



# Where does GMP+ FSA certification start?

GMP+ D 3.5

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**GMP+ Feed Certification scheme**

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## 1 Guidance through this document

One of the key principles of GMP+ FSA certification is the chain approach: all links in the chain must take responsibility for assuring safe feed. Within GMP+ FSA certification, this is arranged via strict purchasing requirements. In general, it is required to purchase products and services from suppliers that are also GMP+ FSA certified. But there are some exceptions to these requirements.

This document is intended to guide the GMP+ participant through the purchasing requirements and show via some situations ('chains') where GMP+ FSA certification begins and for which company ('link') the GMP+ FSA certification is required. The examples are explained via a flowchart and a short description.

In chapter 2 the used symbols in the flowcharts are explained.



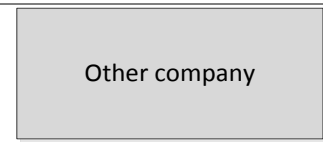


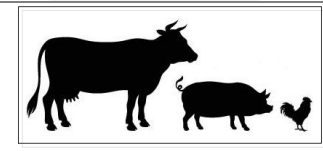





Chapter 3 explains the different purchase options for feed, services and other products. Chapter 4 shows the situations per industry in text and flowcharts.

*Please note the following:*

- *This document is drawn up with care and based on the applicable GMP+ requirements on date of publication.*
- *This document is intended as a guidance to GMP+ FSA certification and should be considered as such. The requirements in the B and BA (normative) documents of the GMP+ Feed certification scheme should be followed.*
- *This document gives a number of examples, but does not describe every possible situation. In the event of any doubt please contact GMP+ International.*

## 2 Used symbols

Used symbols in the flowcharts:

	<p>A feed company is active in the feed chain. This can be either a producer or a trader. <i>As the flowcharts are intended to give a brief overview of the chain, the many different types of companies and activities are not specified. Of course all these companies are also part of the feed chain.</i></p>
	<p>A food company is active in the food chain. The food company with this symbol is supplying ingredients to a food producing company or a company further in the food chain, not selling or producing feed materials.</p>
	<p>A company active in the chain that is not a feed or a food company. This can for example be a producer of biodiesel.</p>
	<p>The colors of this symbol indicate a food producing company that is producing a feed as a by-product. A similar transition in color can be found for a non-feed / non-food company that is producing feed as a by-product</p>
	<p>The by-product / feed material that is produced and supplied to a feed company.</p>
	<p>The livestock farmer.</p>
	<p>The GMP+ FSA logo in the flow chart indicates that the company / link in the chain should be GMP+ FSA certified.</p>
	<p>Flow of feed products from one company to the other.</p>
	<p>Flow of non-feed products from one company to the other. This non-feed can be foodstuffs, ingredients for the food production, bio-ethanol, etc.</p>
	<p>In some cases a gatekeeper protocol can be used to purchase feed from un-certified suppliers. <i>The use of gatekeeper protocols is explained in paragraph 3.3 of this document.</i></p>
	<p>In some cases companies need to use HACCP requirements to be able to purchase products. This is shown via the use of this symbol.</p>

### 3 Purchasing requirements GMP+ FSA certification

GMP+FSA certification starts at the first company that produces feed. There are purchase requirements for this first link in the chain. The GMP+ FSA certification requirements regarding purchasing are quite strict. In general feed and services must be purchased from GMP+ FSA certified suppliers. If purchase of certified companies is not possible, companies can purchase from suppliers certified in accordance to an equivalent certification scheme. In some cases certification is not mandatory and products can be purchased by using a gatekeeper option, such as purchase of feed additives or (former) foodstuff. In the text below the different options of purchasing will be explained.

#### 3.1 Purchase from GMP+ certified suppliers

GMP+ participants are required to buy feed and services from GMP+ certified suppliers. This requirement applies to:

- *Feed*: feed additives, feed materials, compound feed and/or premixtures
- *Services*: transport, affreightment, storage & transshipment and laboratory analyzes

The requirement guarantees that all the links in the chain apply uniform and transparent safety assurance for feed and services. After all, every supplier assumes, when guaranteeing the safety of their feed or services, the same GMP+ FSA basic principles (HACCP, purchasing and system requirements and product norms).

#### 3.2 Equivalent certification schemes

It is also accepted to purchase feed or services from suppliers who are certified for an equivalent certification scheme. Even though there are differences between equivalent certification schemes, these differences are considered minor and result in the same level of feed safety assurance.

All equivalent certification schemes that are approved by GMP+ International are stated in GMP+ BA10 *Minimum requirements purchase*.

#### 3.3 Gatekeeper options

For some specific situations, there are gatekeeper options available. Gatekeeper options are created because for some products and/or services it is not possible to demand GMP+ (or equivalent) certification. The conditions and possibilities for these gatekeeper options are described in GMP+ BA10 *Minimum requirements purchase*.

Gatekeeper options are available for the following products and services:

- Feed additives
- Unprocessed agricultural products from the grower
- Grains, seeds and legumes
- (Former) Foodstuffs
- GMQ Palm oil
- Road transport (outside A-countries)
- Storage and transshipment (outside A-countries)

#### **Responsibilities for a gatekeeper**

A gatekeeper is the first link in the GMP+ chain taking responsibility for feed safety assurance in previous (un-certified) links in the chain. This gatekeeper can purchase from uncertified supplier under so-called gatekeeper protocol. In this gatekeeper protocol specific requirements are laid down to ensure feed safety assurance in previous links in the chain. This includes, for example, a HACCP study, strict monitoring requirements and a regular supplier audit. This way the feed materials can be brought into the GMP+ chain even though the supplier is not GMP+ certified.

Gatekeeper protocols are included in GMP+ BA10 *Minimum requirements purchase*. Gatekeeper protocols are only available for a limited list of products. If there is no gatekeeper protocol mentioned for (a group of) feed, this means that the GMP+ participant is not allowed to act as a gatekeeper and can only buy these feed from GMP+ (or equivalent) certified suppliers.

#### **3.4 Purchase of other products and services via HACCP approach**

Not every product or service purchased by a company must be GMP+ FSA certified because not all of them are part of the scope of the GMP+ FSA scheme. These products or services can be purchased from uncertified suppliers, instead HACCP requirements are applicable. Examples of products and services are:

- Cleaning agents
- Insecticides/fumigation
- Processing aids (not to be confused with technological feed additives)
- Veterinary medical products (feed medicines)
- *Raw materials* for the production of feed additives, feed materials and pre-mixtures see chapter 4 for the individual industries
- Silo cleaning
- Pest control
- Etc.

The principles of HACCP are described in GMP+ D2.1 *Guidelines HACCP GMP+*.

#### **HACCP approach for suppliers of the first link in the GMP+ chain**

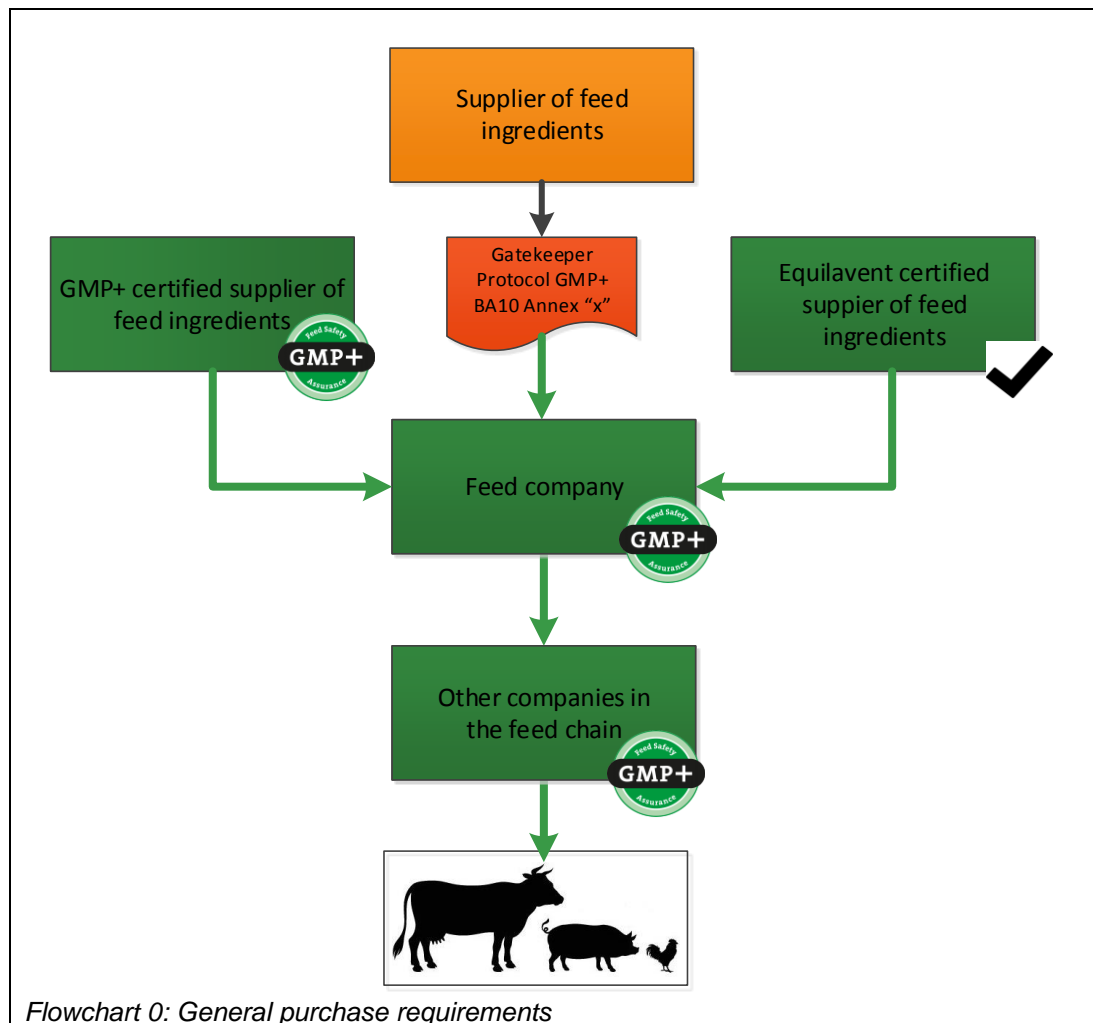
Suppliers of raw material do not themselves have to be GMP+ certified as they are not supplying feed. The GMP+ certified company should carry out a hazards analysis based on HACCP principles to ensure the production of safe feed. The hazard analysis must include all the activities, actions and/or processes which precede the actual producing of the feed materials, including the purchased raw material.

On the basis of the result of this hazards analysis, on HACCP principles, and also on the quality assurance which is applied by the supplier, the GMP+ certified company will make a selection of suppliers and will adjust his (entry) check accordingly.

### 3.5 The start of GMP+ certification supply chain

The previous paragraphs explained the purchase options for GMP+ certified companies in text. *Flowchart 0* will give a visible example of the purchase options. The next chapter will give some examples of the start of GMP+ certification supply chain and what purchase requirements needs to be followed. The examples are explained via text and flowcharts.

Naturally, there must be compliance with the other requirements within the framework of supplier and product selection. Products must be permitted for the intended use by the relevant (national) authorities.



## 4 Specific feed supply chains

GMP+ FSA certification is required from the link where the product is created which is intended (or will be intended) for use in the feed sector: for example a feed material. The status of the product must be made clear by the producing company. In other words; if a feed is created/produced by a company, this is the starting point of GMP+ certification. The producer of the feed and each subsequent link in the chain (including the traders and service provider) should make use of feed safety assurance required in GMP+ FSA certification and should be certified accordingly.

### 4.1 By-products from the food sector

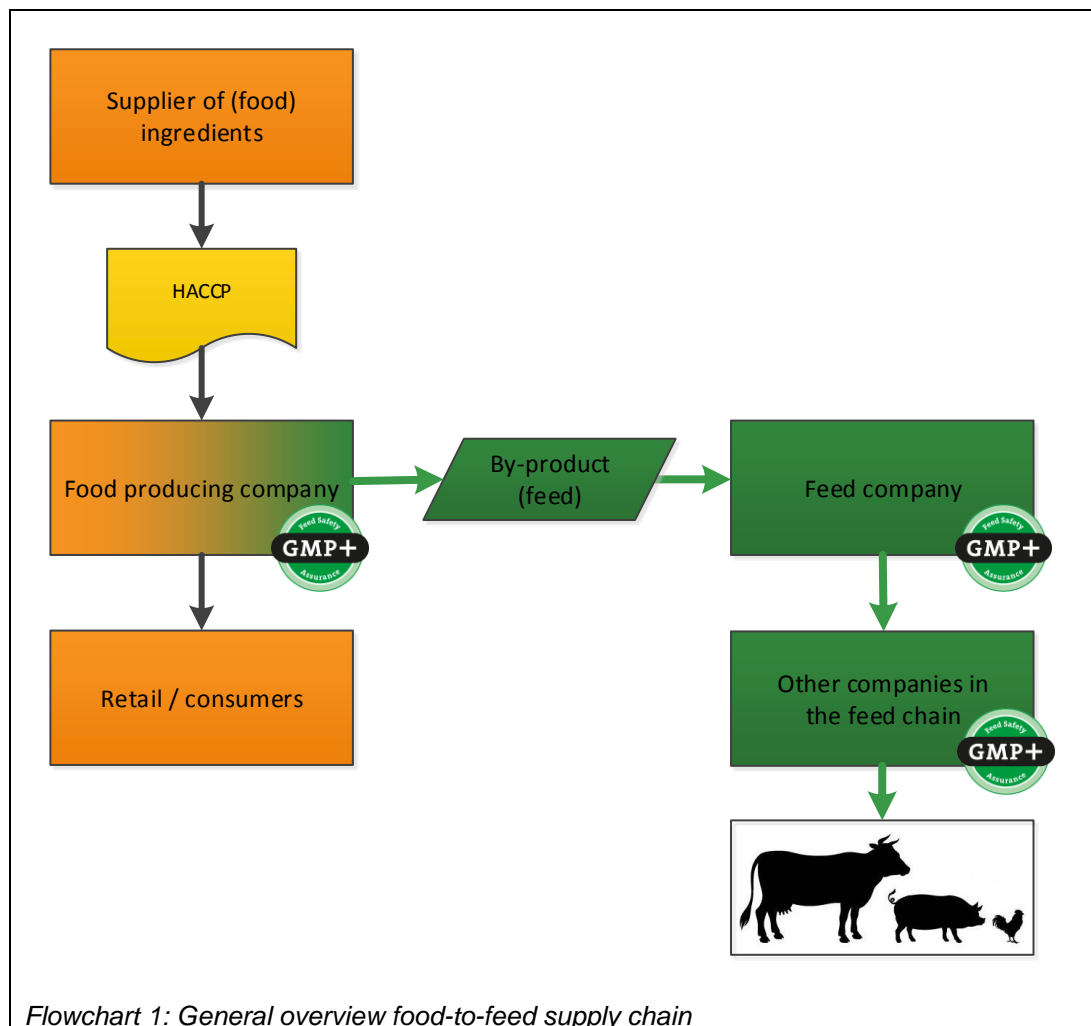
Feed often originate from the production process of foodstuffs. That is why this paragraph is dedicated to food production chains. Food producers can deliver various types of products to the feed sector. Most common flows from food producers to the feed industry are “by-products” that are derived from the production process of food. That is the point where a feed material is created and the feed chain starts. And that is also the first link in the chain where GMP+ FSA certification is applicable.

A by-product defined as “a feed material that is produced as a by-product from the food production and which is neither intended nor suitable as food”.

#### 4.1.1 General overview food-to-feed supply chain

A general overview of the food sector is shown in *flowchart 1*.





### First link in the GMP+ chain

The first link in the GMP+ chain is the point where feed is produced. The first link in the GMP+ chain is a food producing company as this food producing company is producing a by-product that is sold to the feed chain as a feed material.

The GMP+ certificate is issued to the food producing company that is producing a by-product / feed material. The scope of the GMP+ feed safety management system stretches from the moment of creation of the by-product / feed material up to and including delivery to a feed company.

The food producing company should be aware that in addition to foodstuffs, a feed is created in the production process as well. It is important to realize that the risks related to feed production can be different to the risks related to food production. Undesirable substances can, for example, be concentrated in the feed products.

### Examples of food production chains

The following paragraphs give an insight in some examples of food production chains where by-products are produced and delivered to the feed industry:

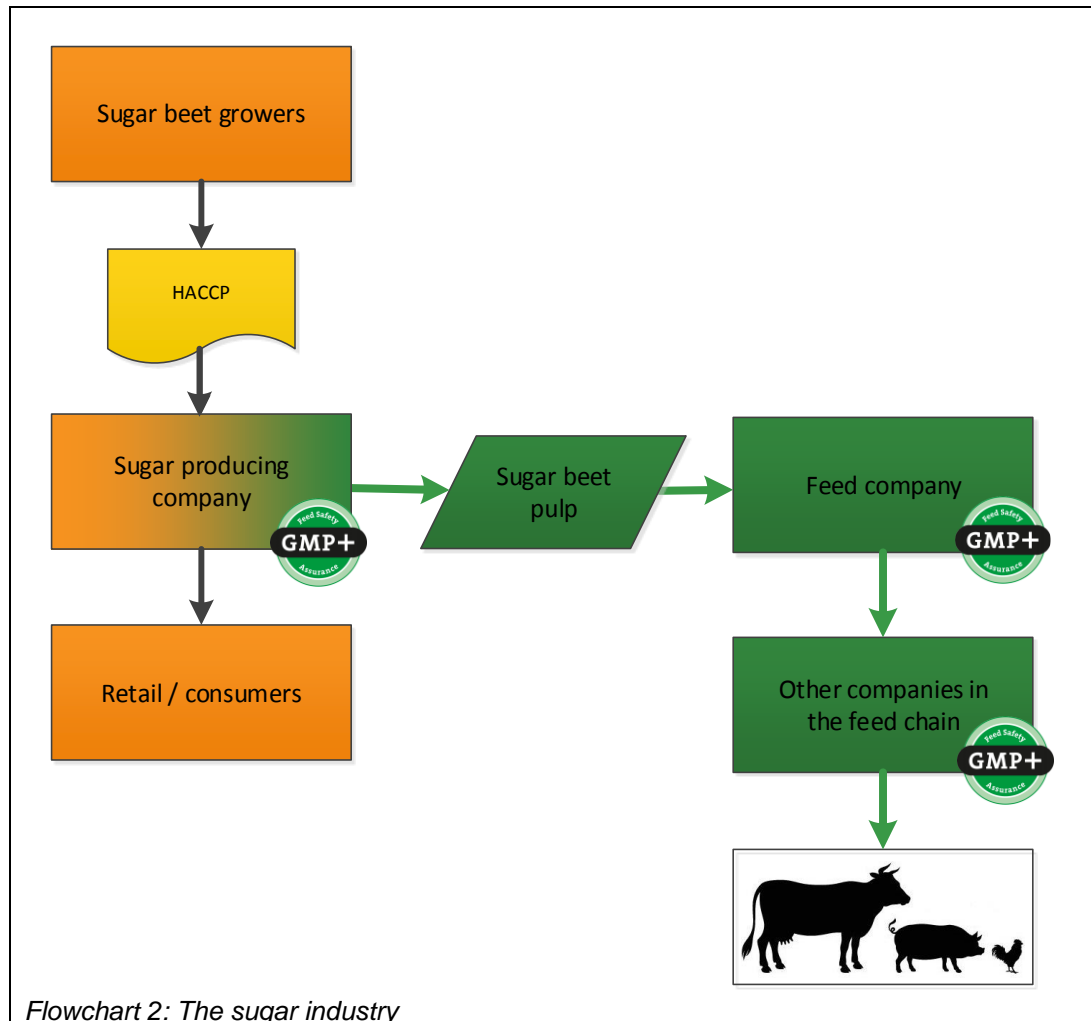
Paragraph	Food production chain
4.1.2	The sugar industry
4.1.3	The dairy industry
4.1.4	The grain industry, including:
4.1.4.1	- By-products of the processing of grains, seeds and legumes
4.1.4.2	- The bakery sector
4.1.5	The oil seed processing industry
4.1.6	The potato grading industry
4.1.7	Fruit and vegetables, including:
4.1.7.1	- Fruit and vegetables from processing companies
4.1.7.2	- Fruit and vegetables from the auction
4.1.8	Seaweed processing industry
4.1.9	Processors of animal by-products, including:
4.1.9.1	- Animal by-products from slaughterhouses
4.1.9.2	- Animal by-products from fish

The flowcharts in these paragraphs are intended as example to inform about the start of GMP+ certification. Of course not all chains are alike, nor do they have the same feed delivered to the feed chain. Use the examples in this document for the general explanation it is intended to give. In case of questions, contact GMP+ International for more information.

#### 4.1.2 The sugar industry

A sugar producing factory is a foodstuff producing company (sugar) with a by-product which is used in the feed sector (for example sugar beet pulp). GMP+ certification begins at the sugar factory where the feed material sugar beet pulp is produced.

The sugar industry is worked out in *flowchart 2*.



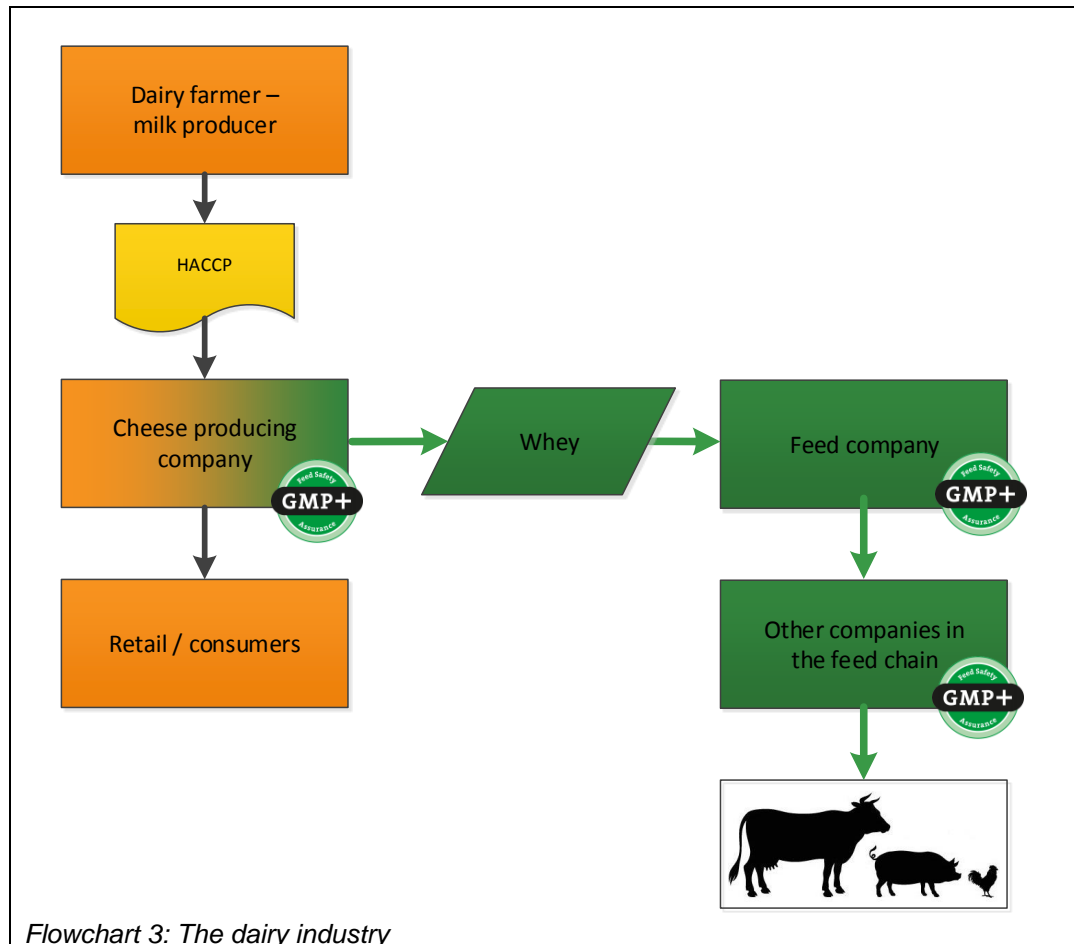
The scope of the GMP+ feed safety management system must include the production of the sugar beet pulp up to and including its sale to the feed company.

Within the framework of GMP+ certification, the sugar factory carries out a proper hazard analysis according to the HACCP principles (more information GMP+ D2.1 *Guidelines HACCP GMP+*). On the basis of the result of this hazards analysis and also on the quality assurance which is applied by the supplier, the GMP+ certified food producing company will make a selection of suppliers and will adjust his (entry) check accordingly.

GMP+ International has a special database with information that can support in carrying out a hazard analysis: FSP (Feed Support Products). Its interactive nature and the information contained in it, offers a massive source of data which can be used in defining the risks of the feed ingredients bought but also in drawing up the HACCP plans. The FSP database can provide information about: the production process of feed materials, possible hazards, facts about hazards, the limits and monitoring data. Go to the FSP database and search the feed ingredients purchased or “sugar beet pulp” produced, to find the accepted products.

#### 4.1.3 The dairy industry

A cheese factory is a foodstuff producing company (cheese) with a by-product which is used in the feed sector (whey). GMP+ certification begins at the cheese factory where the feed material whey is produced. The dairy industry is worked out in *flowchart 3*.



The scope of the GMP+ feed safety management system must include the production of whey up to and including its sale to the feed company.

Fresh milk does not have to be bought from GMP+ certified suppliers. Within the framework of GMP+ certification, the cheese factory carries out a proper hazard analysis according to HACCP principles (more information GMP+ D2.1 *Guidelines HACCP GMP+*). On the basis of the result of this hazards analysis and also on the quality assurance which is applied by the supplier, the GMP+ certified food producing company will make a selection of suppliers and will adjust his (entry) check accordingly.

GMP+ International has a special database with information that can support in carrying out a hazard analysis: FSP (Feed Support Products). Its interactive nature and the information contained in it, offers a massive source of data which can be used in defining the risks of the feed ingredients bought but also in drawing up the HACCP plans. The FSP database can provide information about: the production process of feed materials, possible hazards, facts about hazards, the limits and monitoring data.

Go to the FSP database and search the feed ingredients purchased or “whey” produced, to find the accepted products.

Make sure the European Regulation about animal proteins are followed. These are written down in Regulation (EC) no. 142/2011.

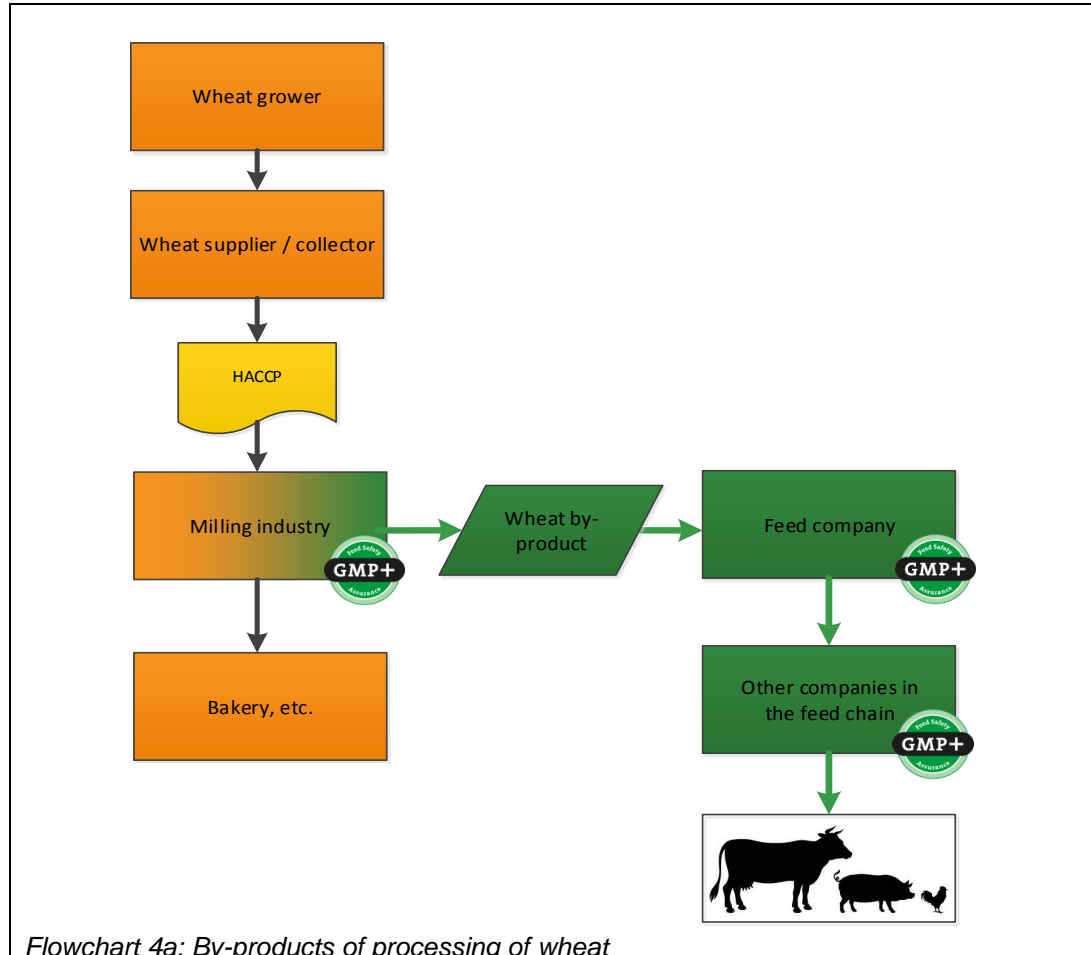
#### 4.1.4 The grain industry

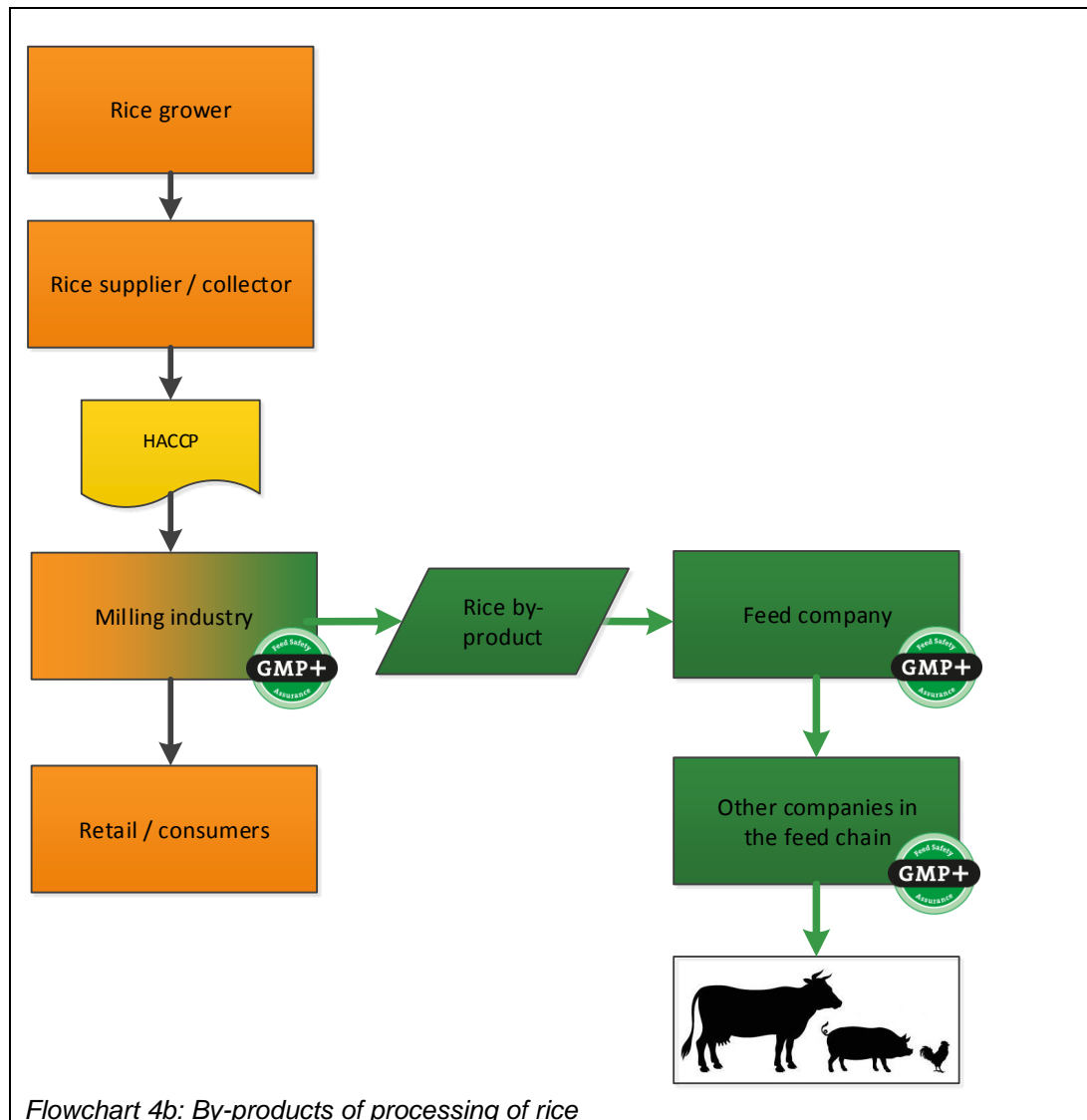
##### 4.1.4.1 *By-products of the processing of grains, seeds and legumes*

Grains, seeds and legumes are often used in the production of food. During the processing of grains, seeds and legumes, by-products are created which are used in the feed sector (for example wheat meal derived from a flour mill). GMP+ certification begins at the company where the feed material is produced. The milling industry is worked out as examples in *flowcharts 4a and 4b*.

The scope of the GMP+ feed safety management system must include the production of the by-product up to and including its sale to the feed company.

Within the framework of GMP+ certification, the flour mill carries out a proper hazard analysis according to HACCP principles (more information GMP+ D2.1 *Guidelines HACCP GMP+*). On the basis of the result of this hazards analysis and also on the quality assurance which is applied by the supplier, the GMP+ certified food producing company will make a selection of suppliers and will adjust his (entry) check accordingly.



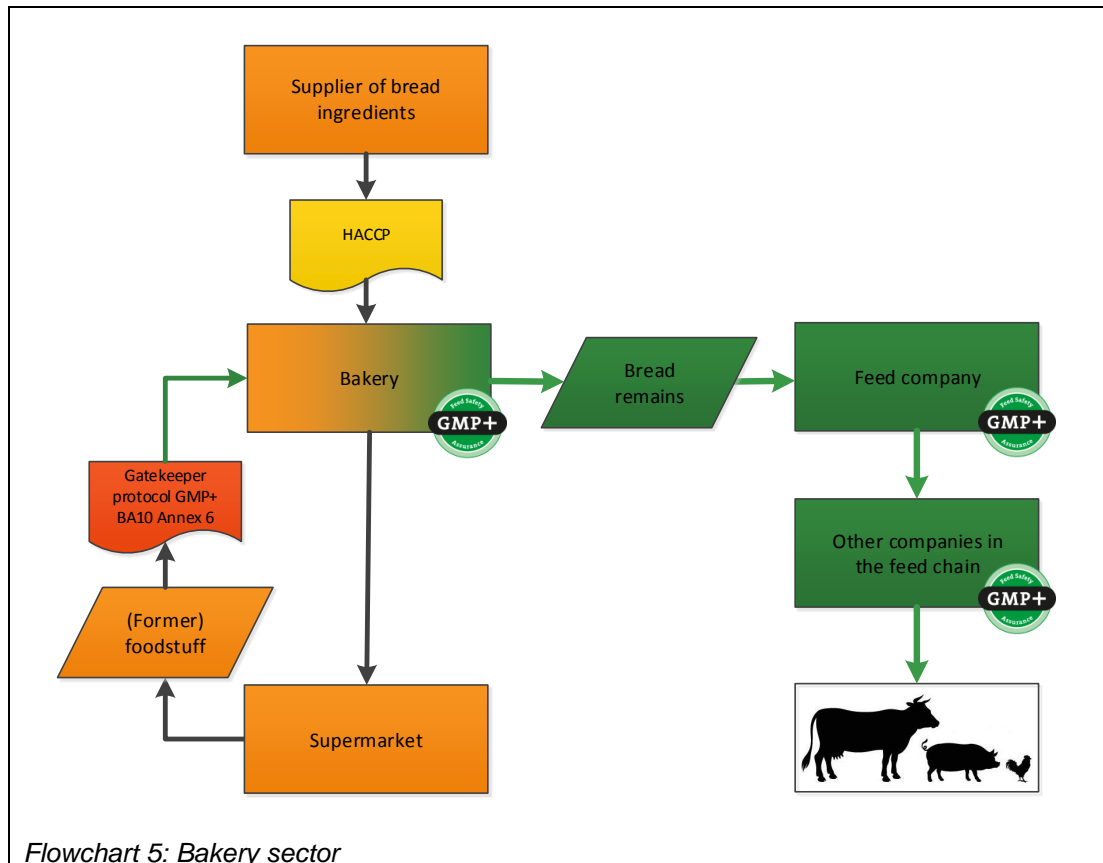


#### 4.1.4.2 The bakery sector

Also at the next step in this sector, the bakery, feed materials (such as bread remains) are created that are delivered to the feed industry. GMP+ certification in that case begins at the bakery where the feed material 'bread remains' is produced. This can be by-products originating from the production process, or can be returned products from supermarkets or bakery shops. The bakery sector is worked out in *flowchart 5*.

The scope of the GMP+ feed safety management system must include the production of the by-product up to and including its sale to the feed company. The ingredients for the bakery do not have to be purchased from GMP+ certified suppliers. Within the framework of GMP+ certification, the bakery carries out a proper hazard analysis according to HACCP principles (more information GMP+ D2.1 *Guidelines HACCP GMP+*). On the basis of the result of this hazards analysis and also on the quality assurance which is applied by the supplier, the GMP+ certified food producing company will make a selection of suppliers and will adjust his (entry) check accordingly.

GMP+ International has a special database with information that can support in carrying out a hazard analysis: FSP (Feed Support Products). Its interactive nature and the information contained in it, offers a massive source of data which can be used in defining the risks of the feed ingredients bought but also in drawing up the HACCP plans. The FSP database can provide information about: the production process of feed materials, possible hazards, facts about hazards, the limits and monitoring data. Go to the FSP database and search the feed ingredients purchased or “bakery” to find the accepted products.



In case the bakery is also including returned products from a supermarket into the feed material ‘bread remains’, the applicable gatekeeper protocol can be found in GMP+ BA10 *Minimum requirements purchase*, Annex 6 “Gatekeeper protocol for purchase of (former) foodstuffs”. This gatekeeper protocol is limited to the purchase of (former) foodstuffs as defined in this Annex.

The returned products may originate from their own bakery or from third parties. In the event of returns from third parties, it should be clear that these returned products were also originally produced under a HACCP system.

#### 4.1.5 The oil seed processing industry

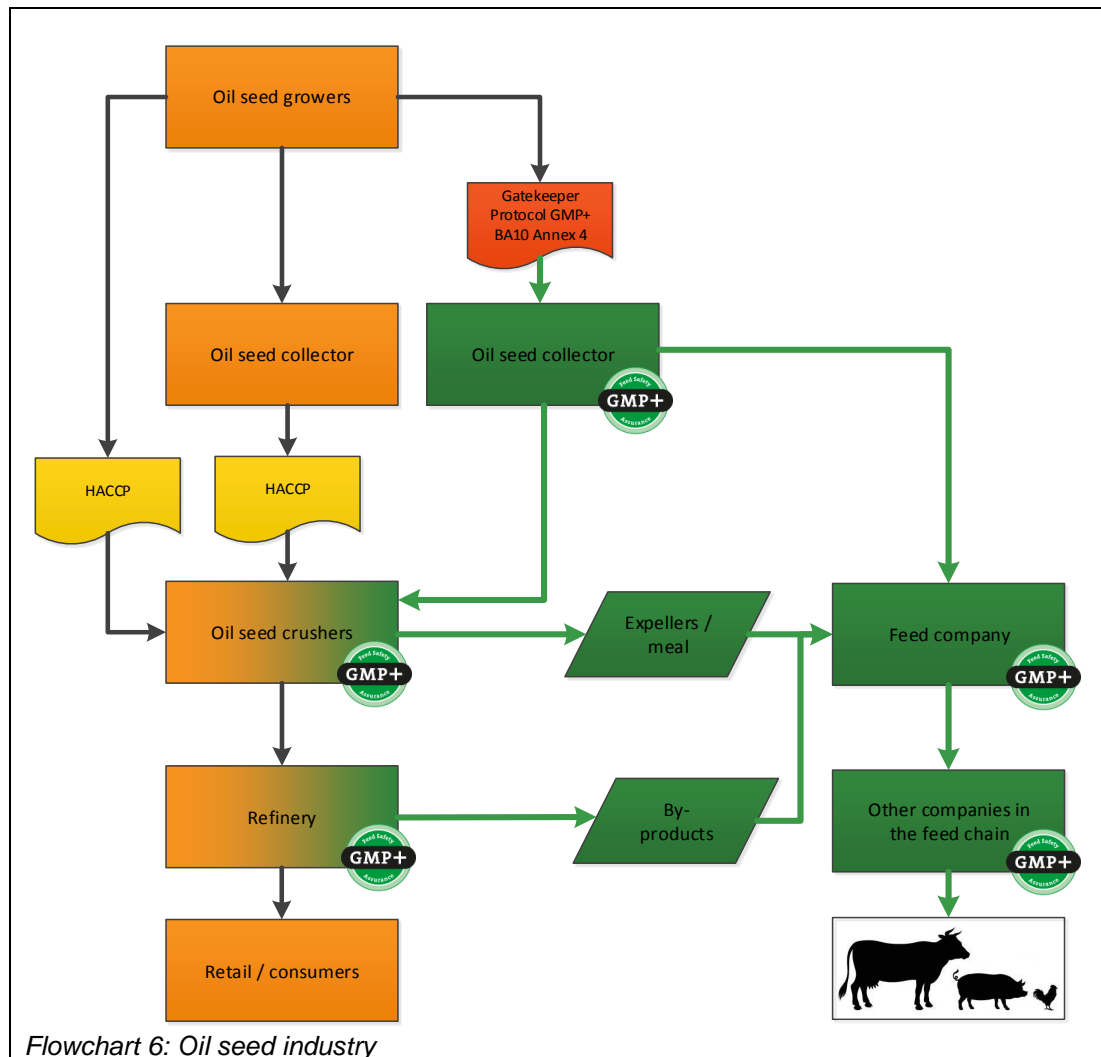
Various by-products from the oil seed processing industry can be designated as feed. In the case of oil seed crushers (for example) a by-product is created which is used in the feed sector (such as expellers or meal). GMP+ certification begins at the crusher at the moment when the feed material expellers or meal is created. Also from refinery industry, feed materials can be created as a by-product. The oil seed processing industry is worked out in *flowchart 6*.

The scope of the GMP+ feed safety management system must include the production of the by-products up to and including its sale to the feed company.

Within the framework of GMP+ certification, the oil seed crusher carries out a proper hazard analysis according to HACCP principles (more information GMP+ D2.1 *Guidelines HACCP GMP+*).

On the basis of the result of this hazards analysis and also on the quality assurance which is applied by the supplier, the GMP+ certified food producing company will make a selection of suppliers and will adjust his (entry) check accordingly.

GMP+ International has a special database with information that can support in carrying out a hazard analysis: FSP (Feed Support Products). Its interactive nature and the information contained in it, offers a massive source of data which can be used in defining the risks of the feed ingredients bought but also in drawing up the HACCP plans. The FSP database can provide information about: the production process of feed materials, possible hazards, facts about hazards, the limits and monitoring data. Go to the FSP database and search the feed ingredients purchased or “oil seeds expellers or meal” produced, to find the accepted products.





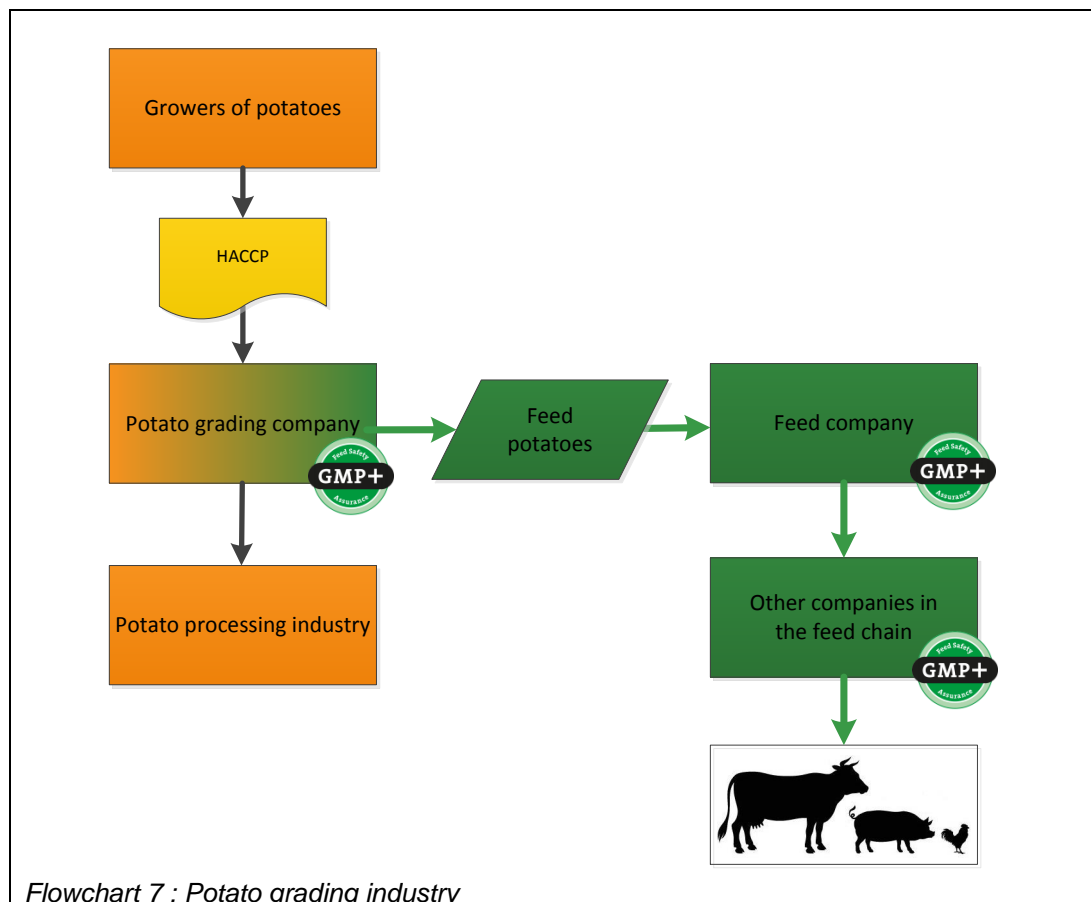
4.1.6 The potato grading industry

A potato grading company is a foodstuff (potatoes) company with a by-product which is used in the feed sector (feed potatoes). GMP+ certification begins at the potato grading company where the feed material is produced. The potato grading industry is worked out in *flowchart 7*.

The scope of the GMP+ feed safety management system must include the production of the feed potatoes up to and including its sale to the feed company.

Within the framework of GMP+ certification, the potato grading company carries out a proper hazard analysis according to the HACCP principles (more information GMP+ D2.1 *Guidelines HACCP GMP+*). On the basis of the result of this hazards analysis and also on the quality assurance which is applied by the supplier, the GMP+ certified food producing company will make a selection of suppliers and will adjust his (entry) check accordingly.

GMP+ International has a special database with information that can support in carrying out a hazard analysis: FSP (Feed Support Products). Its interactive nature and the information contained in it, offers a massive source of data which can be used in defining the risks of the feed ingredients bought but also in drawing up the HACCP plans. The FSP database can provide information about: the production process of feed materials, possible hazards, facts about hazards, the limits and monitoring data. Go to the FSP database and search the feed ingredients purchased or “feed potatoes” produced, to find the accepted products.



Flowchart 7 : Potato grading industry

#### 4.1.7 Fruit and vegetables

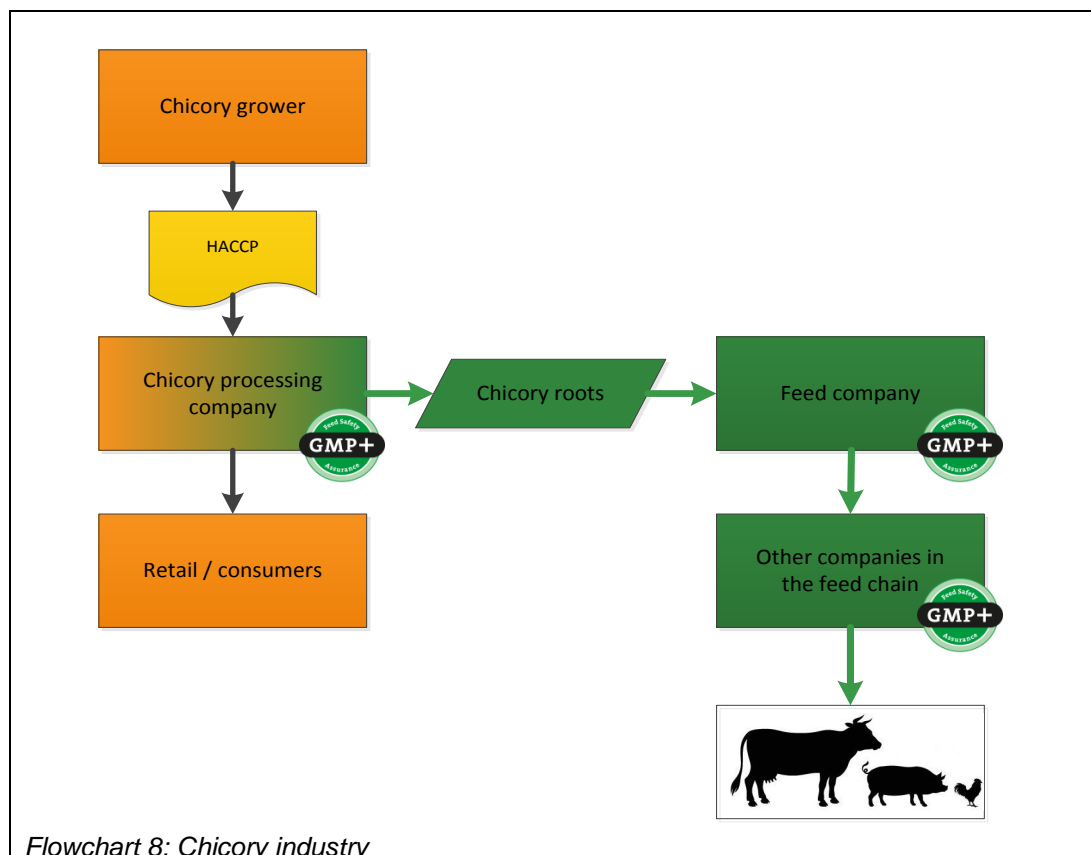
##### 4.1.7.1 *Fruit and vegetables from processing companies*

Fruit and vegetables can be designated as feed at various different moments. For example at a processing company where a by-product (such as cut-outs) is created which is designated as feed. The GMP+ chain starts at the processing company where these by-products are created. The fruit and vegetable chain is worked out in *flowchart 8*.

The scope of the GMP+ feed safety management system must include the production of the chicory roots up to and including its sale to the feed company.

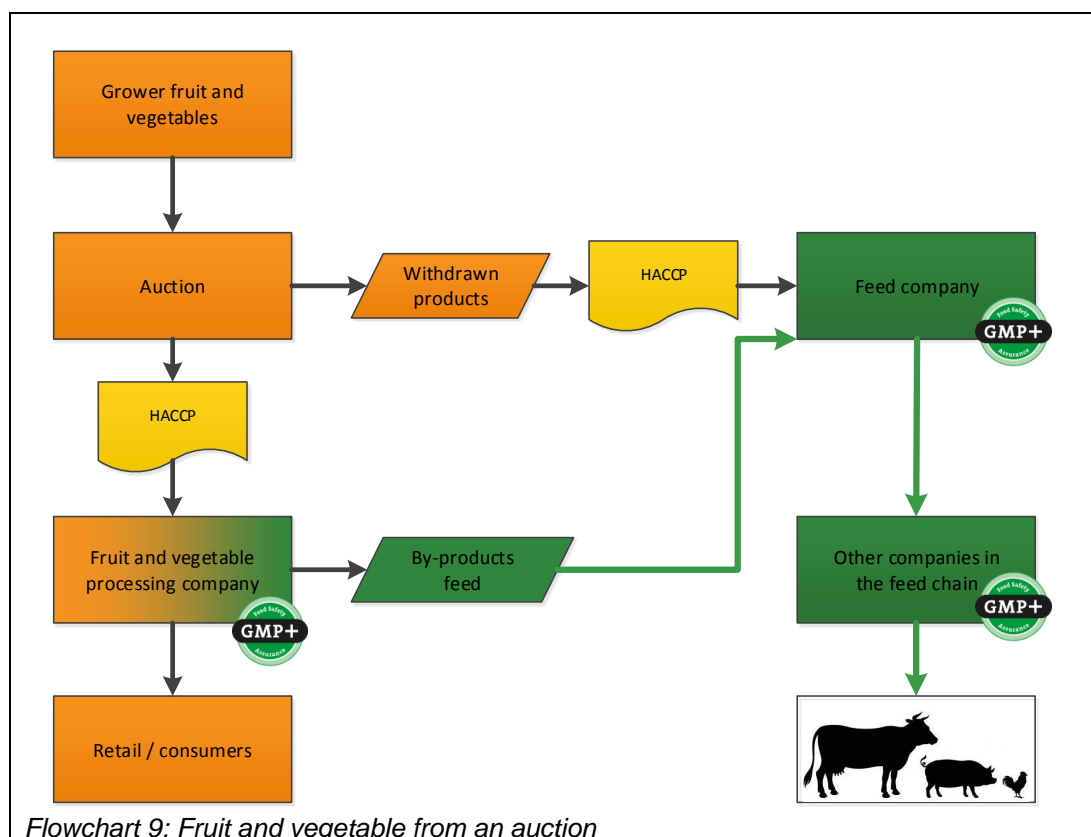
Within the framework of GMP+ certification, the chicory processing company carries out a proper hazard analysis according to the HACCP principles (more information GMP+ D2.1 *Guidelines HACCP GMP+*). On the basis of the result of this hazards analysis and also on the quality assurance which is applied by the supplier, the GMP+ certified food producing company will make a selection of suppliers and will adjust his (entry) check accordingly.

GMP+ International has a special database with information that can support in carrying out a hazard analysis: FSP (Feed Support Products). Its interactive nature and the information contained in it, offers a massive source of data which can be used in defining the risks of the feed ingredients bought but also in drawing up the HACCP plans. The FSP database can provide information about: the production process of feed materials, possible hazards, facts about hazards, the limits and monitoring data. Go to the FSP database and search the feed ingredients purchased or “vegetables” produced, to find the accepted products.



#### 4.1.7.2 Fruit and vegetables from the auction

Unprocessed fruit and vegetables as withdrawals from an auction can be purchased by a GMP+ company. The auction does not have to be GMP+ certified for these products. The purchasing GMP+ certified feed company is counted as the first for which a certification is required. Prior to the purchase of the withdrawn products the GMP+ certified company carries out its own hazards analysis according to the HACCP principles (more information GMP+ D2.1 *Guidelines HACCP GMP+*). On the basis of the results of this analysis and also on any quality guarantees which may be offered by the auction / growers, the company will make a decision, take any control measures and carry out an entry check. The GMP+ certified feed company and the auction house will record this in a written agreement. In *flowchart 9* there is an example of this process.



#### 4.1.8 Seaweed processing industry

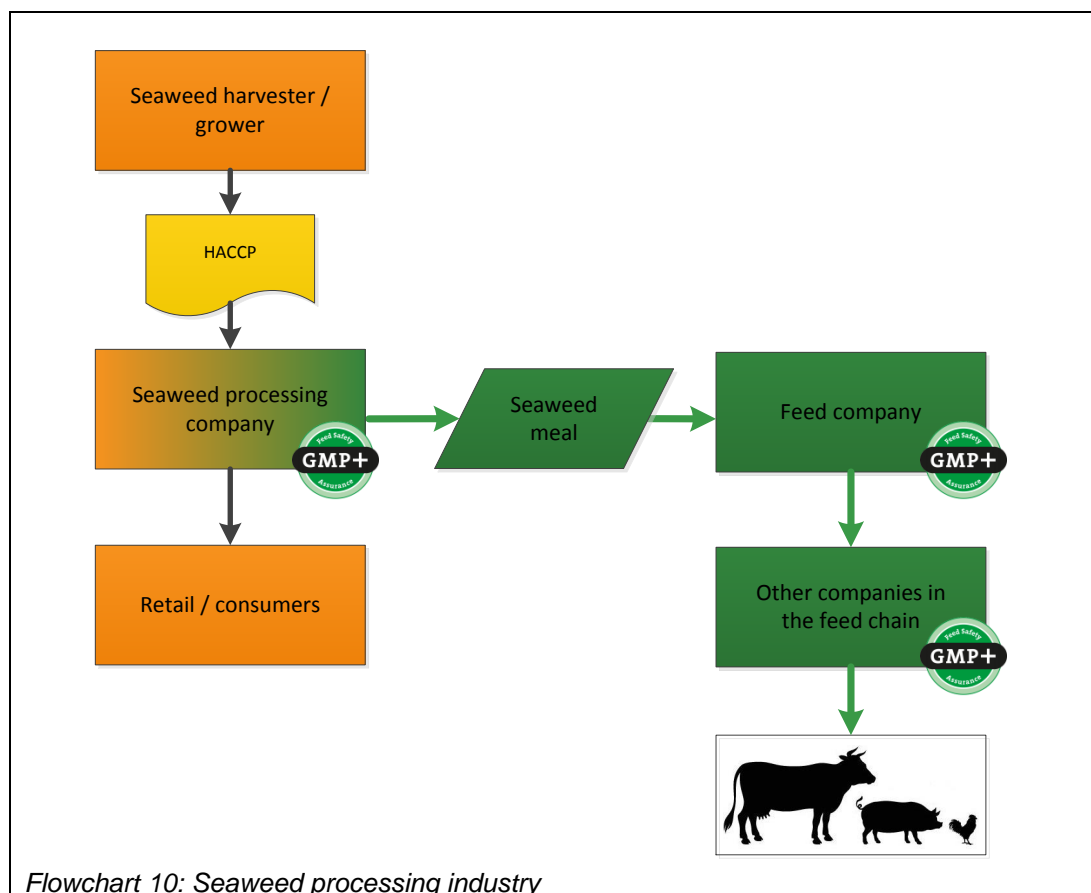
A seaweed processor is a company that produces products which can be used in the feed sector (for example seaweed meal). GMP+ certification begins at the seaweed processor where the feed material is produced. The seaweed processing industry is worked out in *flowchart 10*.

The scope of the GMP+ feed safety management system must include the processing of seaweed up to and including its sale to the feed company.

The seaweed does not have to be bought from GMP+ certified harvesters (in case of seaweed harvested from the sea) or grower (in case of seaweed grown by a farmer). Within the framework of GMP+ certification, the seaweed processor carries out a proper hazard analysis according to the HACCP principles (more information GMP+ D2.1 *Guidelines HACCP GMP+*).

On the basis of the result of this hazards analysis and also on the quality assurance which is applied by the supplier, the GMP+ certified seaweed processor will make a selection of suppliers and will adjust his (entry) check accordingly.

GMP+ International has a special database with information that can support in carrying out a hazard analysis: FSP (Feed Support Products). Its interactive nature and the information contained in it, offers a massive source of data which can be used in defining the risks of the feed ingredients bought but also in drawing up the HACCP plans. The FSP database can provide information about: the production process of feed materials, possible hazards, facts about hazards, the limits and monitoring data. Go to the FSP database and search the feed ingredients purchased or “seaweed meal” produced, to find the accepted products.



#### 4.1.9 Processors of animal by-products

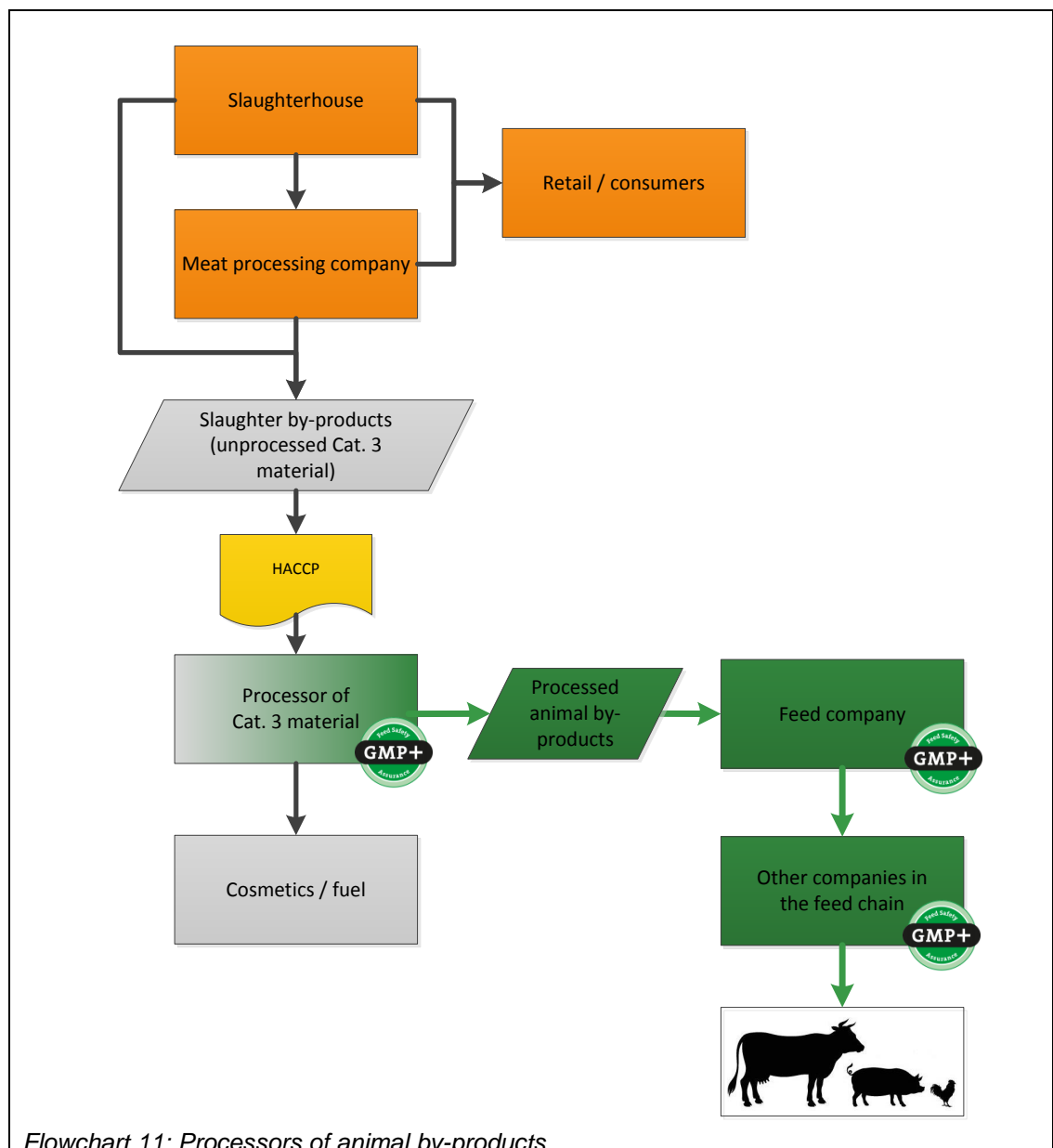
##### 4.1.9.1 Animal by-products from slaughterhouses

Animal by-products can be designated as feed under very strict legal conditions. These requirements are laid down in Reg. (EG) 142/2011. Only products which are classified as so-called Cat. 3 material can be designated as feed. The processing of animal by-products is worked out in *flowchart 11*.

GMP+ certification begins at the point of the processor of Cat. 3 material. That is the point where animal by-products are created that are used as feed.

Within the framework of GMP+ certification, the Cat. 3 processor carries out a proper hazard analysis according to the HACCP principles (more information GMP+ D2.1 *Guidelines HACCP GMP+*). On the basis of the result of this hazards analysis and also on the quality assurance which is applied by the supplier, the GMP+ certified cat. 3 processing company will make a selection of suppliers and will adjust his (entry) check accordingly.

GMP+ International has a special database with information that can support in carrying out a hazard analysis: FSP (Feed Support Products). Its interactive nature and the information contained in it, offers a massive source of data which can be used in defining the risks of the feed ingredients bought but also in drawing up the HACCP plans. The FSP database can provide information about: the production process of feed materials, possible hazards, facts about hazards, the limits and monitoring data. Go to the FSP database and search the feed ingredients purchased or “animal by-products” produced, to find the accepted products.



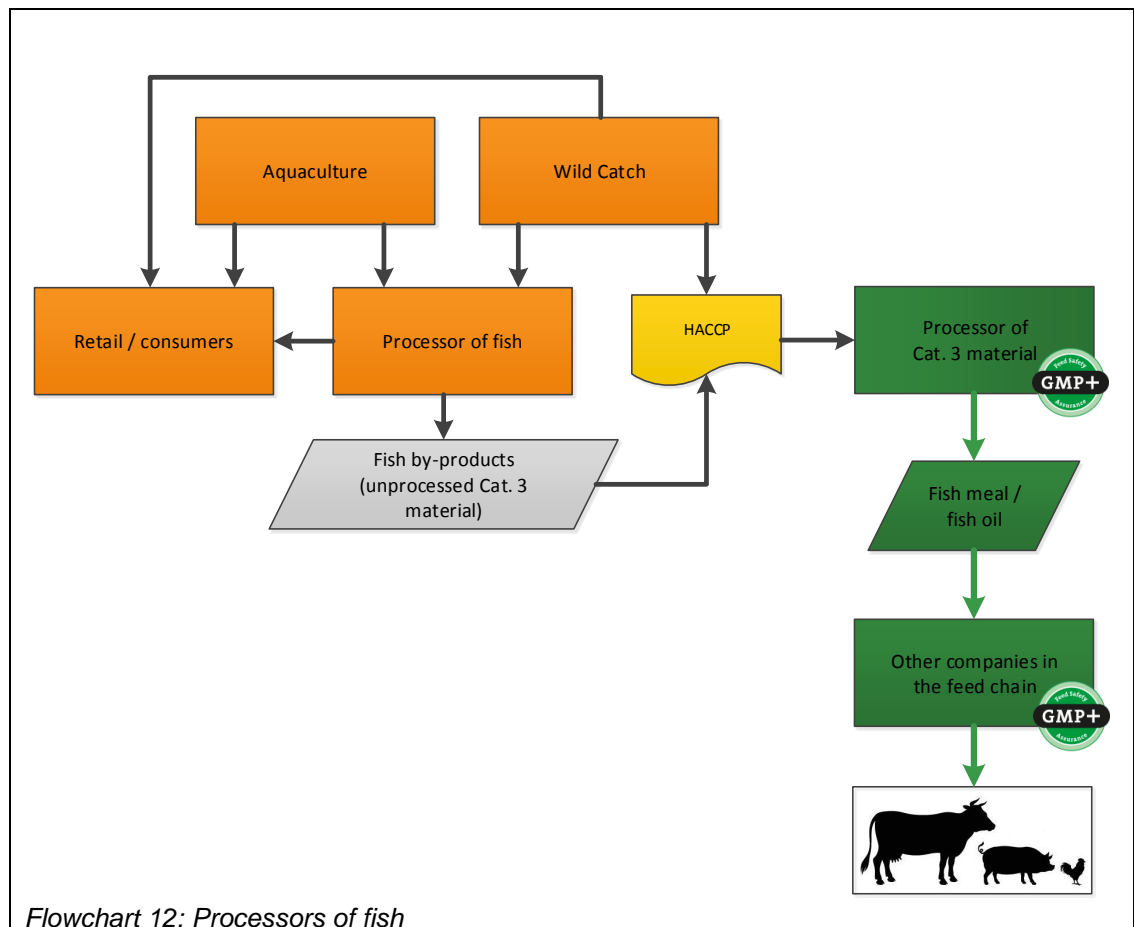
Flowchart 11: Processors of animal by-products

4.1.9.2 *Animal by-products from fish*

By-products from fish such as fish meal or fish oil are common used in the feed chain. For the purchase of the raw materials the requirements are laid down in *flowchart 12*. The fish meal and fish oil producer carries out a proper hazard analysis and does an entry check. For the production of fish meal and fish oil a Risk Assessment is available on the website of GMP+ International.

Within the framework of GMP+ certification, producer of fish oil and fish meal carries out a proper hazard analysis according to the HACCP principles (more information GMP+ D2.1 *Guidelines HACCP GMP+*). On the basis of the result of this hazards analysis and also on the quality assurance which is applied by the supplier, the GMP+ certified cat. 3 processing company will make a selection of suppliers and will adjust his (entry) check accordingly.

GMP+ International has a special database with information that can support in carrying out a hazard analysis: FSP (Feed Support Products). Its interactive nature and the information contained in it, offers a massive source of data which can be used in defining the risks of the feed ingredients bought but also in drawing up the HACCP plans. The FSP database can provide information about: the production process of feed materials, possible hazards, facts about hazards, the limits and monitoring data. Go to the FSP database and search the feed ingredients purchased or “fish oil or meal” produced, to find the accepted products.



Flowchart 12: Processors of fish

#### 4.2 Purchase of (former) foodstuffs

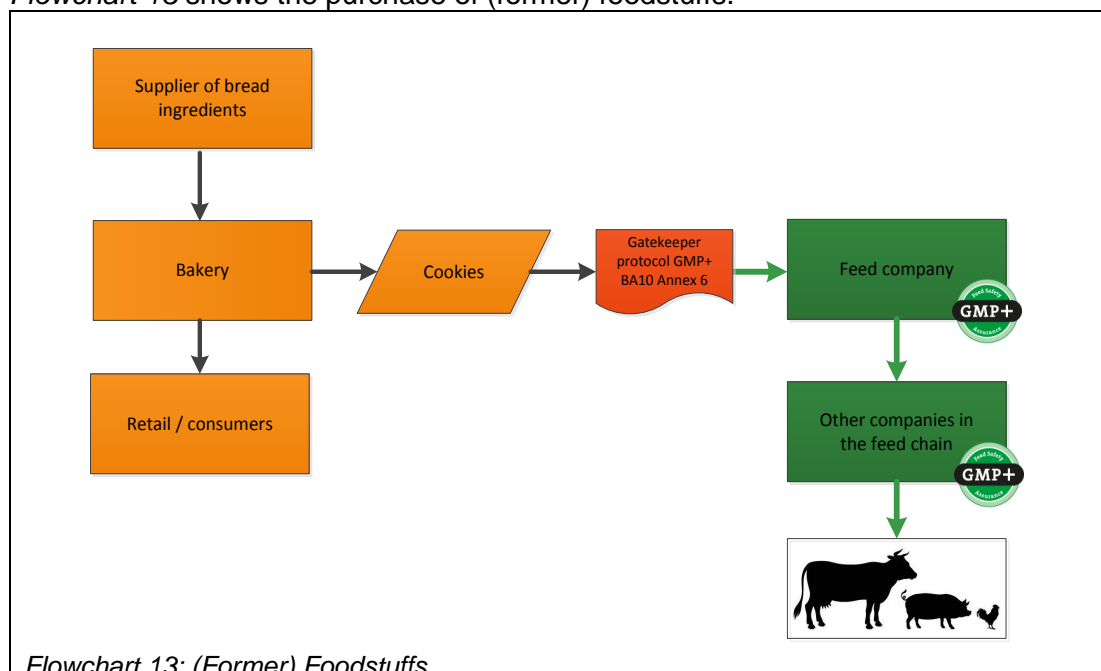
Besides the production of by-products by food producing companies, there are other products that can be derived from food companies. These are foodstuffs and former foodstuffs. The definitions from GMP+ BA10 *Minimum requirements purchase*, Annex 6 “Gatekeeper protocol for purchase of (former) foodstuffs”:

Product	Definition
Foodstuff (intended for use as feed)	Finished food products, which were manufactured for human consumption in full compliance with relevant national legislation and labelled as foodstuff by the food company, but which are no longer intended for human consumption due to practical, logistical or commercial reasons and do not present any health risks when used as feed.

Producers from (former) foodstuffs do not have to be certified for the production of these products as they were intended for food. A feed company can purchase these (former) foodstuffs via a gatekeeper protocol. The requirements for the purchase of (former) foodstuffs are laid down in GMP+ BA10 *Minimum requirements purchase*, Annex 6 “Gatekeeper protocol for purchase of (former) foodstuffs”. This protocol can only be used to purchase (former) foodstuffs. If the product is sold as feed to the feed company, the general purchasing requirements apply (see the other examples in 4.1).

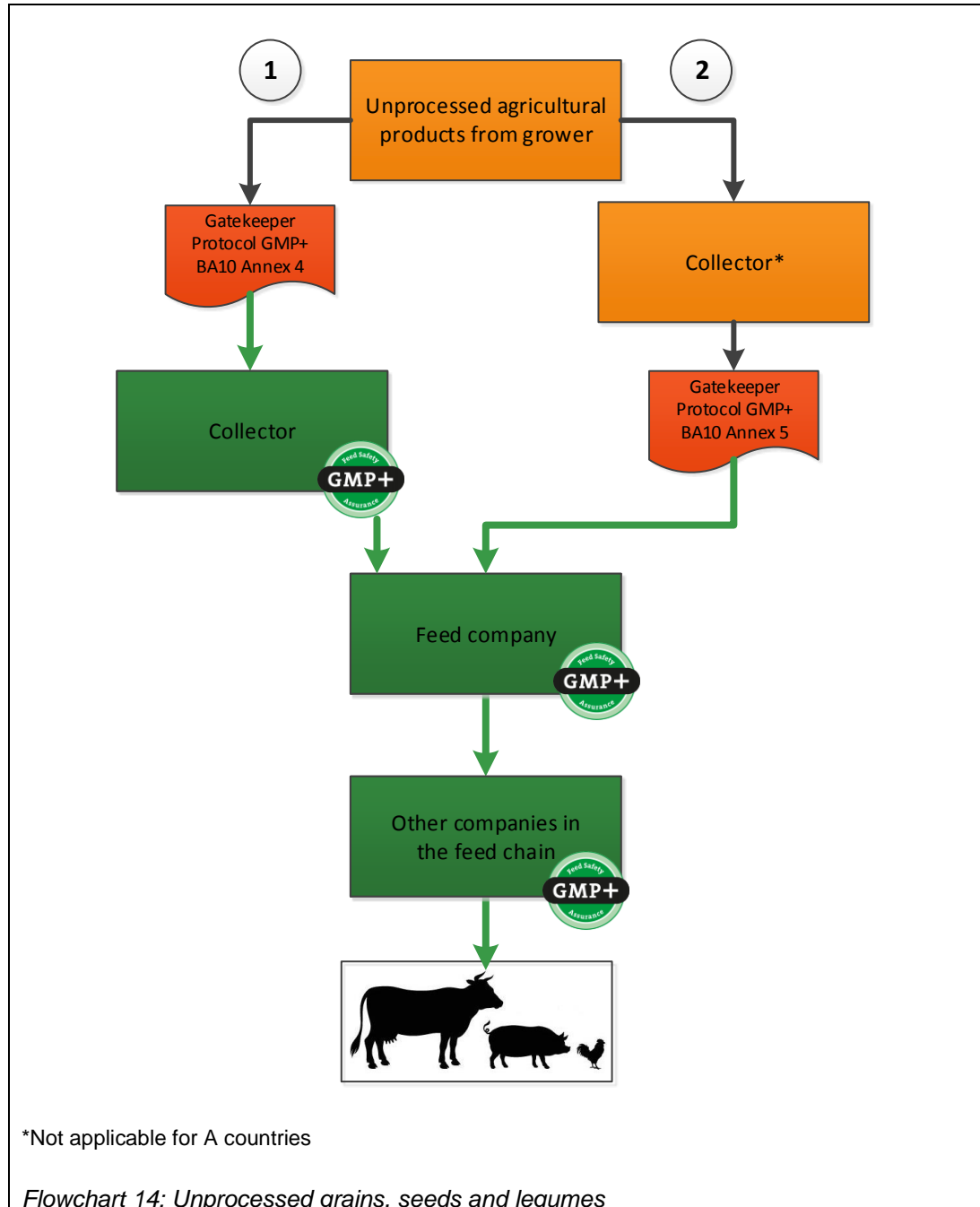
GMP+ International has a special database with information that can support in carrying out a hazard analysis: FSP (Feed Support Products). Its interactive nature and the information contained in it, offers a massive source of data which can be used in defining the risks of the feed ingredients bought but also in drawing up the HACCP plans. The FSP database can provide information about: the production process of feed materials, possible hazards, facts about hazards, the limits and monitoring data. Go to the FSP database and search the feed ingredients purchased to find the accepted products.

Flowchart 13 shows the purchase of (former) foodstuffs.



### 4.3 Unprocessed grains, seeds and legumes

Unprocessed grains, seeds and legumes can be purchased via a gatekeeper protocol. Within the GMP+ purchasing requirements, there are two options to use a gatekeeper protocol, which are also shown in *flowchart 14*.



#### Option 1: Purchase directly from the grower

As there are no GMP+ certified growers (these companies are not included in the scope of GMP+ certification), it is possible to buy unprocessed grains, seeds and legumes directly from a non-certified grower. In this case the first GMP+ participant in the chain must implement gatekeeper requirements.



The first GMP+ participant in the chain can be a collector (as shown in *flowchart 4*), but it can also be a compound feed producer. In all cases, the products must be purchased directly from the grower.

The applicable gatekeeper protocol can be found in the GMP+ BA10 *Minimum requirements purchase*, Annex 4 “Gatekeeper protocol for purchase of unprocessed agricultural products from the grower”.

When a collector purchases grain however the destination is unknown (either food or feed), the collector must make sure that products comply with requirements of the GMP+ BA10 Annex 4 gatekeeper option. When the collector does not comply with requirements, it cannot sell products to GMP+ certified companies.

#### **Option 2: Purchase from an uncertified chain (non A countries)**

It is also possible to purchase unprocessed grains, seeds and legumes from a completely un-certified chain. In this case both the grower and also the collector has no GMP+ certificate. Also in this case the first GMP+ participant in the chain must implement gatekeeper requirements.

The applicable gatekeeper protocol can be found in the GMP+ BA10 *Minimum requirements purchase*, Annex 5 “Gatekeeper protocol for purchase of grains, seeds and legumes”. This gatekeeper protocol is limited to certain countries of origin and cannot be used within ‘A-countries’.

When a company purchases grain however the destination is unknown (either food or feed), the company must make sure that products comply with requirements of the GMP+ BA10 Annex 5 gatekeeper option. When the company does not comply with requirements, it cannot sell products to GMP+ certified companies.

For more information about gatekeeping see paragraph 3.3.

GMP+ International has a special database with information that can support in carrying out a hazard analysis: FSP (Feed Support Products). Its interactive nature and the information contained in it, offers a massive source of data which can be used in defining the risks of the feed ingredients bought but also in drawing up the HACCP plans. The FSP database can provide information about: the production process of feed materials, possible hazards, facts about hazards, the limits and monitoring data. Go to the FSP database and search the feed ingredients purchased to find the accepted products.

#### **4.4 Biofuels sector**

Also from the production process of biofuels, certain by-products are produced which are designated for feed. Because in this case this is not a foodstuffs producing company but a technical factory, the application of the HACCP system is not legally mandatory for the biodiesel manufacturer or its previous links.

GMP+ certification begins at the point where by-products are created that are used as feed.

The raw materials for the biofuel producer do not have to be bought from GMP+ certified suppliers. Within the framework of GMP+ certification, the producer carries out a proper hazard analysis according to the HACCP principles (more information GMP+ D2.1 *Guidelines HACCP GMP+*).

On the basis of the result of this hazards analysis and also on the quality assurance which is applied by the supplier, the GMP+ certified company will make a selection of suppliers and will adjust his (entry) check accordingly.

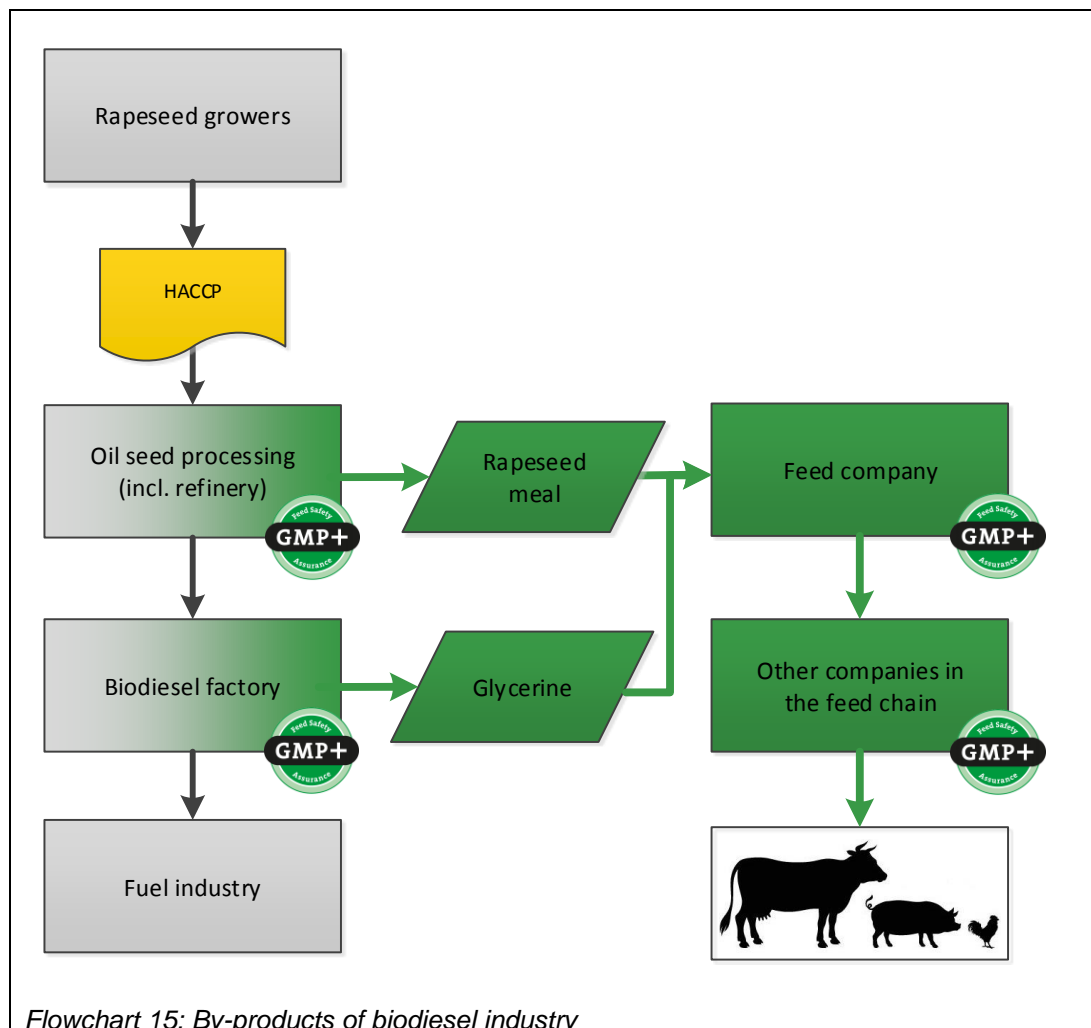
GMP+ International has a special database with information that can support in carrying out a hazard analysis: FSP (Feed Support Products). Its interactive nature and the information contained in it, offers a massive source of data which can be used in defining the risks of the feed ingredients bought but also in drawing up the HACCP plans. The FSP database can provide information about: the production process of feed materials, possible hazards, facts about hazards, the limits and monitoring data. Go to the FSP database and search the feed ingredients purchased to find the accepted products.

Two examples are worked out in the next paragraphs.

#### 4.4.1 By-products of biodiesel industry

During the production of biodiesel from rapeseed, the by-products rapeseed meal and glycerin are created which are designated as feed. The scope of the GMP+ feed safety management system stretches from the moment when these by-products are created up to and including the sale in the feed sector.

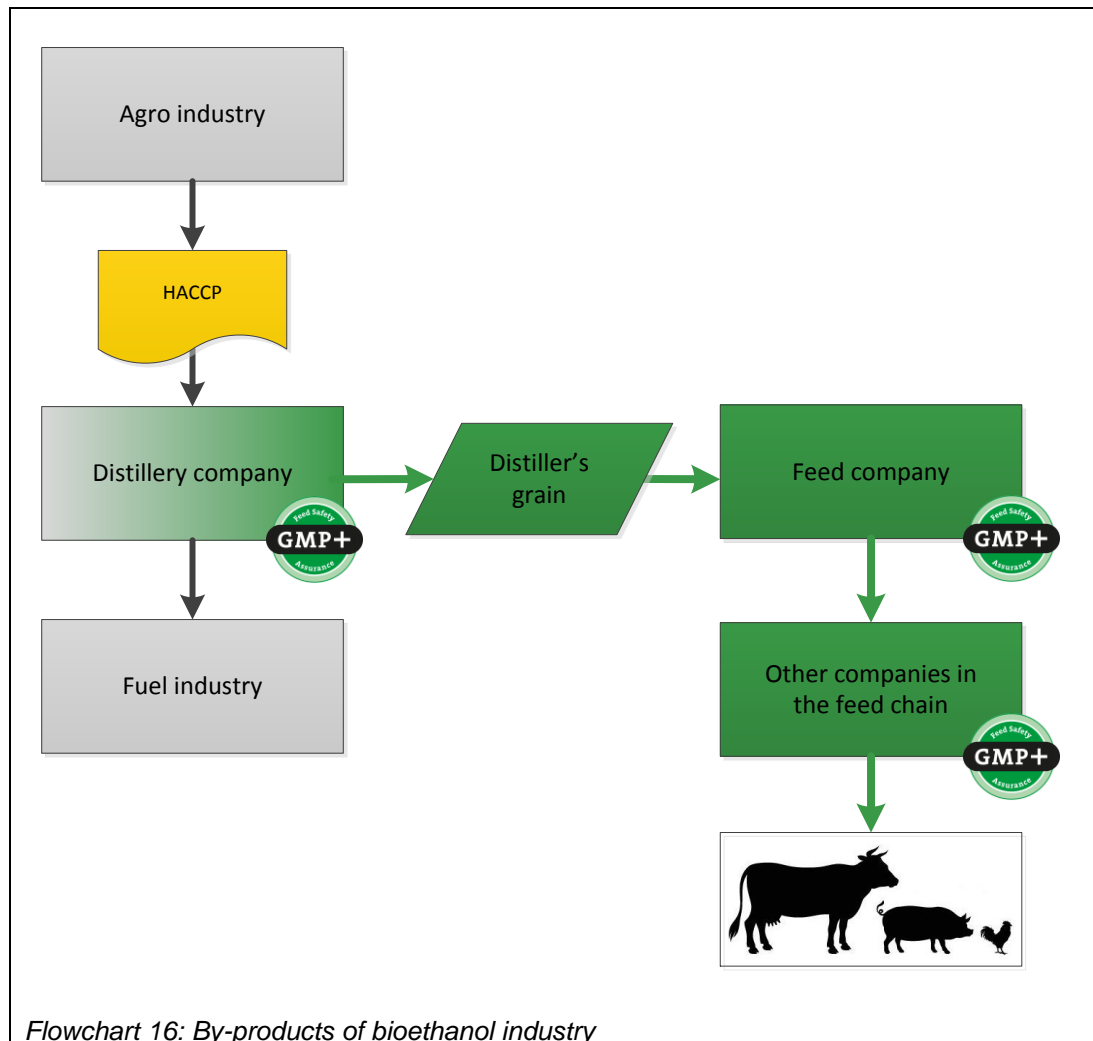
*Flowchart 15* shows the production of by-products of the biodiesel industry.



4.4.2 By-products of bioethanol

During the production of bioethanol the by-product distiller's grain is created which is designated as feed. The scope of the GMP+ feed safety management system stretches from the moment when these by-products are created up to and including the sale in the feed sector.

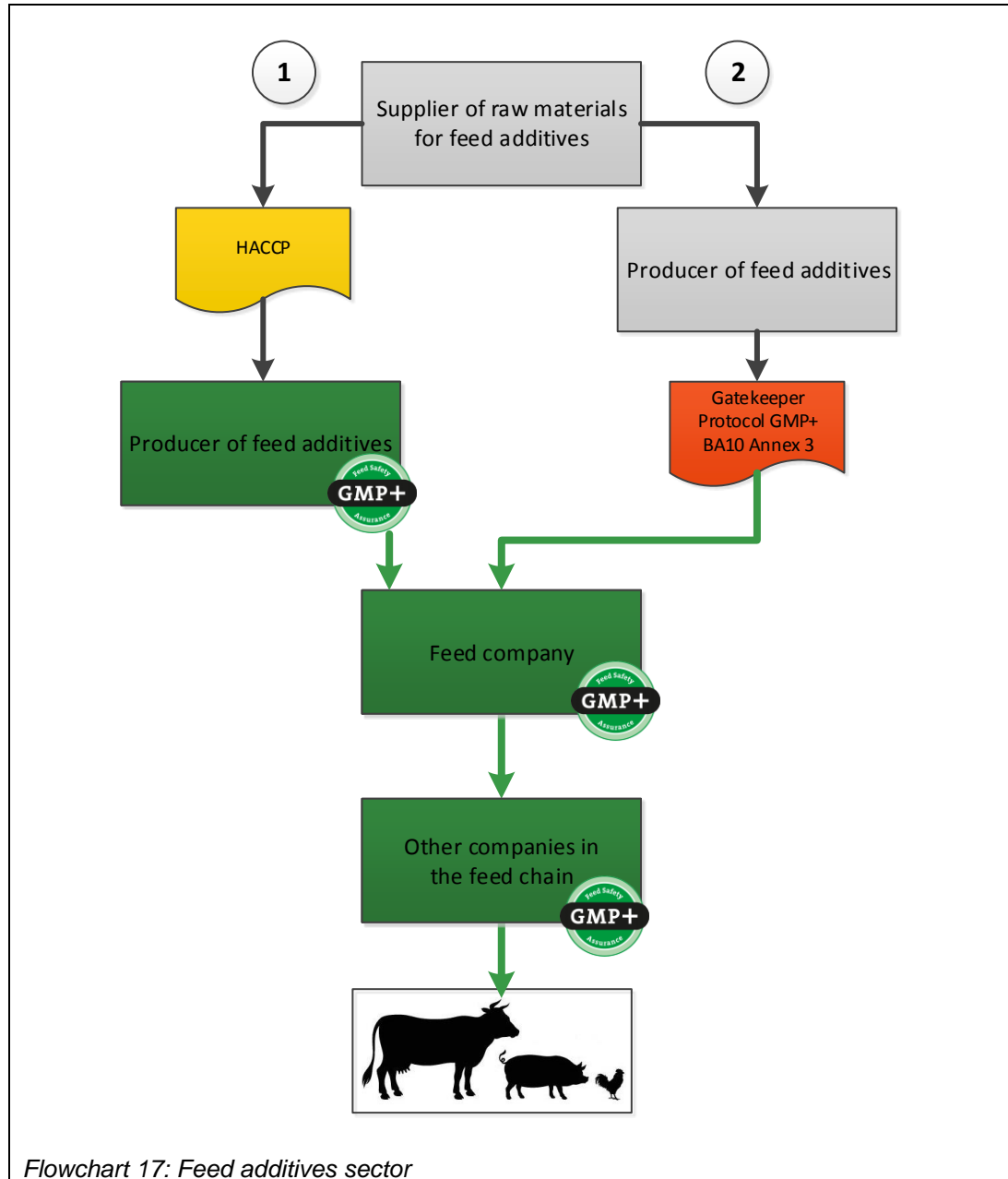
*Flowchart 16* shows the production of by-products of the bioethanol industry.



*Flowchart 16: By-products of bioethanol industry*

#### 4.5 Feed additives sector

GMP+ certification can start at the company where a feed additive is produced for feed. But via a gatekeeper protocol it is also possible to buy a feed from a non-certified supplier. Both options are worked out in *flowchart 17*.



##### Option 1: Feed additive producer is GMP+ FSA certified

In this situation, the GMP+ certification starts at the point where the feed additive is produced. The scope of the GMP+ feed safety management system of the feed additive producer must include the production of the feed additives up to and including its sale to the feed company.

The raw materials for feed additive production do not have to be bought from GMP+ certified suppliers. Within the framework of GMP+ certification, the feed additive producer carries out a proper hazard analysis according to the HACCP principles (more information GMP+ D2.1 *Guidelines HACCP GMP+*).

On the basis of the result of this hazards analysis and also on the quality assurance which is applied by the supplier, the GMP+ certified company will make a selection of suppliers and will adjust his (entry) check accordingly.

#### **Option 2: Purchase from an uncertified chain**

It is also possible to purchase feed additives from a completely un-certified chain. The GMP+ certified feed company (for example a premixture company) is allowed to purchase feed additives from a non-GMP+ certified supplier or a producer of feed additives. The GMP+ certified company should however comply with a number of additional so-called Gatekeeper requirements. These are included in GMP+ BA10 *Minimum requirements purchase*, Annex 3 "Gatekeeper protocol for purchase of additives".

In both cases, the legal requirements for feed additives must be met. This means, for example, that for feed additives that are produced and / or sold on the European market, the European regulation VE 1831/2003 applies. All feed additives must be included in the list of approved feed additives in order to be used within GMP+ certification.

#### **4.6 Mineral feed materials (mines)**

For the production of feed materials or feed additives sometimes raw materials come from mines. The products mined from the mines are not considered a feed material yet but a raw material which the GMP+ company processes into a feed material. Because the mine is not producing feed, GMP+ is not required.

The processing GMP+ company purchasing the raw materials from a mine need to conduct a hazard analysis according to the HACCP principles (more information GMP+ D2.1 *Guidelines HACCP GMP+*) to make sure the raw materials are safe. In case the mine is also processing the raw material into a feed material, the activities of the production of the feed should be covered in the feed safety management system.

Stones from a mine are only raw materials when they are not milled more than once and not dried. As soon as the stones are processed they will be considered as feed material and the company responsible for processing needs to become GMP+ certified.

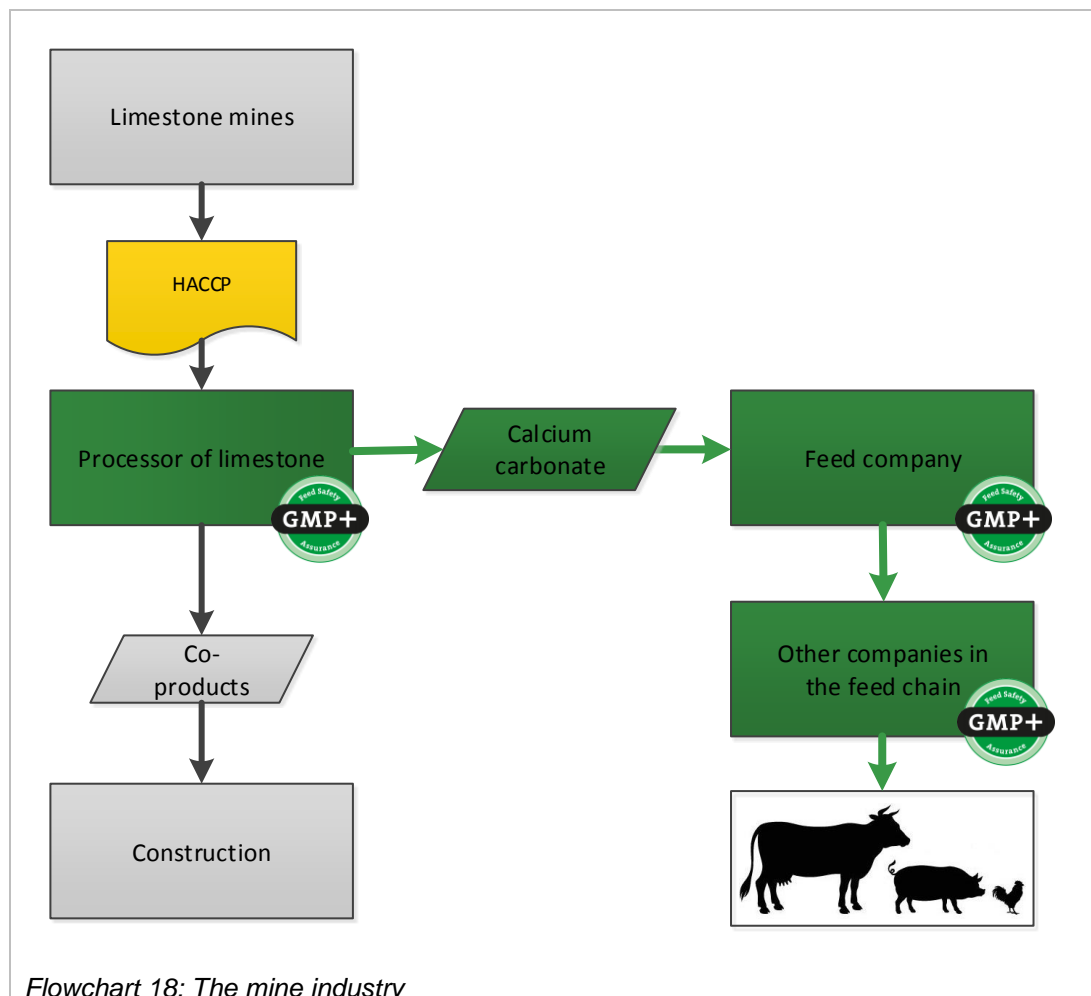
The status of a product, given by the company, is not leading. GMP+ requirements, including GMP+ certification, are applicable when the product meets the description of a feed material based on the Feed Catalogue eg. (EG) 68/2013 and/or FSP Productlist. European companies should also be registered according Reg. (EG) 185/2005.

It is possible that on one site the stones are mined and is processed into feed materials (production of feed materials) and a part will be sold for other purpose. The site then needs to become GMP+ certified for the feed material production process they carry out.

The part of the mined products that is not processed can be sold as raw materials outside the GMP+ scope.

*Flowchart 18* is an example of the process and shows where GMP+ certification begins.

GMP+ International has a special database with information that can support in carrying out a hazard analysis: FSP (Feed Support Products). Its interactive nature and the information contained in it, offers a massive source of data which can be used in defining the risks of the feed ingredients bought but also in drawing up the HACCP plans. The FSP database can provide information about: the production process of feed materials, possible hazards, facts about hazards, the limits and monitoring data. Go to the FSP database and search the feed ingredients purchased or “calcium carbonate” produced, to find the accepted products.



*Flowchart 18: The mine industry*

#### 4.7 Producing feed materials out of other feed materials

In some cases a company produces a new feed material out of other feed materials (in this case to be considered as raw materials). The producer of the new feed material is to be considered as the starting point of the feed chain. The feed materials ('raw materials') which the company purchases, do not necessarily have to be purchased from certified companies. The original feed material needs to 'disappear' due to combined chemical reactions resulting in a new molecule structure.

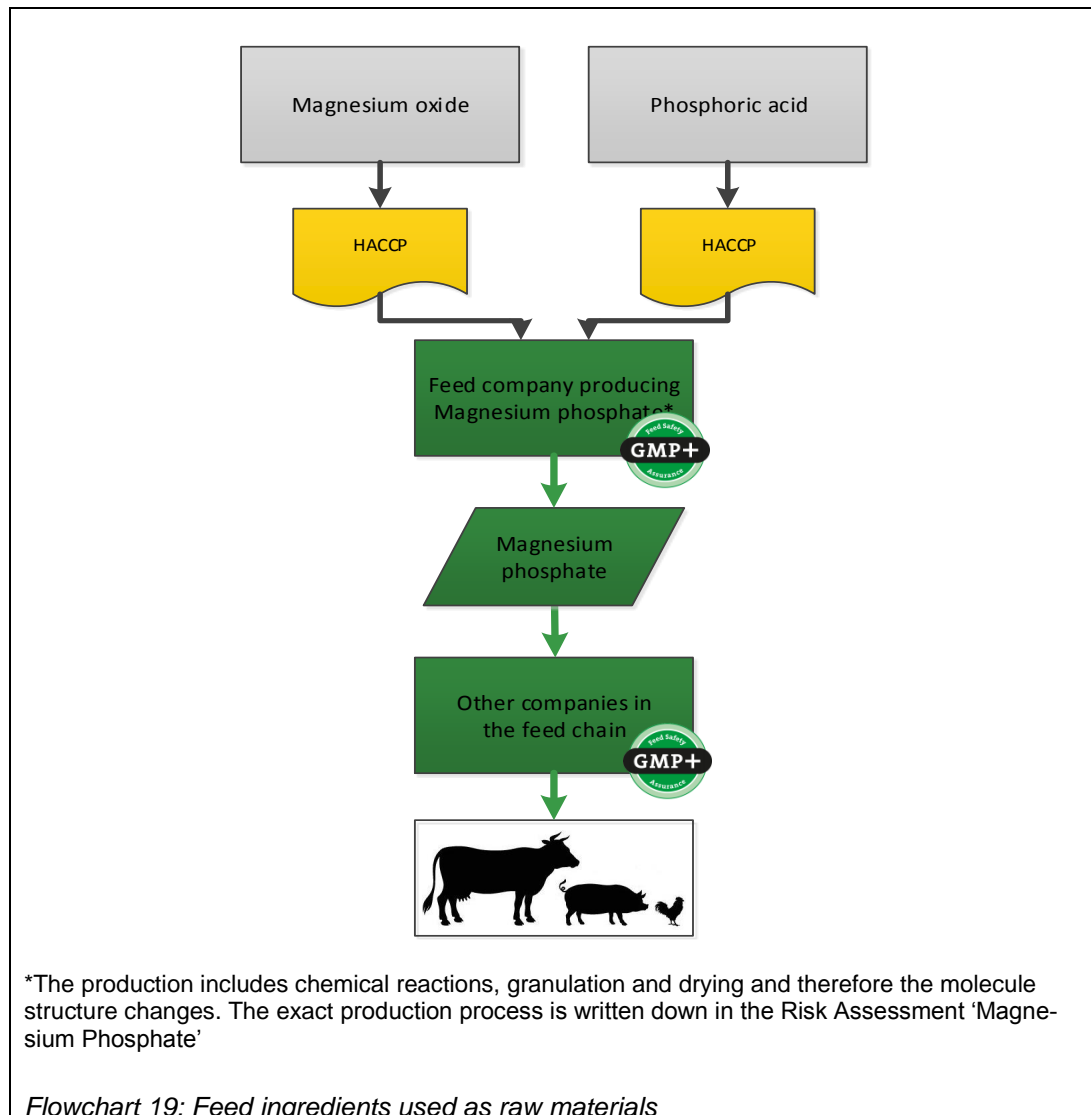
This is not an option for companies who produce products from oils and fats. In case of any doubts or questions please always contact GMP+ International to make sure the requirements are understood and used accordingly.

For the production of, for example, magnesium phosphate, the feed material magnesium oxide is used. The supplier of the magnesium oxide does not have to be certified for GMP+, but the producer of magnesium phosphate must carry out a proper hazard analysis according to the HACCP principles (more information GMP+ D2.1 *Guidelines HACCP GMP+*). Based on the results of this hazards analysis, and also on the quality assurance which is applied by the supplier, the GMP+ certified producing company will make a selection of suppliers and will adjust his (entry) check accordingly.

NOTE: The company that purchases the non-certified magnesium oxide cannot sell this as GMP+ certified feed material.

GMP+ International has a special database with information that can support in carrying out a hazard analysis: FSP (Feed Support Products). Its interactive nature and the information contained in it, offers a massive source of data which can be used in defining the risks of the feed ingredients bought but also in drawing up the HACCP plans. The FSP database can provide information about: the production process of feed materials, possible hazards, facts about hazards, the limits and monitoring data. Go to the FSP database and search the feed ingredients purchased to find the accepted products.

*Flowchart 19* gives an example of the production of a feed material using a feed material as raw material.



#### 4.8 Insects and insect products

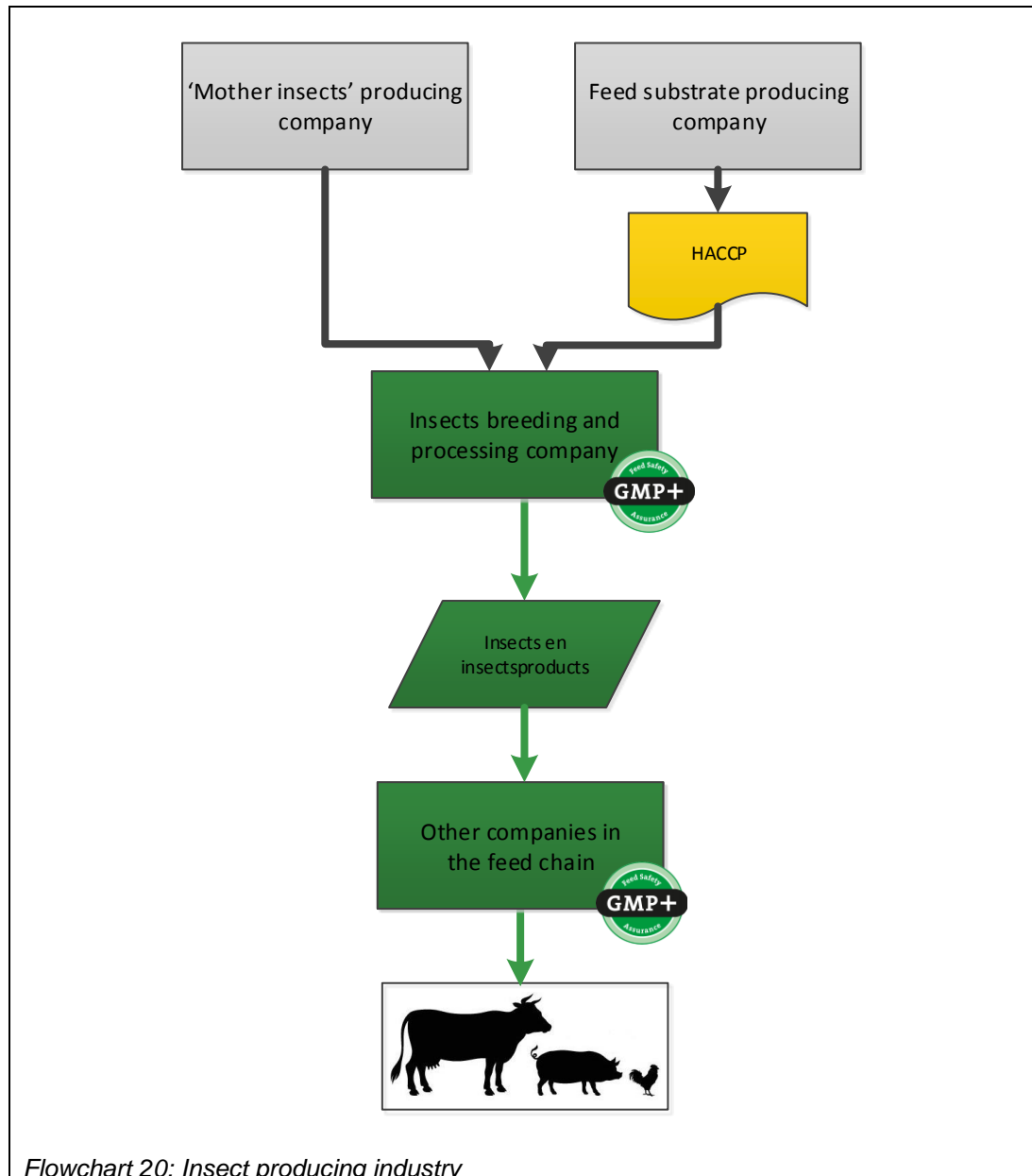
In Europe it is allowed to use insects and insect products in feed. The companies who produce these insects and insect products are producers of feed materials. They need to assure the safety of the products and demonstrate as such with a GMP+ certificate.

The nutrition they purchase to feed their insects does not need to be GMP+ certified, HACCP principles are applicable. Neither do the mother insects used to breed the insects. The mother insects are not intended to be used as feed and only used for breeding. In *flowchart 20* the process is defined.

Within the framework of GMP+ certification, the insect processing company carries out a proper hazard analysis according to the HACCP principles (more information GMP+ D2.1 *Guidelines HACCP GMP+*). On the basis of the result of this hazards analysis and also on the quality assurance which is applied by the supplier, the GMP+ certified company will make a selection of suppliers and will adjust his (entry) check accordingly.



GMP+ International has a special database with information that can support in carrying out a hazard analysis: FSP (Feed Support Products). Its interactive nature and the information contained in it, offers a massive source of data which can be used in defining the risks of the feed ingredients bought but also in drawing up the HACCP plans. The FSP database can provide information about: the production process of feed materials, possible hazards, facts about hazards, the limits and monitoring data. Go to the FSP database and search the feed ingredients purchased or “insects” produced, to find the accepted products.



Flowchart 20: Insect producing industry

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