

Paper Potato Packaging is Back

What once was old is new again in the bagging and packing industry

By Mark G. Resch, freelance writer

For any of us lucky enough to grow up in the potato industry during the 1950's though the early '80s, one thing was constant. The most popular packaging of the day was a paper bag.

The iconic mesh-windowed bags of the era allowed packers to distribute high-quality produce branded with their farm names and colors.

The paper bags were easy to pack on the Weigh-O-Matic baggers of the day and could be hand packed off the end of a grading line with their SOS (self-opening square) bottoms allowing each package to stand up all on its own.

Bag companies of the day focused on the market with their own special, uniquely named bags. Bemis had the "Foto Pak," Union Camp offered the "Vent Vu," Chase Bag boasted a "Vision Air," and International Papers offered the "Hydrotuff" bag.

General Bag, Equitable Bag, PEI Bag, Nepco and many others offered windowed bags along with regional suppliers serving the growing markets.

To this day, the paper bag is known to be the best recommended container for fragile tubers. Paper bags offer excellent light protection

compared to mesh and poly bags and have a natural moisture absorption characteristic not found in other produce packaging.

THE 50-POUND BAG

Of course, back in the day, families were larger and many of the bags sold were of the 50-pound variety. Burlap or Jute bags were also commonplace for packers prior to the advent of bulk totes or straight bulk truck loads.

Many of my early working days in the family bag company warehouse were spent unloading paper bags, which were usually shipped "on the floor" of the truck or rail cars (no pallets) for efficiency.

In late summer, you could easily unload seven or eight trucks a week just like handling hay bales.

As the market demand for fresh produce shifted to the large grocery store chains, so did the demand for higher volumes, flashier packaging and improved automation.

The small 5-, 10-, 15- and 20-pound paper bags were too expensive, bulky and slow at the packing line. A new era of packaging was taking hold, the era of plastics.

Europe embraced the change



to plastics in the early '80s with automated roll-stock plastic film and knitted plastic mesh products for both bags and tubular packing. The inexpensive film bags had taken hold and soon would dominate the markets.

Even in Idaho, where the woven paper drawstring mesh bags ruled the day, plastics would reign supreme.

Above: Wicketed bags, such as these paper ones, stay in place until taken off the wicket. Most wicketed bags are used in production areas where reduced handling time and increased efficiency are desired.



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PLASTIC OFFERS PIZZAZZ

For the packer, plastic film and mesh bags offered ease of automation and the ability to close bags with coded closures like Kwik Loks. The graphic “pop” or pizzazz of plastic printing made paper a dinosaur.

Most of the large paper bag producers sold off or scrapped the window bag machines, and companies like Chase, Friedman, General and many others simply sold out or quit.

The once dominant paper bag was now considered a specialty package in most markets. Parts of Canada and the Eastern United States have continued to use paper but packing speed and automation limited its use.

Now, some 30 years after the heyday of paper bags, there is a new tide approaching.

Every day it seems the media is showing us dolphins with plastic bags on their noses, whales with

plastic bags in their stomachs, birds with plastic pieces in their throats and beaches littered with millions of pounds of plastics washing up on shorelines.

These images, along with a push towards better recycling habits, have contributed to a rise in the interest of paper-based packaging. The fact that most plastics are not being recycled or simply can't be because of their structures is creating a world crisis on a massive scale.

The convenient plastic zipper pouches that are used so prominently in our food systems today are some of the most unrecyclable packages because they combine many different substrates through a lamination process.

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Right: The old-style paper bag once held Prize Potatoes packed for Royal Farms, Inc., of Plover, Wisconsin.



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Nutrition Facts
 about 4.5 servings per container
 Serving size about 5 potatoes (140g)

Amount per serving	% Daily Value*
Calories 100	
Total Fat 0g	0%
Saturated Fat 0g	0%
Cholesterol 0mg	0%
Sodium 10mg	0%
Total Carbohydrate 21g	8%
Dietary Fiber 3g	11%
Total Sugars 3g	
Includes 0g Added Sugars	0%
Protein 3g	
Vit. D 0mcg	0% • Calcium 30mg 4%
Iron 2mg	10% • Potas. 600mg 15%

*The % daily values (DV) tell you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

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RECYCLING NIGHTMARE

The high graphic pouches use combinations of films like nylon, polyethylene, polypropylene terephthalate (PET) and many other substrates to create completely unrecyclable packaging. Even paper, when combined with plastic, becomes unrecyclable.

Possibly the worst packages used in

the produce industry today are the large woven polypropylene tote bags we see so often in bulk shipping. They are some of the worst for our environment and extremely hard to get rid of.

It is obvious that the plastic bag industry is starting to take notice about consumers' interest in paper packaging.

Walk into any large grocery store today and look at all the plastic bags that are made to appear like paper. The bags have flat bottoms, matte-finish print, which makes the film look and feel like paper, and graphics that evoke nature.

In the fresh potato section, many of the bags are being Flood Coat printed in order to prevent light intrusion and to keep spuds from greening, a trait that comes naturally with paper bags.

Unfortunately, most, if not all, of these plastic bags are unrecyclable in their laminated forms. This includes most of the popular plastic and mesh bags that combine many types of plastics to produce a finished bag, one which is difficult to dispose.

Makers of bio-based plastics are attempting to change the perception of plastic bags. With a percentage of potato or corn starch in the makeup, blended with resin, bioplastics

Above: Shown is a Tasteful Selections all-mesh form-fill and seal bag. New paper bags can be wicketed for easy automation, made in form-fill and seal configurations, printed in high-quality graphics and are often similarly priced to plastic bags, particularly when compared to mesh and combination mesh and plastic packages.

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purportedly degrade and compost like paper, breaking down over time.

So far, the results and acceptance have been mixed, but at least there is an attempt. Unfortunately for the plastics industry, perception is reality and consumers still view the bio bag as plastic!

RETURN TO PAPER

Europe is now leading the return to paper produce packaging with several new types of recyclable and compostable products being market tested. Here in the United States, there are several new paper bag ideas being developed that will be market tested over the next 12 months in the produce industry.

Products like potatoes, onions, citrus, garlic, etc. are candidates for the new paper bags.

Technology with new paper materials and structures is allowing for a huge paper bag expansion, particularly in

smaller single-use-type packaging applications. The new paper boasts similar automation, packaging speeds and pricing to the current poly-based packaging.

So, what's next? That question is being tossed around daily in the boardrooms of many major retailers as they try and work towards sustainable packaging solutions.

The push is real and the need immediate! Retailers like Kroger, Trader Joes, Wal-Mart, Aldi and many others have all publicly stated their intentions to move back to paper when and wherever possible.

Retailers from many different areas are looking at fresh produce to lead the way back to paper packaging. Produce is a category that could not only benefit from quality paper for freshness, but also by reduced bag sizes with optional closing methods.

New ideas swirling around could help

reduce the size of master containers by producing packages that lie flatter and are less ball-shaped in the process.

This would greatly improve the sustainability scorecard by removing plastic and metal bag closures, reducing the overall cost of the package and enhancing the fresh image for the produce sector.

UNLIKELY ELIMINATION

Will we ever eliminate plastics completely? The answer is most likely "no," due to its barrier and food preserving properties that paper just can't offer. This is especially true in the frozen and dairy sectors.

Can some items move back to paper? The answer here is "absolutely, yes," especially in fresh produce categories where paper can not only change the environmental impact of the package, but also benefit the produce inside.

With billions of bags used annually in

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the produce industry, the impact of change is considerable.

Since fresh produce needs air for freshness and in many cases light protection, the paper bags of today can help reduce the use of plastics while adding beneficial effects to the produce itself.

New paper bags can be wicketed for easy automation, made in form-fill and seal configurations, printed in high graphics and are often similar in price to plastic bags, particularly when compared to mesh and combination mesh and plastic packages.

Single-ply paper technology has become mainstream and dramatically reduced the price gap that made paper too expensive to use back in the day.

It's likely we will not see the resurgence of the old-style paper/mesh window potato bags of the past. However, there are some exciting new

variations of those bags that could bring paper packaging back to the forefront in produce.

RECYCLING RATES

Paper industry data supports the fact that consumers are recycling paper at astounding rates—68.1 percent in 2018 and growing.

Unfortunately, plastics are not doing so well. In a recent Gallup poll, 73 percent of consumers said they believe paper is more environmentally friendly, while only 22 percent believed the same about plastics.

The paper versus plastic debate is one that is ongoing, and both sides continue to argue their points about production cost, carbon footprint and financial impacts. I have been on both sides of the issue and have friends working on both sides, yet all of us will be affected by this issue.

An old bag-making friend of mine



Above: Here is a European version of a paper produce bag. Europe is now leading the return to paper produce packaging with several new types of recyclable and compostable products being market tested.

recently left the industry to produce equipment for the emerging hemp fiber market. Hemp has some unique qualities for paper making over timber, as the fibers are much longer and can potentially create stronger sheets of paper.

As we enter an era of new consumers and laws, it is absolutely feasible that a potato or onion grower could introduce a crop of industrial hemp into their rotation, harvest the hemp for paper production and pack a new crop of potatoes or onions in a hemp-based paper bag!

Just like we grow cotton for clothes, we could certainly grow hemp for paper packaging and complete a unique circle of life in the produce and farming industry.

Idaho potato shippers once said just a few short years ago, "We will never get away from a paper mesh drawstring bag." Now, that bag is no longer produced. Embrace change! **BCT**

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