a region / state within a country. In the case of area mass balance, the credits must originate from the same area as the area where the feed material originated from.*

**5.4.1 Purchasing**

With area mass balance, the participant is allowed to purchase non-responsible feed material from suppliers. Credits must be purchased via a credit trading platform that complies with the purchasing requirements in the GMP+ MI document. Credits can also be purchased directly from growers. These credits must originate from growers that operate in the same area (region) as the feed material is originating from.

When the participant is purchasing feed via multiple supply chain models, the participant shall ensure that inputs to each supply chain model complies with the purchasing requirements in the relevant GMP+ MI document.

**5.4.2 Material accounting system**

The area mass balance model has the same requirements for the material accounting system as the mass balance model. The requirements for the material accounting system can therefore be found in paragraph 5.3.2.

The only difference is that in the case of area mass balance the first link in the chain (collector/ trader) can purchase credits for the amount he/she would like to sell as responsible. No more area mass balance feed material can be sold than purchased via credits. Other links in the chain purchase area mass balance feed material and register this in their material accounting system accordingly.

**5.5 Book & Claim**

The supply chain model book & claim represents the trade of credits through a credit trading platform, where the certificates are separated from the physical flow of feed material. Companies that buy feed material on the regular market can purchase 'responsible feed material production credits' directly from growers. These credits equal the responsible production of a certain amount of responsible feed material. After having bought credits, a company can publicly claim to have supported responsible production of equivalent volumes of feed materials.

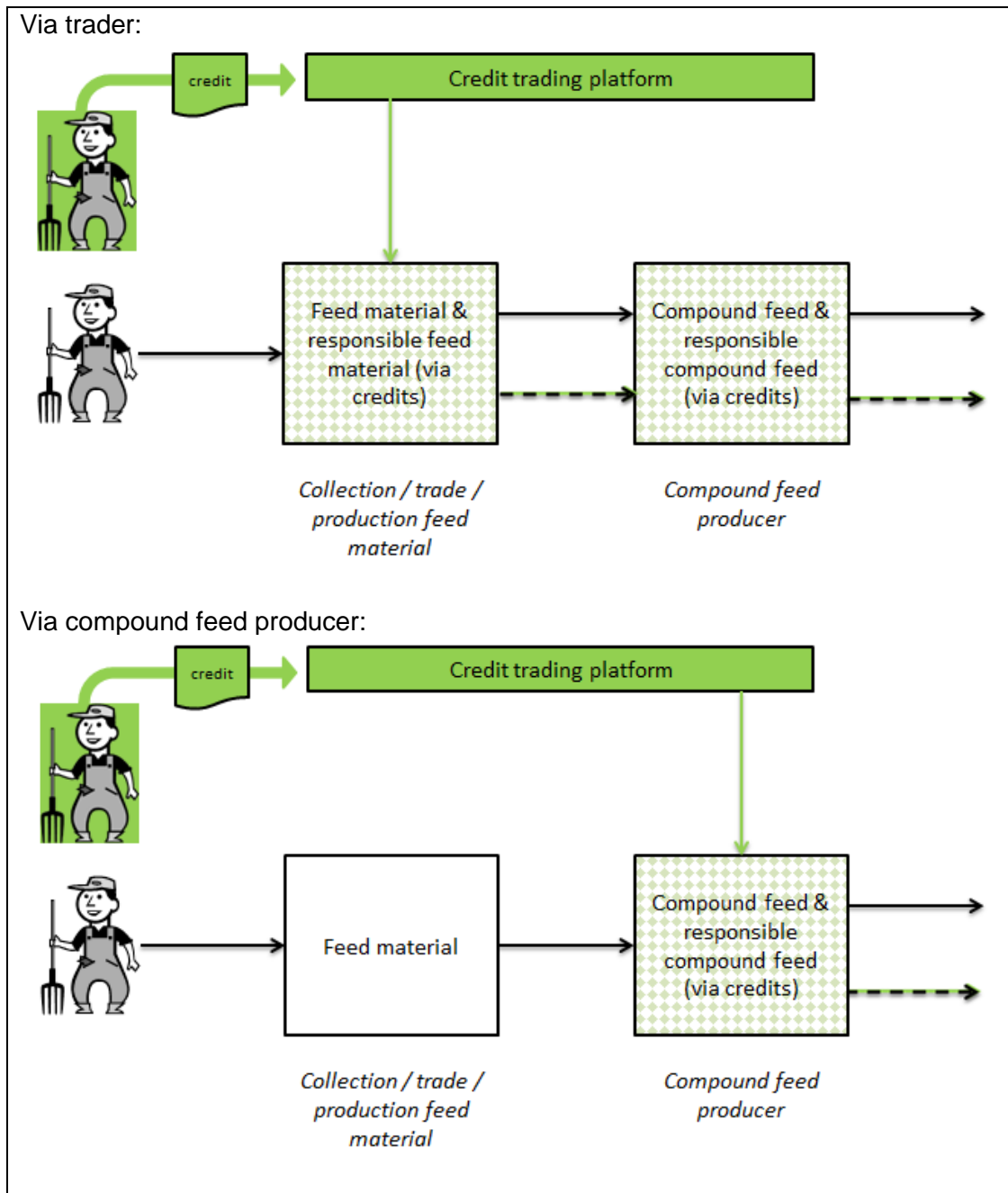


Fig. 4: Schematic overview of Book & claim (simplified)

### 5.5.1 Purchasing

With book & claim, the participant is allowed to purchase non-responsible feed material from suppliers. Credits must be purchased via a credit trading platform that complies with the purchasing requirements in the relevant GMP+ MI document.

When the participant is purchasing feed via multiple supply chain models, the participant shall ensure that inputs to each supply chain model complies with the purchasing requirements for that supply chain model.

**Guidance**

*In the case that redeeming / claiming of credits is needed to finalize the purchasing process, the requirements regarding purchasing of credits must be read as 'purchasing including redeeming / claiming'. Otherwise the credits are not considered as purchased and cannot be used in the material accounting system.*

**5.5.2 Material accounting system****Input**

The participant shall record the quantity (volume or weight – as specified on the credit) of all responsible input material in the material accounting system. This data shall be recorded as 'output units'.

Where the processing/manufacturing process generates co-products and by-products, the participant shall record the quantity (volume or weight – as specified on the credit) by using separate categories for these co-products and by-products. In this case conversion factor(s) for the processing unit or actual measured output quantities should be used.

Where additional responsibility data is associated with the inputs received, this data shall remain linked, combined and recorded in the material accounting system using separate categories for each identical group of responsibility data.

**Output**

Where the processing/manufacturing process generates co-products and by-products, the participant shall deduct the quantity of data supplied to customers from the respective co-product and by-product categories in the material accounting system. The participant shall not apply data generated from the production of one co-product or by-product to a different co-product and by-product.

Where additional responsibility data is associated with the inputs received, the participant shall deduct the quantity of data supplied to customers from the relevant category of linked data in the material accounting system.

The participant shall not supply responsibility data to customers for other feed materials. In bulked products, the responsibility data shall only be applied to the proportion of the related feed material.

**Allocation of sustainability data**

The balancing of input and output of responsibility data shall be implemented as a part of the material accounting system. Records of responsibility data available for allocation to outputs are clearly visible to relevant staff and maintained updated at all times.

The participant shall allocate responsibility data to customers using either a continuous balancing system or a fixed inventory period.

### 5.5.3 Continuous balancing system

Where a continuous balancing system is in operation, the participant shall ensure that the quantity of credit inputs and outputs (in volume or weight – as specified on the credit) are monitored on a real-time basis.

The participant shall ensure that the material accounting system is never over-drawn. Only responsibility data which has been recorded in the material accounting system shall be allocated to outputs supplied by the participant.

Responsibility data is valid for 24 months from the date it was first recorded in the material accounting system. If the participant does not allocate the available quantity of responsibility data to outputs within 24 months, the data shall expire and shall be deducted from the material accounting system.

### 5.5.4 Fixed inventory period

Where a fixed inventory period is in operation, the participant shall ensure that the quantity of credit inputs and outputs (in volume or weight – as specified on the credit) are balanced within a fixed inventory period which does not exceed one year (12 months).

Responsibility data which has not been allocated to output material at the end of the inventory period can be carried over and recorded in the material accounting system for the following inventory period. Carried-over responsibility data is valid for 24 months from the date of the inventory. If the participant does not allocate the available quantity of responsibility data to outputs within 24 months, the data shall expire and shall be deducted from the material accounting system.

The participant shall ensure that the material accounting system is not overdrawn at the time of the inventory. Only responsibility data which has been recorded in the material accounting system within the inventory period (including the carried-over from the previous inventory period) shall be allocated to outputs supplied within the inventory period.

**GMP+ International**

Braillelaan 9  
2289 CL Rijswijk  
The Netherlands

t. +31 (0)70 – 307 41 20 (Office)  
+31 (0)70 – 307 41 44 (Help Desk)  
e. [info@gmpplus.org](mailto:info@gmpplus.org)

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