IMPORT PROMOTION DESK

Traceability

How to use the “IPD Guide on Traceability”

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+ This guide is a resource to help you and your company better understand the topic of “traceability”. It is not a comprehensive guide to all traceability concerns in any industry, but is instead a “key issues” guide to topics every international operating company should know about.

In this guide, you will learn:

- ✓ What traceability actually means
- ✓ What the historic roots of traceability are
- ✓ Why traceability is something your company should apply
- ✓ What the difference between documentary and physical traceability is
- ✓ Whom of your company should be part of the “Traceability Team”
- ✓ How a flow chart can help you to establish a traceability system
- ✓ Why a batch number is key
- ✓ What you have to consider in each single processing step with regard to traceability
- ✓ Where you can find additional information about traceability

Explanation
What is traceability?

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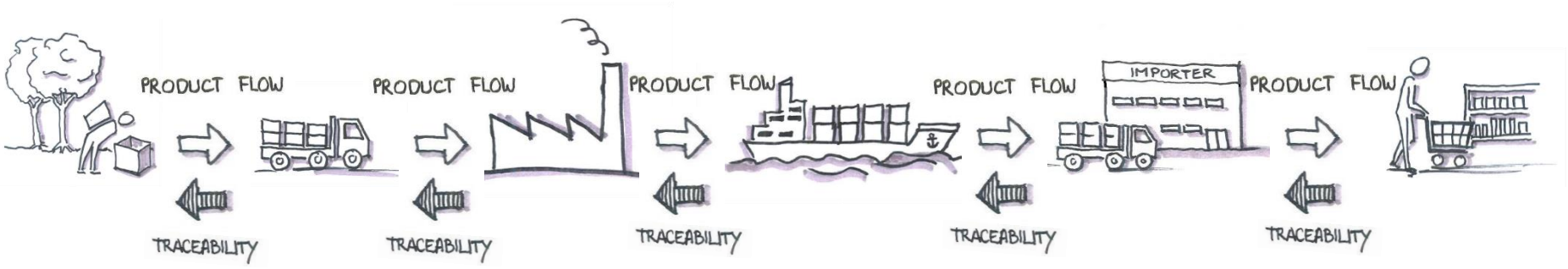
+ **Definition of traceability:**

> Traceability is the ability to identify and trace the history, distribution, location and application of products, parts and materials, to ensure the reliability of sustainability claims.

Source: UN Global Compact & BSR „A Guide to Traceability“, 2014, p. 6.



Explanation
History of traceability

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+ Already in the beginning of the 20th century, the notion of traceability developed. Originally, it was important to producers and consumers to **prove the geographical origin of a product**, such as champagne from the region of Champagne in France.

+ Over the past two decades, food safety related issues and **various food scandals in the agribusiness sector have highlighted the importance of traceability**, which supports health and **food safety** by **increasing the possibility to track the origin of defective goods by tracing food through the production and distribution chain.**

+ Today, traceability is furthermore **important because the demand for organic, fair trade and environmentally friendly products** is increasing. Producers must prove to consumers where and under what circumstances their products were produced.

Source: UN Global Compact & BSR „A Guide to Traceability“, 2014.

Explanation
Why should I apply traceability?

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\+ There are some strong reasons why producers and companies should take on the implementation of a traceability system!

✓ A quick **detection of quality failures** within the production chain is possible!

✓ International **certifications** such as ISO, organic or fair trade require traceability!

✓ **Production processes** in your company become more efficient and consistent!

✓ National and international clients ask for traceability; your company's **reputation increases**!

✓ Traceability is a **legal requirement** in many countries and regions (see i.e. General Food Law Regulation of the EU).

Explanation
Documentary and physical traceability

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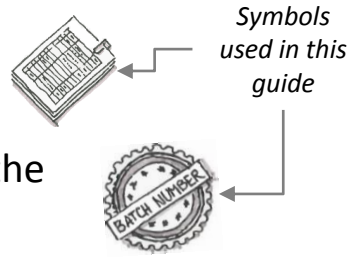
+ A traceability system consists of two different components:
  - **Documentary traceability** = the written information about the product
  - **Physical traceability** = the identification of the product origin on the product itself



+ This means, you have to **document in writing** the path of your product(s) within your company; at the same time you have to **label the product(s)** in order to know which written documentation corresponds to which product(s). **Documentary and physical traceability always need to correspond! One component of traceability is useless without the other.**

Preparation
Selection of a traceability team

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+ The first step is to **define a team, which will design and monitor the traceability system**. It depends on the size and the nature of your company, how many people will be part of your team.

+ Typical **members of the traceability team** can (but must not) be:
    - A traceability team leader, usually from the higher management
    - One responsible person from each production step
    - Persons responsible for quality control and management

+ The team should at first design the traceability system, but then continue to **meet regularly to monitor**, if the system is correctly implemented and if it works.

Preparation
Development of a product flow chart

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+ The traceability team should get together and draw a production **flow chart of your product(s).**

+ A production flow chart is a **simple visualization of the path a product takes** – beginning at the point of entry into your company's responsibility and ending at the point of exit.

+ In the flow chart, the traceability team needs to:
  - **Describe each point of entry and exit of a product at a production location!**
    A production location can be the production field, the area of wild collection of a product, the storage rooms of raw materials, the different points of transformation processes, the storages of the final products, etc.

Examples
Different kinds of product flow charts

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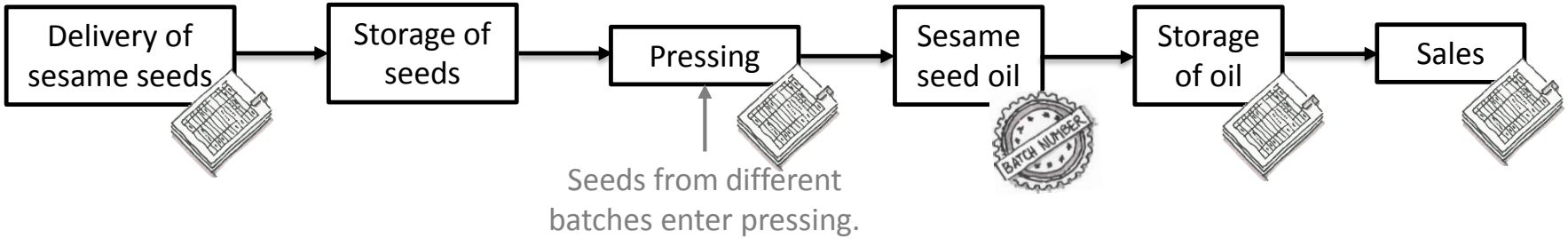
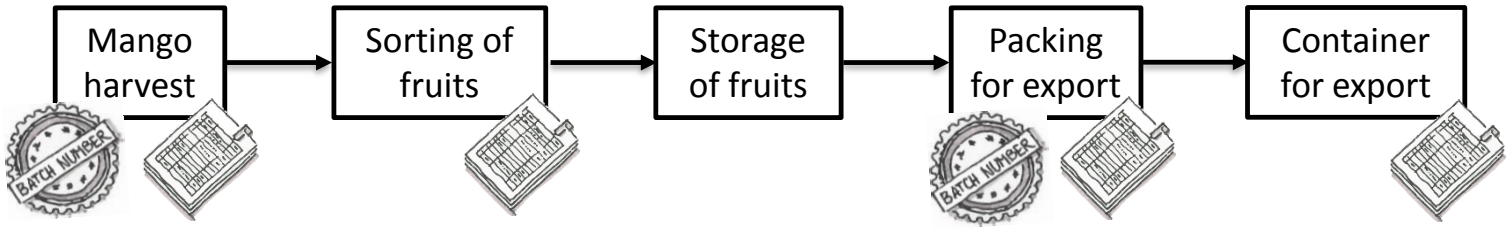
+ REMEMBER: Your traceability system needs to cover the product path only for the time when a product is under your company's control and responsibility. Therefore, **each product flow chart is unique depending on the setup of your company**.

+ Example: A company is producing sesame oil from seeds cultivated by different farmers.



+ Example: A company is producing fresh mangos on their own fields for export.



= physical

= documentation

Examples
Different kinds of product flow charts

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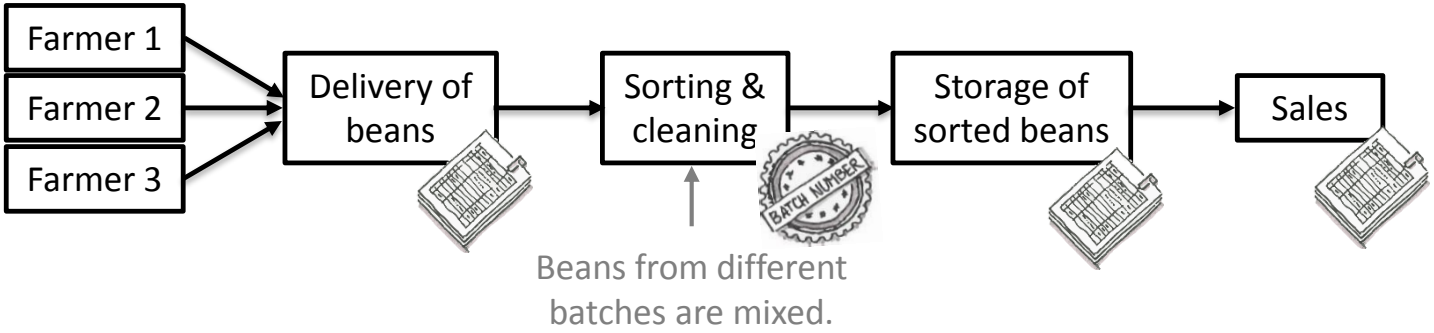
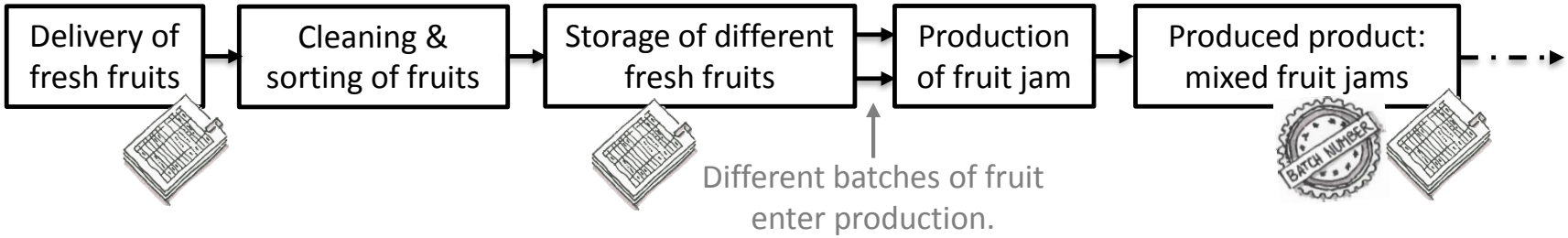
+ IMPORTANT: Your flow chart should show all points where a product either enters or exits a production location – not more and not less. This is important because these are the **points at which you will monitor and document the product for your traceability system**.

+ Example: A company is producing beans, cultivated by farmers under *contract farming*.



+ Example: A company is producing fruit jams of fruits bought from different suppliers.



Implementation
Documentary traceability

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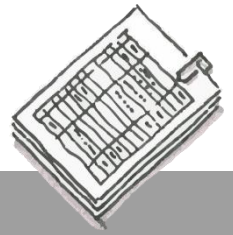
+ **Documentary traceability registers the production flow in writing.** The documents, in which you collect the data do not need to be computer-based.

+ **Data will be registered in tables.** Those tables can be:
  - ✓ Hand-written tables in a book or folder
  - ✓ Excel tables on the computer
  - ✓ Tables provided by a traceability software program (for advanced traceability systems!)

+ You need to **define which person is responsible** for entering the data and which person for verifying it (different persons!). **Use the four-eyes principle!** This means the data is looked at by two different persons in order to avoid mistakes.



Implementation
Physical traceability

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+ Physical traceability reflects the documentary traceability on the actual product. **Physical and documentary traceability are linked. One refers to the other.**

+ Products are identified by numbers, so called **batch or lot numbers**. Batch numbers need to be **attached clearly to the product itself**.

+ For producing the physical batch numbers you might need:
  - ✓ A printer or white paper for handwritten batch numbers
  - ✓ Stickers, transparent paper covers, scotch tape, etc. to attach to bags, containers, etc.
  - ✓ Technical equipment for a bar code system (only for advanced traceability systems!)

+ Of course, you also need to **define responsible persons** for this step of traceability.

Implementation
Raw material harvest/collection

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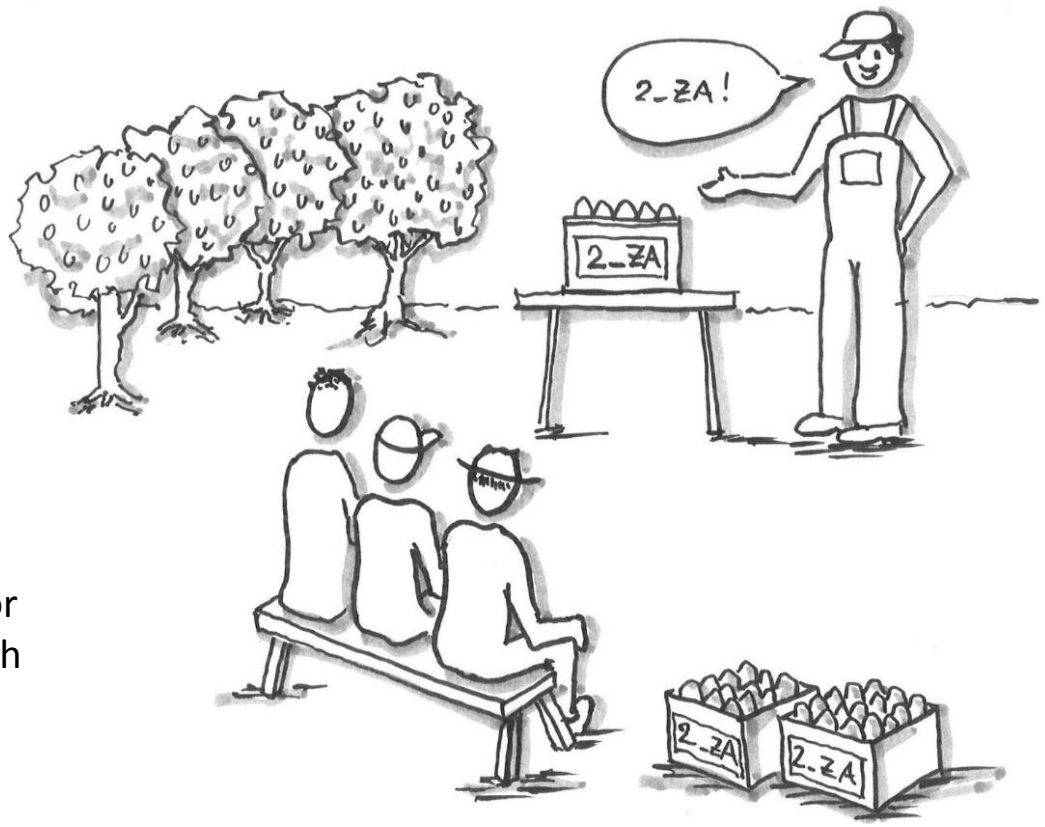
+ This step of traceability only applies to your company, if **your company is responsible for the cultivation or collection of the raw material**. If you purchase your raw materials from another company, that company should implement their own traceability measures. In this case, your company must document and understand the incoming batch numbers of the supplier(s).

+ If you work with smallholder farmers or collectors groups, you should work with them on their traceability.
This is in your own interest!



Implementation
Raw material harvest/collection

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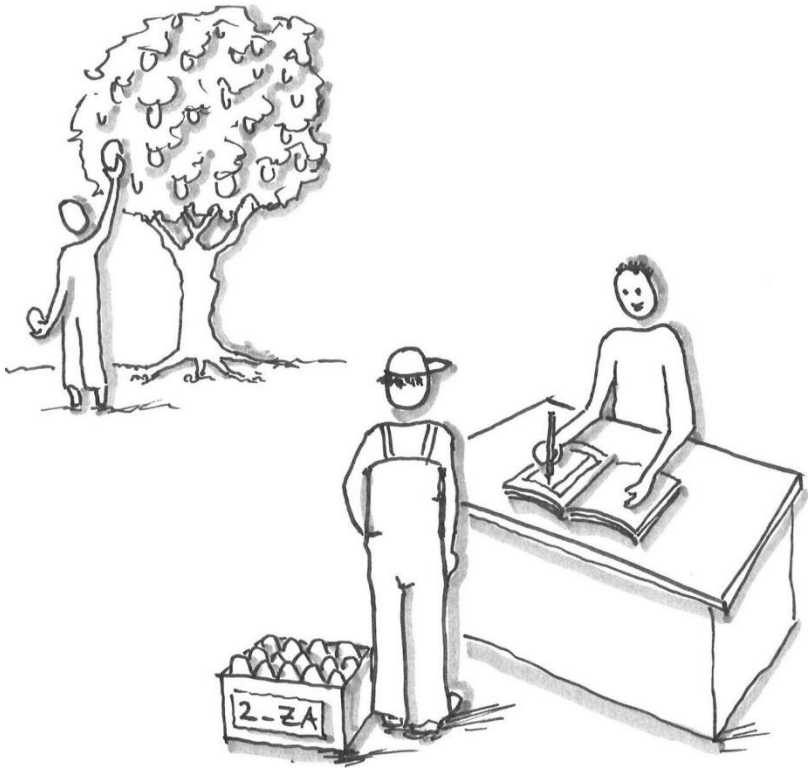
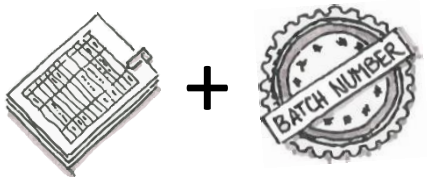
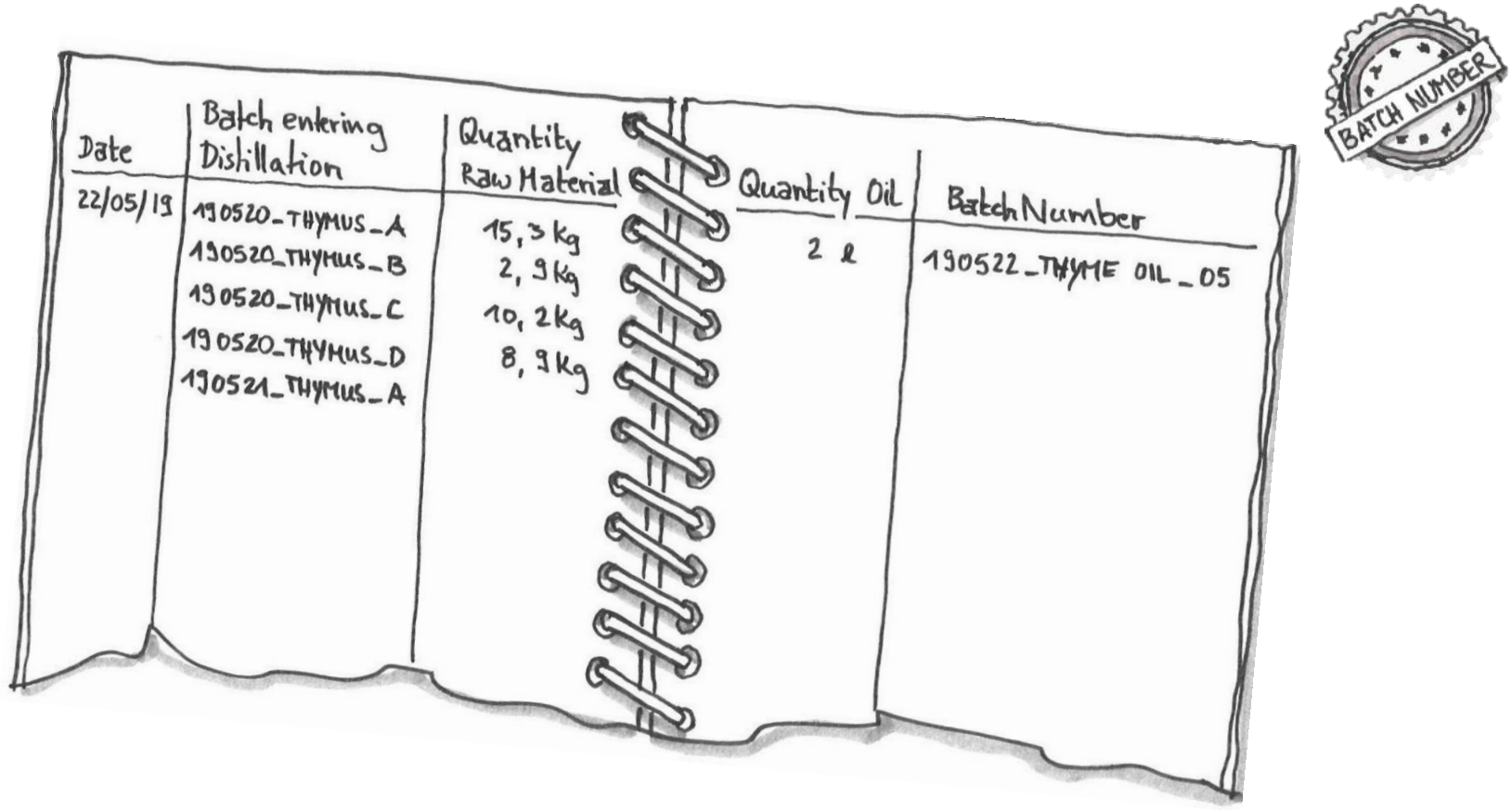
+ **During the harvest or collection of raw material, the following information should be written down in the documentary traceability:**
  - ✓ Date of harvest
  - ✓ Botanical name of the harvested product
  - ✓ Quantity
  - ✓ Harvesting location / zone
  - ✓ Batch number particularly created for this harvested product

+ **The batch number is attached to the harvested/collected product(s) – physical traceability.**





Examples
Traceability during harvest



+ **Hint:** In addition to the necessary information, you can add information which is important to you, e.g. the name of the farmer/collector etc.

Implementation
How to create a batch number

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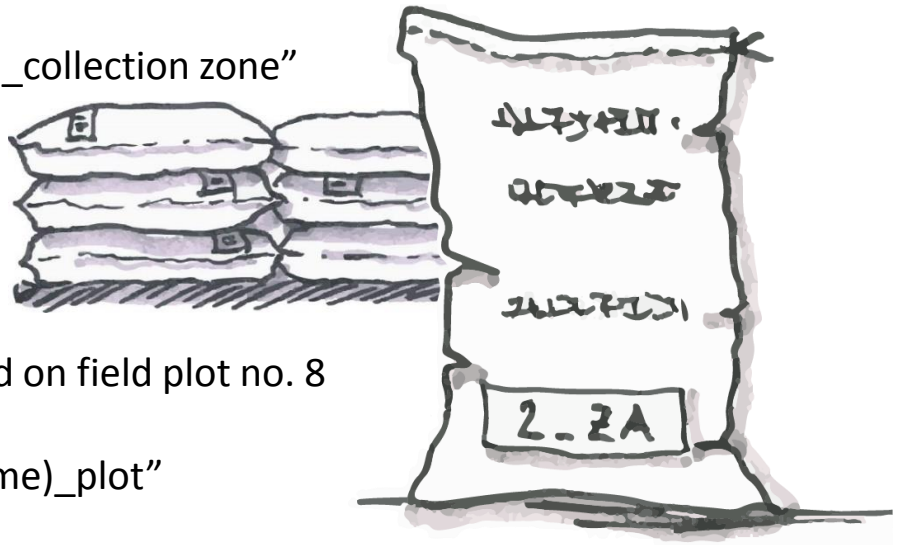
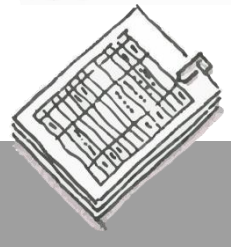
+ In the case of raw material traceability, it is recommendable to **create a batch number for the harvest/collection of each day in each defined zone**.

+ Example: The batch number of thyme leaves collected in zone A (e.g. one village or one collectors group) on the 20th of May 2019 could be:
"Collection date_raw material (botanical name)_collection zone"
= "190520_THYMUS_A"



+ Example: The batch number of lentils harvested on field plot no. 8 on the 5th of August 2018 could be:
"Harvest date_product (botanical name)_plot"
= "180805_LENS CULINARIS_8"



Implementation
Reception at the processing site

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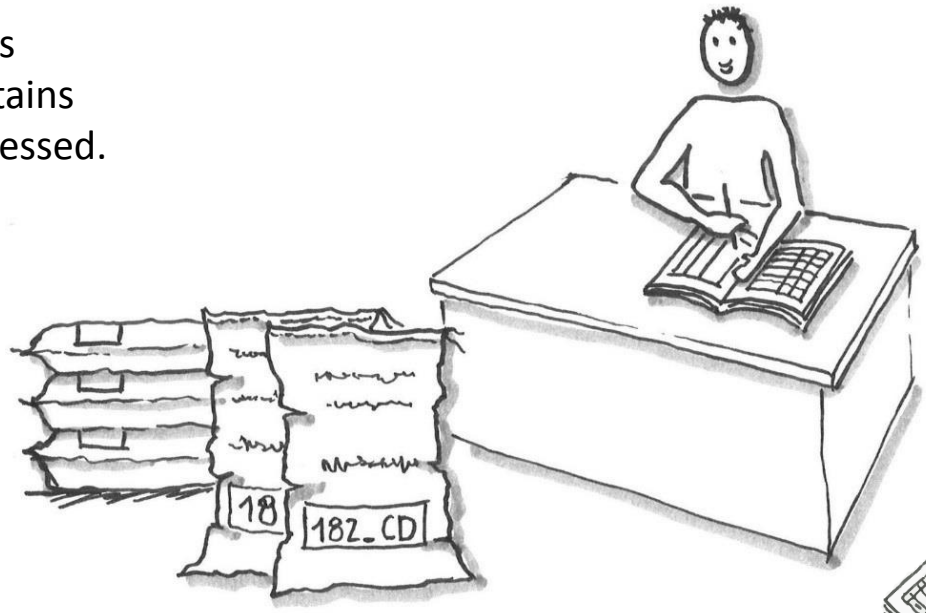
+ When the raw material arrives **at your company's processing side, you need to register the following information** – regardless if it is your own raw material or material purchased from another company:
  - ✓ Date of reception
  - ✓ Number of received batch(es) (see batch number created in the previous step)
  - ✓ Received quantities

+ The raw material is stored in the stocks of the processing site and normally retains the same batch number until it is processed.

+ When raw material is taken from the storage for processing, make sure to use the oldest lot first ("first-in-first-out-principle"). Record the amount and the batch number.



Implementation
Processing/transformation of product(s)

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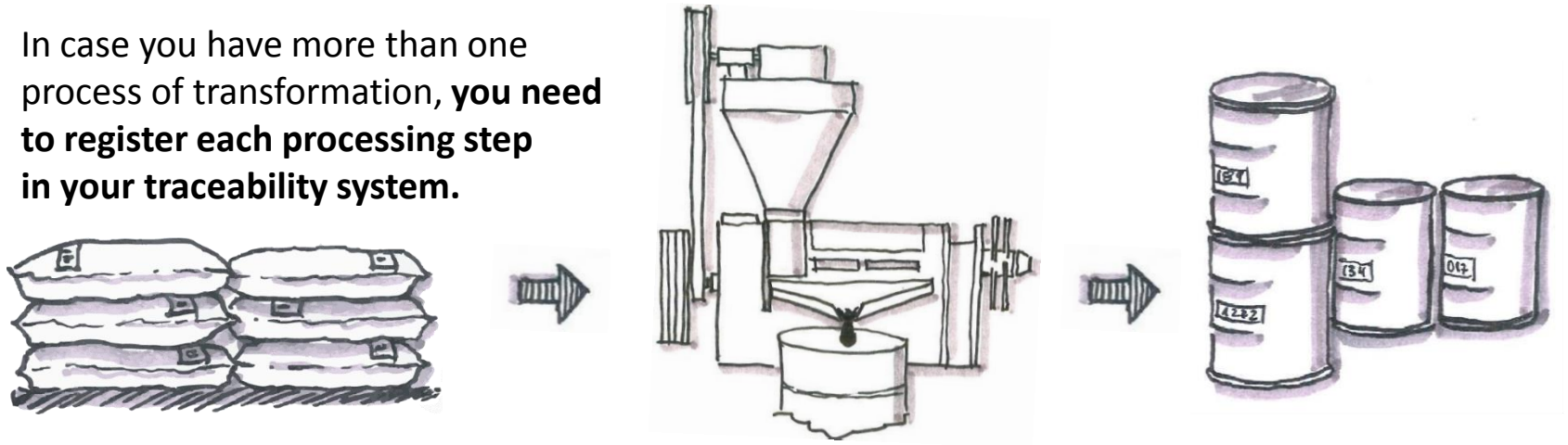
+ A processing step defines a **transformation of a product (e.g. a raw material) into a new product**. Also, two or more ingredients can be mixed and transformed into a new product.

+ **When a processing step starts, you need to register (in a checklist) the following information:**
  + Processing date (often also the exact time)
  + Staff that is responsible for the processing step at this moment
  + Batch numbers of *all* products entering the processing (preferably only one batch number per product is processed at the same time; different products can enter the same processing step)
  + Quantities of products entering processing
  + Quantity of final product obtained after processing
  + The processing line (if several existing) on which the batch number is processed
  + Results of quality checks (e.g. temperature control)

+ In case you have more than one process of transformation, **you need to register each processing step in your traceability system.**



Implementation
Changing the batch number

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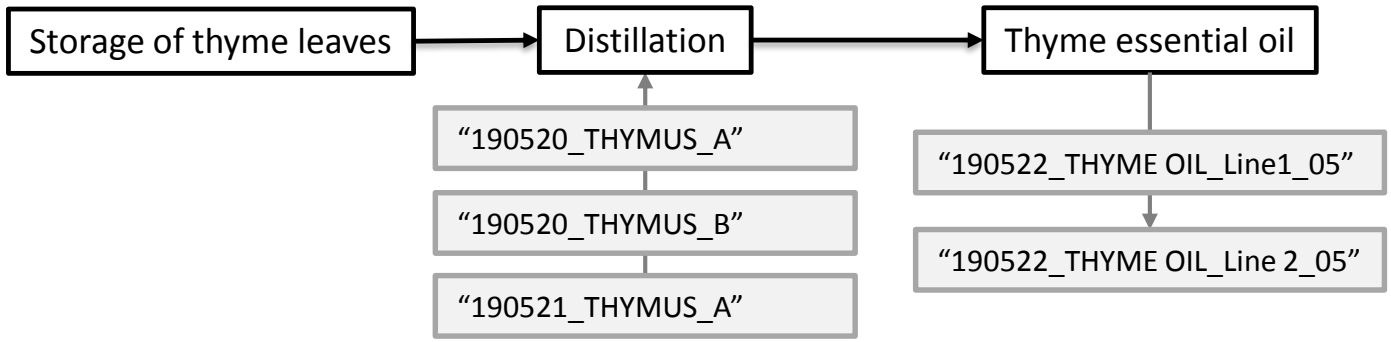
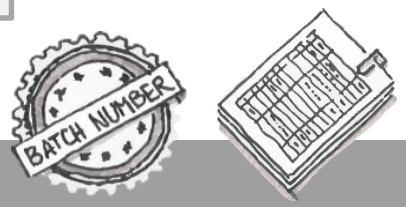
- **When a new product is created, a new batch number must also be created.**
- Example: Several batches of thyme leaves from the example above are distilled to produce thyme essential oil on 22nd of May 2019. The new batch number of the oil could be "**Processing date_product_numbering of production process** (if production process is repeated several times/day)"= "190522_THYME OIL_05"
- Please consider:
  - When several **processing lines** are existing, you need to indicate the line where you produced the batch in the batch number, e.g.: "190522_THYME OIL_**Line1**_05"
  - If in a more complicated production process **new raw material enters the process** at different steps, the batch number needs to be always adapted.





Implementation
Documentation during product sales

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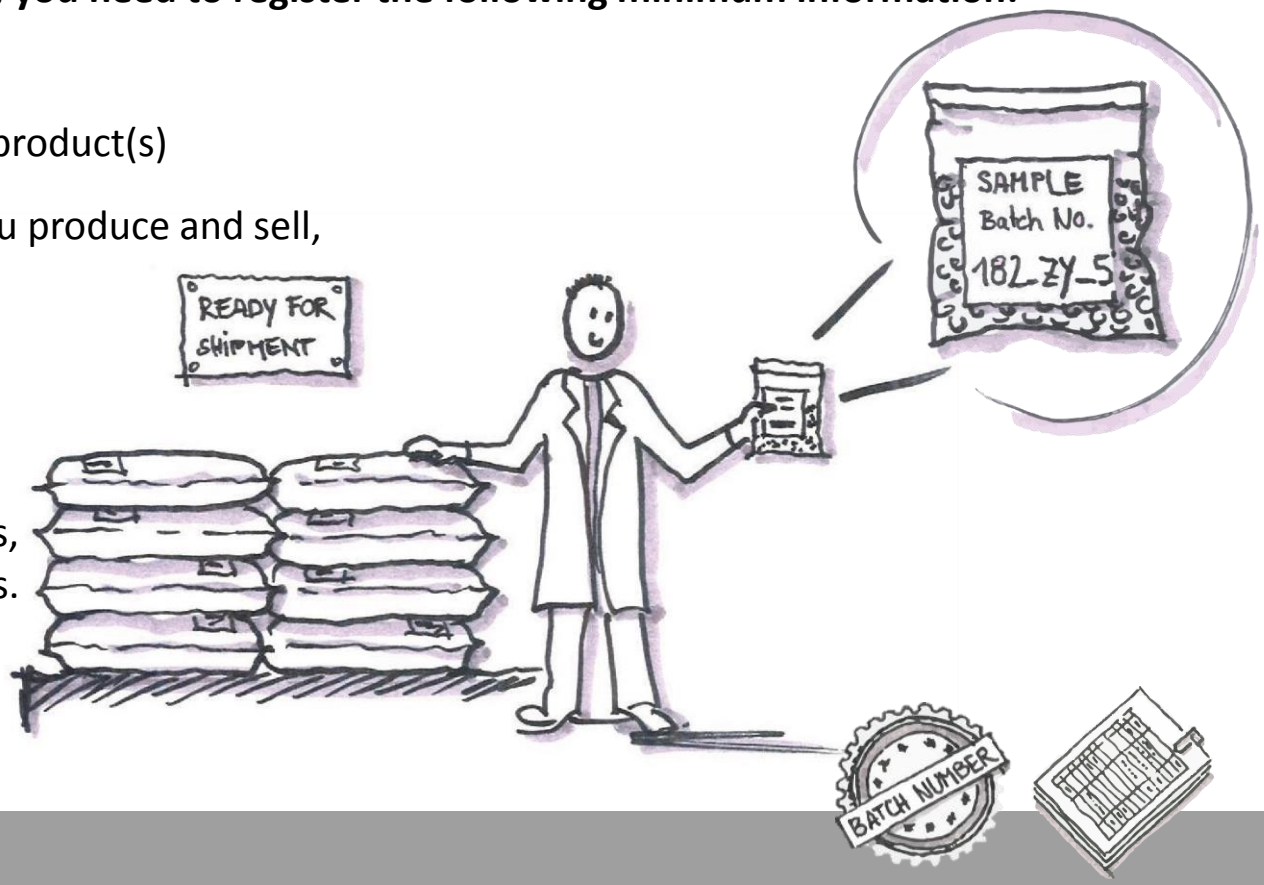
+ After processing your product(s), they have received their final badge number and are stored clearly separated under this number in the stocking facilities of your company.

+ **When selling the product(s), you need to register the following minimum information:**
  - ✓ Sales date
  - ✓ Quantity sold
  - ✓ Batch numbers of sold product(s)

+ From each product badge you produce and sell, **you should retain samples.** Samples help you to monitor your product quality. They are also a **proof of the quality you sold**. In case a customer complains, you can verify the complaints.



Information
Links of useful websites

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+ If you would like to get **more information on traceability**, we recommend the following websites and links:

  - UN Global Compact, “A Guide to Traceability”: https://www.bsr.org/reports/BSR_UNGC_Guide_to_Traceability.pdf
  - ITC, Bulletin No. 91/2015, “Traceability in Food and Agricultural Products”: http://www.intracen.org/uploadedFiles/intracenorg/Content/Exporters/Exporting_Better/Quality_Management/Redesign/EQM%20Bulletin%2091-2015_Traceability_FINAL%2014Oct15_web.pdf
  - FAO, “Food Traceability Guidance”: http://www.fao.org/3/a-i7665e.pdf
  - Advanced Business Solutions, „Supply Chain Traceability - How to improve supply chain traceability”, Video: https://www.youtube.com/watch?v=kkBjz-QF8Dg
  - Institute of Food Technologists: A Guidance Document on the Best Practices in Food Traceability http://www.ift.org/~/media/GFTC/Best%20Practices%20Paper.pdf
  - Epicor Software, “The Importance of Traceability for Food and Beverage Manufacturers”, Video: https://www.youtube.com/watch?v=XXl4YM-8ifE
  - GS1 Guides on traceability and trade: https://www.gs1.org/docs/gdsn/tiig/3_1/GDSN_Trade_Item_Implementation_Guide.pdf and https://www.gs1.org/docs/traceability/Tracebility%20Schema%20v7b.pdf

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