Paper and cardboard have been recycled in large quantities for many years. The quantity of recycled material going into new products varies greatly, depending on the application. Only a small fraction goes into superior quality graphic paper. However, corrugated cardboard uses up to 80% in its composition. It is therefore important to carefully manage the recycling flows of used paper. The sector continues to undertake numerous efforts to make ever-greater volumes of paper/cardboard available for recycling.

**A well-oiled recycling process**

**Collection** — Several methods are used to collect used paper and cardboard. In most Belgian cities, the intermunicipal authorities carry out this collection door-to-door. In addition, the cities also provide dedicated containers in the container parks. Likewise, a growing number of companies organize the selective collection of their paper and cardboard waste.

**Recycling** — Specialized companies purchase the collected paper and cardboard and carefully sort it. Approximately fifty of these companies are active in Belgium. They supply fibres from more than fifty types of used paper to the paper industry.

At paper mills, the paper fibres are separated from each other in water, until a grey paste is obtained. This paste is carefully cleaned in order to remove foreign matter such as staples, lacquer and varnish, remains of glue, and pieces of plastic and rope. This is followed by several washings and fractionating to separate the long fibres from the short ones. The result is a homogeneous pulp. For the production of certain types of paper, the pulp must also be de-inked and then whitened.

Thanks to these rigorous processes, the end quality of the recycled pulp is well known and stable. The paper industry is perfectly familiar with applications for which this pulp is ideally suited.

**Prevent Pack**

Thanks to careful collection and sorting, the sector today succeeds in reusing all of the recycled paper. In addition, each new product represents an equilibrium in terms of the portion of recycled fibres. For foldable cardboard, this portion amounts to about 60%; for corrugated cardboard, it is 80%. ‘We do not expect this portion to increase further,’ states Jan Cardon of Filipap. ‘For economic reasons, the sector uses as much recycled fibres as possible. For instance, we have already reached a maximum for packaging. In addition, the (sometimes unilateral) request to reduce the packaging weight is in contradiction with the will to use more recycled fibres. Often, a larger amount of recycled fibres is indeed required to achieve the same robustness as is possible with virgin fibres.’

Depending on the application, a certain quantity of virgin fibres therefore remains necessary. Moreover, it is not possible to use the same wood fibres indefinitely, as these eventually get damaged during successive recycling cycles. Consequently, a continuous supply of virgin fibres is indispensable in the overall paper production cycle.

On top of the pyramid is superior quality graphic paper, which contains only a limited amount of recycled fibres. It is followed by plain white paper, which contains a little higher percentage. At the next level are the household and sanitary applications, such as kitchen rolls and toilet paper, where the ratio of recycled fibres reaches up to 30%. This ratio rises to almost 50% in newsprint. Paper and cardboard packaging form the broadest base of the pyramid; they are comprised of up to 80% recycled fibres.

‘The recycling pyramid has to be viewed as a whole,’ explains Ilse Vervloet of Fetra. ‘New fibres are indispensable in the making of superior quality paper, but it would not be reasonable to use as many new fibres to manufacture cardboard packaging. On the contrary, such packaging represents an important market for the subsequent recycling of superior quality paper products.’
Choosing the appropriate paper type

For economic as well as environmental reasons, it is important to choose the appropriate type of paper or cardboard. ‘It’s the same as for clothes: when your children are going out to play, you are not going to dress them up as if it were a special occasion,’ observes Ilse Vervloet. ‘It is therefore important to determine what type of finished paper product is the most suitable for each type of pulp. Even though virgin paper fibres might be required for graphic applications, for instance, they are not necessary for newspapers. In order to be sufficiently robust, beverage cartons need virgin fibres. However, recycled fibres are perfectly suited for other types of packaging. Each application thus finds its most appropriate place in the pyramid.’

Fostering recycling through design and communication

Certain types of packaging contain foreign elements such as plastic carrying handles. In such cases, it is better to plan right from the design stage on making it easy for consumers to remove the handles themselves in order to avoid complicating the recycling process. You can find additional information on the recyclability of packaging at www.pack4recycling.be. Collection is the most sensitive link in the paper and cardboard recycling chain. ‘We must therefore guide the consumer in this field,’ says Vervloet. ‘To efficiently and economically recycle paper,’ adds Cardon, ‘it may not contain too many materials other than fibres. It must be clean and free of any greasy substances. Preferably, it should be packed in a cardboard box or bound into stacks with natural rope or string. It cannot be wrapped together in adhesive tape. We must clearly communicate this to the public.’

The sector wants to collect more used paper

For many years, recycling has been a key component of the paper industry. In Europe, about 66% of used paper is recycled, and there is still room for this figure to grow. ‘There are plenty of applications for recycled paper,’ points out Ilse Vervloet. New sources are always welcome. That is one reason why we want to improve the collection of used paper in office buildings.’

Given the fact that a supply of virgin wood fibres will always be necessary, the sector gives considerable attention to the sustainable management of forests. ‘The renewable character of the raw material is an additional benefit of paper and cardboard,’ explains Cardon. ‘We plant as much raw material as possible. A distinct increase can be observed in the number of production forests at the European level.’

‘Cardboard packaging is an important outlet for the recycling of superior quality paper products.’ Ilse Vervloet, Environmental Advisor at Fetra

‘For recycling purposes, paper may not contain too many materials other than fibres. It must be clean and free of any greasy materials. Preferably it should be provided in a cardboard box or bound with natural rope or string, and without using any adhesive tape.’ Jan Cardon, Director of Filpap

Pack4recycling.be

The Pack4recycling.be Website provides additional information on the recyclability of the various types of packaging. You can test whether your packaging will be recycled or not by using a decision tree: www.pack4recycling.be

Filpap

Filpap is an independent organization that Fost Plus calls upon as an expertise centre for the collection and recycling of paper and cardboard packaging. www.filpap.be

Fetra

The federation of paper and cardboard transforming industries (Fetra) was created in 1946. It brings together the manufacturers of foldable cardboard, corrugated cardboard, and paper bags, among other players. www.fetra.be