A United Soybean Board checkoff funded study has shown that there is a growing demand for a logistics system that is more diverse, one which can deliver smaller lots of product with precise product attributes. "Ocean carriers currently spend close to $100 billion per year operating their container assets. Of this, approximately $16 billion is directly attributable to the total cost of repositioning (globally) empty equipment to the point of its next cargo." Leading us to containerization.

The trend of containerized shipping for bulk agricultural products is moving upward because of several factors. There is a huge imbalance of container traffic between the U.S. and Asia and to some extent the European Union. (See figure 1.) More than half of the containers loaded in Asia and shipped to the U.S. return to Asia empty. There is an opportunity to take advantage of empty containers returning to export markets. (See figure 2.) U.S. soybean producers and industry (whether agricultural or retail) have the opportunity to use these empty containers to their advantage.

Today, containerized shipping is a lower cost option due to increasing high bulk vessel freight costs. There are other benefits to choosing this mode of transportation. Most importantly keeping the quality of U.S. produced soybeans high and offering a competitive advantage for the U.S. soybean industry.

**WHAT IS CONTAINERIZED SHIPPING?**

Containerization is a system of freight transport using standard shipping containers that can be loaded and sealed intact onto ships, trains, planes or trucks. This channel of logistics can be used by those looking for opportunities other than those offered by the bulk vessel shipping channel.

**WHY IS IT SIGNIFICANT?**

Leading us to containerization. The trend of containerized shipping for bulk agricultural products is moving upward because of several factors. There is a huge imbalance of container traffic between the U.S. and Asia and to some extent the European Union. (See figure 1.) More than half of the containers loaded in Asia and shipped to the U.S. return to Asia empty. There is an opportunity to take advantage of empty containers returning to export markets. (See figure 2.) U.S. soybean producers and industry (whether agricultural or retail) have the opportunity to use these empty containers to their advantage.

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**CHOOSEING CONTAINERIZED SHIPPING CAN BENEFIT:**

- Producers, cooperatives and smaller suppliers who normally cannot fulfill demand for large shipments via bulk vessels; and/or are challenged by the volume requirements/availability of hopper-cars or cannot ship by this mode to ports

  - Smaller customers purchasing in smaller quantities

  - Customers wanting to minimize their inventory investment by purchasing more frequently in smaller quantities

  - Customers seeking fast turnaround of their orders

    - 3 - 4 month is typical turnaround time for the bulk vessel channel, whereas with the container distribution channel one can see turnaround times from filling containers to Asian port delivery of 3 - 4 weeks

  - Customers seeking more competitive pricing by limiting the involvement of various 'middle men'

  - Assist overseas customers who want to deal with suppliers more directly linked to producers

Over 5 Million Empty Containers Return to Asia

The imbalance of container traffic between the US and Asia is well recognized.

The cost of repositioning empty containers between Asia and the U.S. is $1.3 billion, up from $600 million in 2000.

Capitalizing on Empty Containers Destined For Export to Asia

<table>
<thead>
<tr>
<th>Asia</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>THC = $ 150</td>
<td>THC = $ 185</td>
</tr>
<tr>
<td>Sunk Cost</td>
<td>Rail = $ 0.00</td>
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<tr>
<td>Point of Import</td>
<td>Point of Export</td>
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<tr>
<td>THC = $ 150</td>
<td>THC = $ 300</td>
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<td>THC = $ 185</td>
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<td>Soybeans in 40-Ft. Ctr.</td>
</tr>
</tbody>
</table>

$935 cost

To send empty container back to Asia

$200 cost

To send empty container back to Asia with soybeans

Source: Journal of Commerce, 6-13-06, OCEC.

Figure 1

Figure 2
HOW DOES IT WORK?
The physical network for container shipping, from the production side to the unloading site, a typical soybean shipment consists of:

- Move soybeans from production site to elevators or storage facilities (**transload sites**)
- Fill containers (including weighing, inspection, certification, etc.)
- Truck (**drayage**) empty containers from railroads’ **intermodal terminals** (or “ramps”) to the **transload** site then the loaded container back to the ramp
- Load onto a stack train, moved to a port
- Ocean move to an Asian port
- Once the container arrives in Asia, it is removed from the vessel and loaded onto either a truck or train, and transported to a crushing facility
- At crushing facility, container is weighed and inspected
- Soybeans are unloaded into storage bins
- Unloaded soybeans conveyed into storage
- The soybeans will either be crushed at the facility or delivered to appropriate processor for crushing
- Empty containers are checked and cleaned, loaded back onto truck and redistributed

WHO TO CONTACT FOR MORE INFORMATION?

- U.S. Soybean Export Council  [http://www.ussoyexports.org](http://www.ussoyexports.org)
- Contact one or more Freight Forwarders, NVOCC’s and/or Shippers Associations. These entities can provide further guidance on the mechanics and “real world” issues of exports, some with significant ag shipping experience. Visit USDA’s “Directory of Freight Forwarders Serving Agricultural Shippers” at: [www.ams.usda.gov/tmd/freight](http://www.ams.usda.gov/tmd/freight).
- State Soybean and Agriculture Associations and economic development organizations.
- Talk to your potential partners such as, fellow soybean producers, commodity brokers, grain elevators, local processing facilities, etc. Such discussions may provide an opportunity to participate in international sales while sharing the investments and risks.

STEPS IN THE PROCESS:
It is difficult for individual, smaller shippers to navigate in the export distribution system. Complexity includes:

- Securing proper insurance and agreements to pick-up empty containers at intermodal ramps
- Finding suitable draymen for container transfers
- Negotiating competitive drayage costs for empty container pick-up and loaded-container return
- Dealing with dray freight bills.
- Negotiating competitive spot or contract rates with ocean carriers
- Maximizing the weight of the load depending on the origin of the transload and the form of transportation to the port terminal on the West Coast
- Completing all necessary paperwork for an export shipment, such as the Export Declaration, Bills of Lading, Certificate of Origin, USDA Certification, etc.
- Ensuring product quality, e.g., moisture content, is correct for shipment in containers, where there is little aeration.
- Dealing with ocean carrier freight bills and freight forwarder fees and documentation
- Tracing, tracking and, if necessary, expediting shipments

INDUSTRY COMMENTS:
As one third-party exporting agent stated:

“Knowledge of foreign market needs and the various pitfalls that can be encountered is critical. This should not be taken lightly. We have seen many companies experience significant losses due to not knowing the rules of engagement in the markets they are targeting. Usually the traders involved in the transaction absorb a level of risk that they have learned to manage after they experience problems with their transactions over the years.”

Footnotes:
1. **Transload site**: where containers are loaded
2. **Drayage**: local trucking, typically short-haul. In the context of exporting soybeans in ocean containers, local drayage is the trucking service used to pick-up an empty container at the ramp, transport to the loading site, and, return of the loaded container to the ramp.
3. **Intermodal rail terminal**: a railroad’s terminal, the purpose of which is to load and unload domestic or ocean containers onto trains. Empty containers are drayed to a shipper’s site for loading of goods and loaded containers are brough to the terminal for lifting onto trains. Also known as ramps.

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