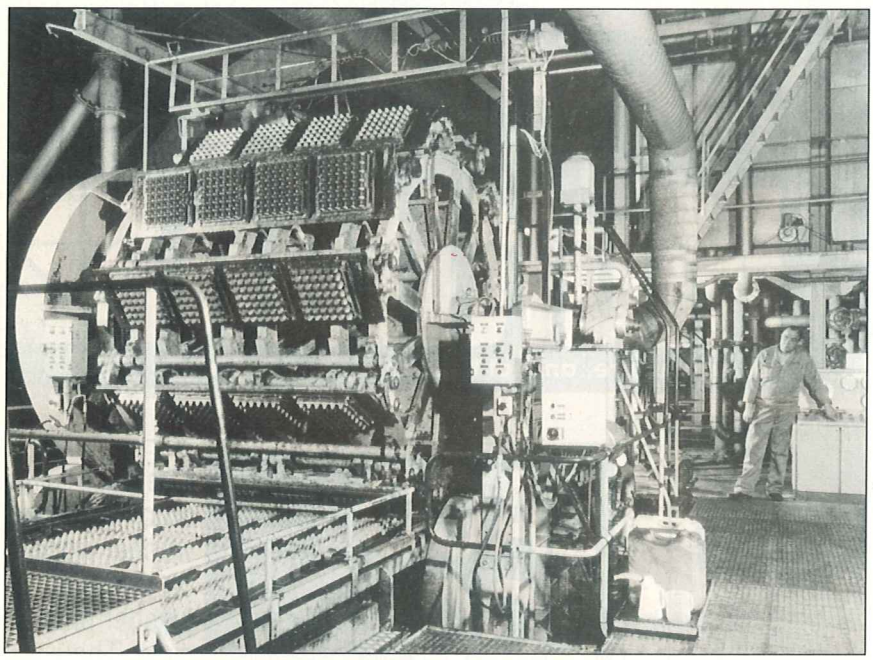
Using Recycled Materials For Packaging

Protecting The Egg And The Environment



Use of state-of-the-art recycling facilities such as this moulding machine allows the recyling of waste paper whilst maintaining highest quality standards.

Recycling 100% waste paper to produce moulded fibre packaging, including egg trays and egg boxes of various sizes.

With world-wide egg consumption rising, the need for reliable egg packaging which delivers the product safely to the consumer is evident. The success of moulded fibre is due to two key factors. First, the practical benefits, vital for packaging which must protect and shield products and, secondly, the environmental benefits. But how, in reality, does choosing moulded fibre packaging meet the needs of the egg producer and help to reduce the impact of all our businesses on the environment?

The practical benefits

Moulded fibre made from 100% waste paper is an ideal packaging material due to its versatility and strength. The egg is a fragile and porous product which needs careful storage and handling. A major attribute of this type of egg packing is that the recycled fibres used have a porous but strong consistency. These fibres absorb moisture from the egg. The moisture is then expelled to the outside via the moulded fibre material. In this way freshness is preserved by allowing air to circulate and by preventing bacterial build-up within the packaging.

The environmental benefits

The environmental benefits of moulded fibre egg packaging are apparent throughout the product's life cycle. That means paying attention to the raw materials used in manufacture, the impact of the production process and even the ways in which the product can be disposed of after use.

Raw materials

Saving resources: new life is injected into old newspapers and printed paper to make egg boxes and trays from 100% waste paper. In this way natural resources such as coal and oil are preserved, safeguarding some of nature's most valuable resources for future generations.

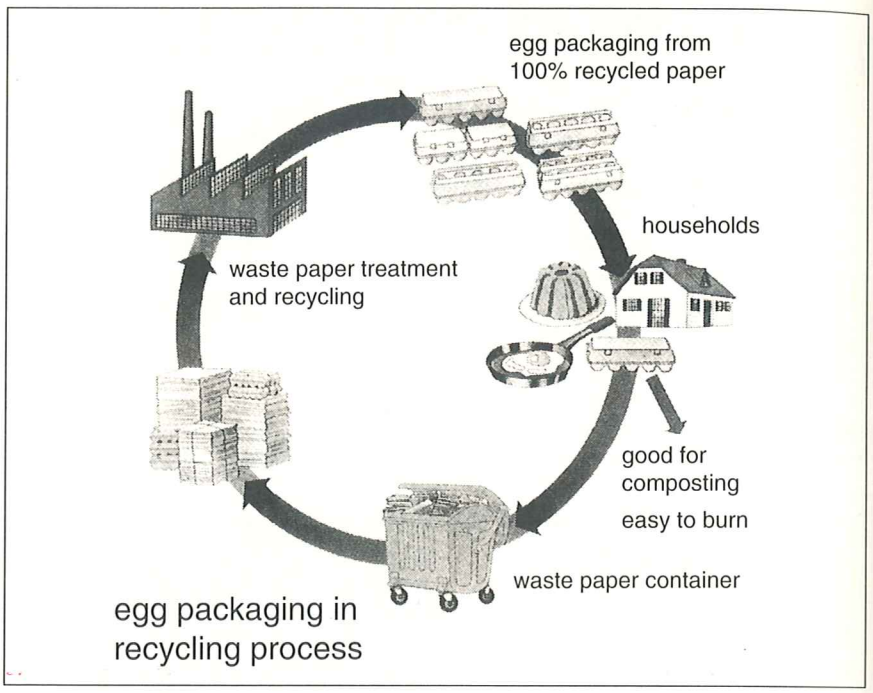
By taking advantage of the latest ecological technologies, Hartmann has been able to switch over to using as raw materials only, waste paper, whilst maintaining the highest quality standards and safeguarding the environment. And, at the end of the life-cycle, the product can be disposed of simply and easily through recycling, composting, energy, recovery or landfill.

Manufacture

Clean technology for a cleaner future: the plant in Tonder (Denmark) is the largest and most modern moulded fibre packaging production plant in Europe.

Heavy investments in research and development, over UK4.5 million pounds sterling in 1990, have brought increased benefits for product improvement and production modernisation. The fact that the company is keenly aware of its environmental commitments is reflected by its production which turns only raw material that is 100% waste paper into finished products.

At Tonder, they use the latest clean technology at every stage of production. Unique to the system is a de-inking plant for white pulp which



egg packaging in recycling process

removes printing inks from the waste paper without using environmentally damaging chlorine bleach. Even the resulting de-inking sludge can be mixed with other compostables and then used as a fertiliser.

Another important environmental benefit to consider is the saving made on electricity and water. This has been achieved through a water purification system which enables water to be recycled within the production process. Similarly, waste heat which might normally be lost is recovered and put to good use. In general, it is true to say that products made from recycled paper use far less fresh water and energy than products made from new paper.

Disposal

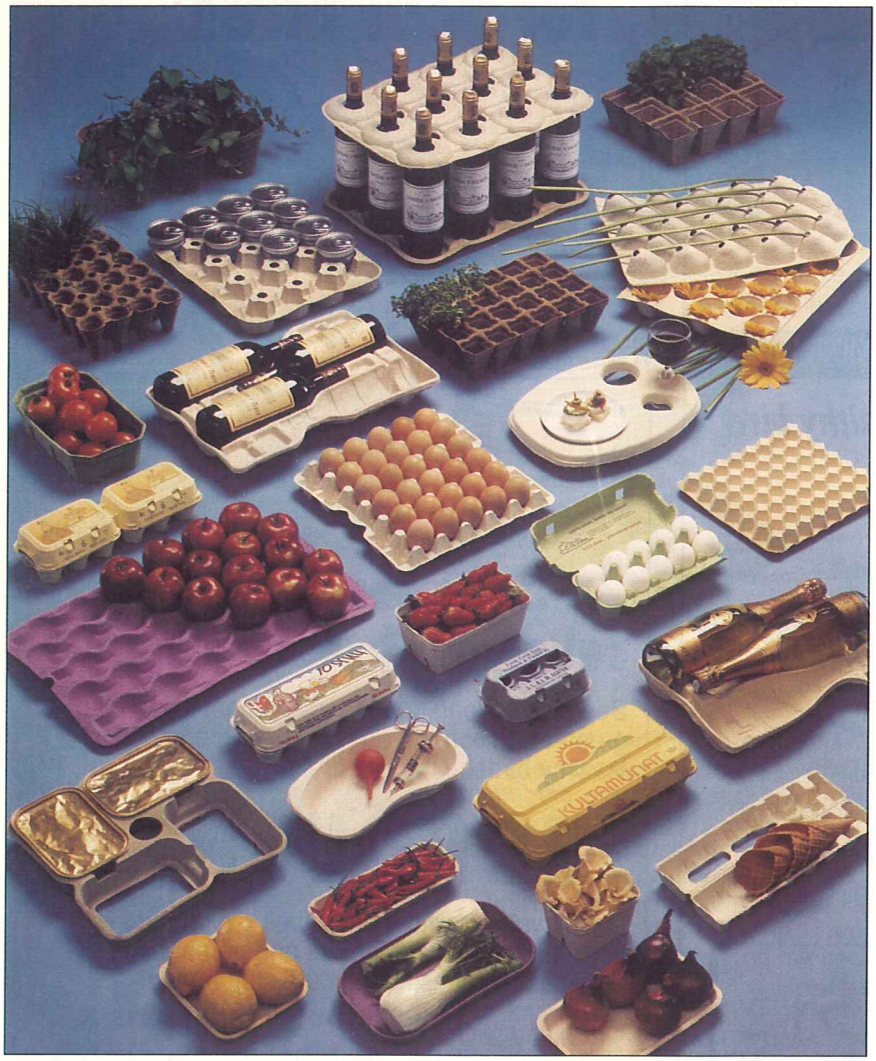
Moulded fibre, meeting the demands of legislation: the disposal of post-consumer waste is currently the subject of an intensive legislative debate in the EC. A draft proposal for a European Directive on packaging and packaging waste plans to introduce harmonised legislation which will set standards for the disposal of packaging waste in Europe. The aim of the legislation will be to divert waste from landfill. To achieve this the legislation will set targets for a variety of waste management options including recycling, energy conversion, composting and landfill. As the draft currently stands, egg packaging made from moulded fibre products, since it is easily recyclable, will be able to meet the demands of the legislation.

Recycling into other useful products: after an egg box has served its useful purpose, will it simply be added to the growing waste mountain? In simple terms - no - there is still further life left as moulded fibre can still be recycled again, once more saving on valuable natural resources. Material recycling is a key component of the draft packaging and packaging waste EC Directive as part of the solution to the waste management problem. This is also the case world-wide as governments have to face the reality of an increase in post-consumer waste and meeting the growing concerns of the consumer for the environment, by developing their own regulations for tackling the waste management problem. Most EC countries recycle waste to some extent, although the efficiency of

Table 1: Material Recycling of Municipal Solid Waste

Country	%
Denmark	18
Netherlands	15
Sweden	5
France	1
UK	1

Source: UK Parliamentary Select Committe on the Environment)



Variety of products made from moulded fibre including egg boxes, egg trays, wine bottle packaging, fruit trays, plant pots and kidney dishes for use in hospitals.

each country's recycling systems do vary considerably (see Table 1).

Energy Recovery: in addition to materials recycling, the used egg box can also be recycled to produce energy. High temperature, state-of-the-art waste to energy conversion has proved to be a viable method for moulded fibre and other household waste. In Switzerland, about 70% of all household waste is incinerated to produce energy and in Denmark and Sweden, about 65% and 55% respectively, is used in this process.

Biodegradability: finally, moulded fibre has the added advantage of being biodegradable and can be composted. Studies undertaken by the EMPS (Swiss Federal Laboratories for Material Testing and Research) in St Gallen, Switzerland, established that moulded fibre develops into valuable compost. France leads the way in Europe with 95 composting facilities producing 650 000 tons of compost a year. Alternatively, due to is natural composition, moulded fibre packaging can be safely landfilled.

Further markets and growth opportunities for moulded fibre products

Moulded fibre, serving other industries: due to its versatile nature, egg packaging is not the only use for moulded fibre. Industries value it as an environmentally friendly packaging material which is stable enough to transport wine bottles, tinned foods, electrical components and pharmaceutical products. Hospitals and associated ancillary services use disposable kidney dishes made from moulded fibre because they are both economically sensible and hygienic.

The parent company, Brodrene Harmann A/S of Denmark, plans to expand its activities in the moulded fibre sector and will launch other products made from moulded fibre in the future. One such product will be the 'Humulus' planting pot for plants and seedlings which is completely biodegradable.

The company is committed to safeguarding the environment and to providing a positive contribution to society through the production of packaging which makes environmental, economic and practical sense.

Moulded fibre is versatile and sturdy packaging, providing ideal protection for the delicate egg. Consisting of 100% waste paper, natural resources like coal and oil are preserved for future generations. Use of state-of-the art recycling facilities, scrupulous water purification and energy recovery are all part of the production process which takes the environment into consideration at every stage of manufacture. Moulded fibre is easily disposed of through a variety of options including recycling, energy recovery and composting. Consumers prefer environmentally friendly moulded fibre packaging made from natural material which is easy to dispose of. Quality is guaranteed. The moulded fibre breathes, allowing air to circulate, thus preventing bacterial build-up and ensuring packaging which is safe and hygienic. — *Hartmann UK, Exchange House, Exchange Square, Beccles, Suffolk NR3 49H.*

FDA Withdraws Drug Approvals

In the USA, the Federal Drugs Administration (FDA) has revoked its interim policy permitting the use of gentian violet at levels up to 8 ppm as a mould inhibitor in poultry feed. This action was based on studies which have shown that gentian violet causes cancer in test animals and that residues of the substance occur in the edible tissues of chickens under the use which was permitted under the interim policy.

The FDA has also withdrawn approval for use of furazolidone and nitrofurazone in food producing animals and poultry. The reasons given were (1) that practical assay methods to detect residues of these drugs and their metabolites do not exist and (2) that furazolidone and its metabolites, have been shown to induce cancer in animals.