American Journal of Transportation
www.ajot.com November 27, 2017 Issue #661

# Cocoa bean imports are handled breakbulk for chocolate producers

***Cocoa bean imports are still handled, and handled efficiently, by sling and pallets from breakbulk vessels.***

By Robert L. Wallack, AJOT

Pier 84 is occupied by DDS at PhilaPort, which has become an epicenter of United States' cocoa bean imports.

A tasty big bite of the United States consumer chocolate bar market passes through Dependable Distribution Services, Inc. (DDS) in PhilaPort to four area chocolate manufacturers. Burlap bags of cocoa beans arriving from West Africa are handled breakbulk with great efficiency.

Texture, flavor and snap are important attributes of dark and milk chocolate bars with different health benefits from each which start from cocoa bean processing in the Philadelphia area. However, chocolate bars are not the only goods from imported cocoa beans. Initial processing is from cocoa liquor and its two by-products of cocoa powder and cocoa butter can be trucked down the supply chain to food manufacturers, gourmet and other cocoa product customers. In 2015, the global chocolate market in retail sales was $101 billion, of which the U.S. bite accounted for $22.4 billion and Western Europe for $34.4 billion. Mars and Hershey, among other customers, rely on the value-added services from DDS in the cocoa and chocolate supply chain.

## Pennsylvania – the Sweet Spot for Imports

"The West African countries of Ivory Coast, Ghana, Nigeria, and Cameroon account for 70% of the world's cocoa beans with 35% from Ivory Coast and combined Ivory Coast and Ghana are half of the world's supply of cocoa," said Harvey Weiner, President of DDS in a recent interview with the *AJOT*. Ninety percent are produced on small farms and account for 4.5 million tons of cocoa beans per year shipped worldwide. Brazil and Indonesia are plagued by cocoa bean disease, so Latin America (Dominican Republic, Ecuador, Peru, and Venezuela) picks up some of the slack, he said. Pier 84 is occupied by DDS at the PhilaPort *(renamed this year from Philadelphia Regional Port Authority)* and responsible for becoming the epicenter of United States' cocoa bean imports. "In 1990, PhilaPort had 20% share and now 80-90% of U.S. cocoa beans are imported up the Delaware River to the Port of which 70% is used in Pennsylvania," said Weiner.

DDS continues to handle breakbulk for cocoa beans even though other soft commodities of coffee and cotton transitioned to containers years ago. However, Weiner also receives containers and offers a de-bagging service to bulk shipment for his customers. "Last year was a banner year. We handled 200,000 tons breakbulk in cocoa beans and 100,000 metric tons of containerized cargo which amounts to 5,000 TEUs. Of the 4 million bags in the U.S.A., 3.7 million are in Philadelphia because they belong here, logistically," he added. Through October 31, 2017, the Port of Delaware River 2017 monthly standing inventory averaged 4,690,844 bags of cocoa beans of 143 pounds each in, according to historical end of month cocoa stocks held by ICE (Intercontinental Exchange) Futures U.S. licensed warehouses.

## Breakbulk versus Containers

DDS expects over 200,000 tons breakbulk and 2,500 TEUs (containerized cargo) or 50,000 tons this year. DDS recognizes the shift to containers for fruit as well, but breakbulk is still needed for large tonnage in season which can move quickly from country of origin and from warehouses with fewer inspec-

*(Continued on Page 2)*

tions. The four major area roasters want their beans whether breakbulk or in containers and without moisture. “Get me good, clean specs (no moisture and good bean size) and I’ll buy it,” he said of his customers.

There are advantages and disadvantages to receiving cocoa beans by breakbulk or containers. Containers often have condensation problems and need special bags to absorb damage which includes insurance risk. Also, logistics people have chassis, demurrage, and on/off fees as well as more chance of detention with containers. “Unloading and segregating traceable cocoa is often easier in containers but we have found with great communication and efforts at the load Port that we are able to do an efficient and cost effective discharge and storage at our facility,” said Weiner. The largest container lines handling cocoa beans are Maersk and MSC both calling the Packer Avenue Marine Terminal next to Pier 84.

Furthermore, burlap bags made in India and Bangladesh holding cocoa beans can’t stay in tropical humid climates for very long because of mold, whereas once in the U.S.A. moisture goes out of the bags and dries out. Breakbulk has advantages for DDS because shipments can be segregated off the ship to the four main chocolate processors in the area.

Cargill made a large investment in Pennsylvania with the acquisition of ADM Hazelton plant in addition to expansion at Mt. Joy. Blommer Chocolate is the largest cocoa grinder in the U.S. and is in East Greenville. M&M Mars expanded in Elizabethtown and grinds all their beans here for the entire United States. Barry-Callebaut is in Eddystone and in a new Bethlehem temperature-controlled 500,000 square feet warehouse as the main distribution hub for business on the East Coast.

## Logistics Costs

Dependable helped to lower logistics costs with several innovations resulting in chocolate processors expanding their area operations. Typically, the largest dedicated breakbulk cocoa carrier Unicargo Transport GmbH based in Hamburg, Germany or the next largest Spliethoff Group based in Amsterdam, Netherlands arrive from West Africa with almost 20,000 tons of cocoa beans in about 300,000 bags in the hold of the ship. Slings with nets holding 25 bags are hoisted off the ship onto the dock, or pallets stacked with bags are hoisted. This is labor intensive from the ship to the truck trailers. DDS improved the 4 hours unloading bag by bag to 20 minutes by de-bagging the cocoa beans into specially designed bulk trailers loosely holding all the cocoa beans once released from the bags by gravitational pull. Additional services to customers are sampling of bags to a laboratory of choice or use a third party in the European style as well as weighing on a truck scale after de-bagging. “Barry-Callebaut doubled plant capacity from Dependable’s logistics cost savings in the supply chain,” said Weiner.

Barry-Callebaut Group, based in Switzerland, is a major supplier of chocolate and cocoa products operating in over 30 countries with 60 production facilities tallying $6.9 billion in revenues in 2016. The multinational was formed in 1996 by the merger of Belgian chocolate maker Callebaut

Cocoa beans arriving from West Africa are handled with great efficiency.

and French chocolate producer Cacao Barry and has a history of 175 years and is now selling its products in over 140 countries. Barry-Callebaut are present in one of four of all chocolate and cocoa products consumed in the world, and is the largest cocoa grinder in the world.

Barry does not own any cocoa plantations, but is a partner with famous brand name companies such as Hershey. “Barry is a third party that makes and processes for Hershey,” commented Weiner. We delivery 24/7 to them and for all others in the state with access to nearby highways and railways,” he concluded. Imports of cocoa beans up the Delaware River are expected to increase and benefit the Philadelphia area.