

Lesson B4–9

Distributing and Transporting Products

Unit B. Starting and Operating the Agribusiness

Problem Area 4. Operating the Agribusiness

Lesson 9. Distributing and Transporting Products

New Mexico Content Standard:

Pathway Strand: Agribusiness Systems

Standard: VI: Use sales and marketing principles to accomplish an AFNR business objective.

Benchmark: VI-D: Merchandise products and services.

Performance Standard: 1. Identify key components to organize a sale. 2. Build and develop customer relationships. 3. Conduct sales presentation. 4. Provide post-sale service.

Student Learning Objectives. Instruction in this lesson should result in students achieving the following objectives:

1. Discuss the role of distribution in business.
2. Explain the five most important physical distribution activities.
3. Discuss the various methods used to move materials and goods.
4. Discuss the various forms required when shipping products.

List of Resources. The following resources may be useful in teaching this lesson:

Recommended Resources. One of the following resources should be selected to accompany the lesson:

Nickels, William G., James M. McHugh and Susan M. McHugh. *Understanding Business*. Boston, Massachusetts: Irwin McGraw-Hill, 1999. (Chapter 15)

Pride, William M., Robert J. Hughes and Jack R. Kapoor. *Business*. Boston, Massachusetts: Houghton Mifflin Company, 1993. (Chapter 13)

Other Resources. The following resources will be useful to students and teachers:

Dlabay, Les R. and James Calvert Scott. *Business in a Global Economy*. Cincinnati, Ohio: South-Western Publishing Co., 1996. (Chapter 20)

Turner, John and Gina Bottoms Maio. *Marketing in a Global Economy*. Cincinnati, Ohio: South-Western Publishing Co., 1995. (Chapter 8)

List of Equipment, Tools, Supplies, and Facilities

Writing surface
Overhead projector
Transparencies from attached masters

Terms. The following terms are presented in this lesson (shown in bold italics):

Bill of lading
Carrier
Certificate of origin
Channel of distribution
Common carrier
Contract carrier
Destination control statement
Export declaration
Fishyback
Holding costs
Insurance certificate
Inventory management
Logistics
Marketing intermediaries
Materials handling
Order processing
Physical distribution
Piggyback
Private carrier

Pro forma invoice
Retailer
Stock-out costs
Transportation
Warehousing
Wholesaler

Interest Approach. Use an interest approach that will prepare the students for the lesson. Teachers often develop approaches for their unique class and student situations. A possible approach is included here.

Ask students to think about their favorite meal from a fast food restaurant. Next, have them consider the path the food travels from the producer to the restaurant. Instruct them to consider the physical “trip” the food takes as it travels from the grower to the restaurant. This should generate discussion on the importance of transportation to the agriculture industry.

Summary of Content and Teaching Strategies

Objective I: Discuss the role of distribution in business.

Anticipated Problem: What is the role of distribution in business?

- I. Products have to be physically moved from where they are produced to a convenient place where consumers and industrial buyers can see and purchase them. **Physical distribution** is the movement of goods from producers to industrial and consumer users. This is also sometimes referred to as **logistics**. It involves functions such as transportation and storage, and activities such as purchasing goods, receiving them, moving them through the plant, taking inventory of them, storing them and shipping them to final users. How efficiently those tasks are performed often makes the difference between success and failure of the whole system.
 - A. **Marketing intermediaries** are organizations that assist in moving goods and services from producers to industrial and consumer users. They are called intermediaries because they are organizations in the middle of a whole series of organizations that join together to help distribute goods. A **channel of distribution** consists of marketing intermediaries who join together to transport and store goods in their channel from producers to consumers. A **wholesaler** is a marketing intermediary that sells to other organizations. A **retailer** is an organization that sells to ultimate consumers.

A variety of techniques may be used to assist students in mastering this objective. Students should use text materials to help understand the role of distribution in business. Chapter 15 in Understanding Business is recommended. Use TM: B4–9A to assist in discussion on this topic.

Objective 2: Explain the five most important physical distribution activities.

Anticipated Problem: What are the five most important physical distribution activities?

II. As stated in Objective 1, physical distribution is all those activities concerned with the efficient movement of products from the producer to the user. There are five distinct steps in this process. Not long ago, separate departments or groups within a firm conducted each of these functions. The result was usually very high physical distribution costs. Now the functions of physical distribution have been recognized as a major part of the overall marketing of a product. By improving this interrelationship, distribution cost can be lowered. The five most important physical distribution activities are:

- A. **Inventory Management**—is the process of managing inventories in such a way as to minimize inventory costs, including both holding costs and potential stock-out costs. **Holding costs** are the costs of storing products until they are purchased or shipped to consumers. **Stock-out costs** are the costs of sales lost when items are not in inventory.
- B. **Order processing**—consists of activities involved in receiving and filling customers' purchase orders. Fast, efficient order processing is an important marketing service. It is one that can provide a dramatic competitive edge.
- C. **Warehousing**—is the set of activities involved in receiving and storing goods and preparing them for reshipment. A firm can either use its own warehouses or rent space in public warehouses. A private warehouse can be designed to serve the firm's specific needs.
- D. **Materials handling**—is the actual physical handling of goods, in warehousing as well as during transportation. Proper handling techniques can increase usable capacity of a warehouse or that of any means of transportation. Proper handling can also reduce breakage and spoilage.
- E. **Transportation**—is the shipment of products to customers. The greater the distance between seller and purchaser, the more important the choice of the means of transportation and particular carrier. A **carrier** is a firm that offers transportation services. A **common carrier** is a transportation firm whose services are available to all shippers. Railroads, airlines, and most long-distance trucking firms are common carriers. A **contract carrier** is available for hire by one or several shippers. They do not serve the general public. The law limits the number of firms a contract carrier can handle at any one time. A **private carrier** is owned and operated by the shipper.

A variety of techniques may be used to assist students in mastering this objective. Students should use text materials to help understand the five most important physical distribution activities. Chapter 13 in Business is recommended.

Objective 3: Discuss the various methods used to move materials and goods.

Anticipated Problem: What are some of the various methods used to move materials and goods?

- III. A primary concern of distribution is selecting a transportation mode that will minimize costs and ensure a certain level of service. There are several different modes of transportation for a company to choose from. Each one has its advantages and disadvantages. A firm must choose a form that best suits its needs. Some of the most popular modes of transportation are:
- A. The largest percentage of goods in the United States is shipped by rail. Railroad shipment is best for bulky items such as coal, wheat, automobiles, and heavy equipment. For the past 20 years, railroads have handled about 38 percent of the total volume of goods in the United States. Railroad lines are in a state of transition, but as a result of practices such as piggyback shipments, railroads should continue to hold a large market share. **Piggyback** means that a truck trailer is detached from the cab, loaded onto a railroad flatcar, and taken to a destination where it will be offloaded, attached to a truck, and driven to customers' plants. Railroad shipment is a relatively energy-efficient way to move goods and could therefore experience significant gains if energy prices climb.
 - B. The second largest surface transportation mode is motor vehicles. Such vehicles handle about 25 percent of the volume. Trucks can deliver almost any commodity door-to-door. For this reason they will continue to be a popular mode of transportation for businesses.
 - C. Water transportation moves a greater volume of goods than a person might think. This is especially true near the Mississippi River or other smaller rivers. Other important water transportation locations are the Great Lakes and international shipping. When truck trailers are placed on ships to travel long distances at lower rates this is called **fishyback**. This process is very similar to piggyback with railroads.
 - D. One transportation mode that is not visible to the average consumer is movement by pipeline. Pipelines are primarily used for transporting petroleum and petroleum products.
 - E. Only a small part of shipping is done by air. The primary benefit of air transportation is speed.

A variety of techniques may be used to assist students in mastering this objective. Students should use text materials to help understand the various methods used to move materials and goods. Chapter 15 in Understanding Business is recommended. Use TM: B4–9B to assist in discussion on this topic.

Objective 4: Discuss the various forms required when shipping products.

Anticipated Problem: What forms are required when shipping products?

- IV. Before an exporter can ship goods abroad; a series of forms must be completed. The manufacturer of a freight company can fill out these forms. The carrier requires some forms, while the government requires others. Some of the required forms are:

- A. **Bill of lading**—is a contract between the owner and the carrier of the goods being exported. It describes the weight, number, and value of goods. It also lists the seller’s and buyer’s names. It states that the carrier will deliver the goods to the buyer as arranged. On the document, the carrier must acknowledge that it has received the goods for shipment.
- B. **Export declaration**—is a form required by the U.S. Department of Commerce for shipments of more than \$500 in value. This document lists the same information about the goods as the bill of lading. It also lists the name of the carrier and the exporting vessel.
- C. **Destination control statement**—states the country to which goods are being sent. It notifies the carrier and all other handlers that the shipment may go only to certain places.
- D. **Pro forma invoice**—is a form that functions as a quotation for goods going abroad. It describes the goods in detail and provides cost, shipping, and delivery information to a potential buyer. It is not a true invoice, which functions as a bill of goods that have been purchased. The foreign buyer typically uses this form to apply for an import license or to get bank financing. This document is an initial contact between buyer and seller, not a final agreement.
- E. **Certificate of Origin**—documents the country in which the goods being shipped were produced. This document may be required to determine the amount of any import tax.
- F. **Insurance certificate**—explains the amount of insurance coverage for fire, theft, water, or other damage that may occur to goods in shipment. This certificate also lists the names of the insurance company and the exporter.

A variety of techniques may be used to assist students in mastering this objective. Students should use text materials to help understand the various forms required when shipping products. Chapter 8 in Marketing in a Global Economy is recommended. Use TM: B4–9C, TM: B4–9D, and TM: B4–9E to assist in discussion on this topic.

Review/Summary. Use the student learning objectives to summarize the lesson. Have students explain the content associated with each objective. Student responses can be used in determining which objectives need to be reviewed or taught from a different angle. Questions at the end of each chapter in the recommended textbooks may also be used in the review/summary.

Evaluation. Evaluation should focus on student achievement of the objectives for the lesson. Various techniques can be used, such as student performance on the application activity. A sample written test is attached.

Answers to Sample Test:

Part One: Matching

1. f
2. d
3. g

4. e
5. c
6. h
7. b
8. a

Part Two: Completion

1. destination control statement
2. speed

Part Three: Short Answer

Inventory management, order processing, warehousing, materials handling, transportation.

Test

Lesson B4–9: Distributing and Transporting Products

Part One: Matching

Instructions. Match the term with the correct response. Write the letter of the term by the definition.

- | | | |
|------------------|---------------------|-------------------|
| a. Holding Costs | d. Bill of lading | g. Common carrier |
| b. Carrier | e. Order processing | h. Warehousing |
| c. Piggyback | f. railroad | |

- _____ 1. Best for shipping bulky items such as coal and wheat.
- _____ 2. A contract between the owner and the carrier of the goods being exported.
- _____ 3. A transportation firm whose services are available to all shippers.
- _____ 4. Consists of activities involved in receiving and filling customers' purchase orders.
- _____ 5. Means that a truck trailer is detached from the cab; loaded onto a railroad flatcar.
- _____ 6. The set of activities involved in receiving and storing goods and preparing them for reshipment.
- _____ 7. A firm that offers transportation services.
- _____ 8. The costs of storing products until they are purchased or shipped to consumers.

Part Two: Completion

Instructions. Provide the word or words to complete the following statements.

- 1. A _____ states the country to which goods are being sent.
- 2. The primary benefit of air transportation is _____.

Part Three: Short Answer

Instructions. Provide information to answer the following questions.

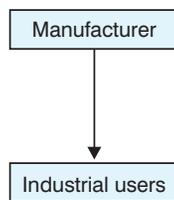
What are the five most important physical distribution activities?

- 1.
- 2.
- 3.
- 4.
- 5.

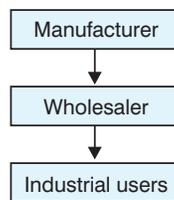
CHANNELS OF DISTRIBUTION FOR INDUSTRIAL AND CONSUMER GOODS AND SERVICES

Channels for Industrial Goods

Common channel for industrial products such as glass, tires, and paint for automobiles.

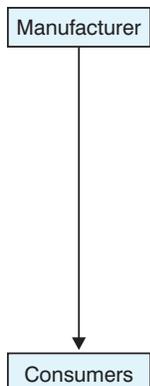


Channel for lower-cost items such as supplies. The wholesaler is called an industrial distributor.

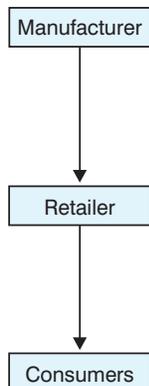


Channels for Consumer Goods

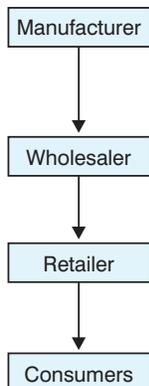
Channel used by craftspeople and small farmers.



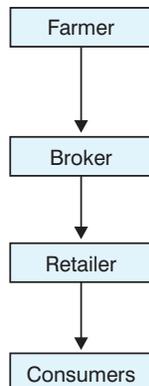
Channel used for cars, furniture and clothing.



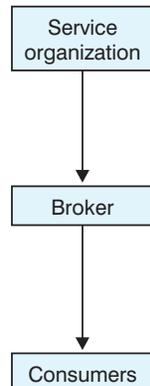
Most common channel for consumer goods such as groceries, drugs, and cosmetics.



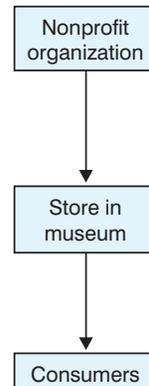
Common channel for food items such as produce.



Common channel for consumer services such as real estate, stocks and bonds, insurance, and nonprofit theater groups.



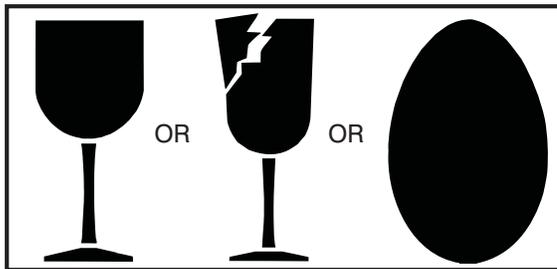
Common channel for nonprofit organizations (including museums, government services, and zoos) that want to raise funds.



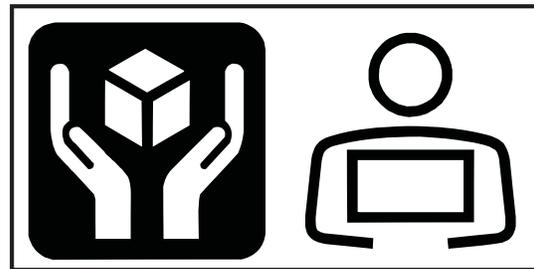
COMPARING TRANSPORTATION MODES

Mode	Cost	Percent- age of Domestic Volume	Speed	On-time Depend- ability	Flexibil- ity Han- dling Products	Fre- quency of Ship- ments	Reach
Railroad	Medium	38	Slow	Medium	High	Low	High
Trucks	High	25	Fast	High	Medium	High	Most
Pipeline	Low	21	Me- dium	Highest	Lowest	Highest	Lowest
Ships (water)	Lowest	15	Slowest	Lowest	Highest	Lowest	Low
Airplane	Highest	1	Fastest	Low	Low	Medium	Me- dium

UNIVERSAL PACKAGE LABELING



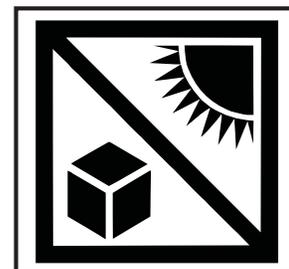
FRAGILE



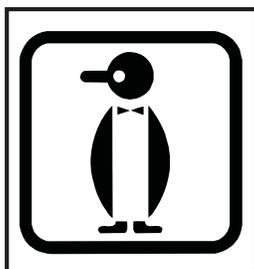
HANDLE with CARE



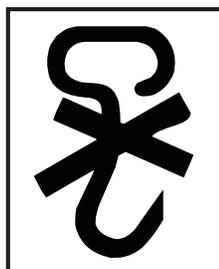
KEEP DRY



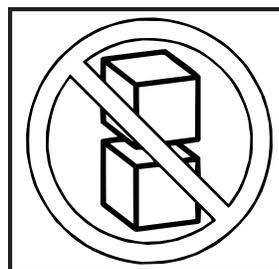
PROTECT from HEAT



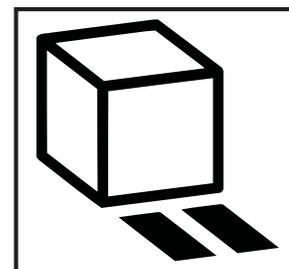
KEEP FROZEN



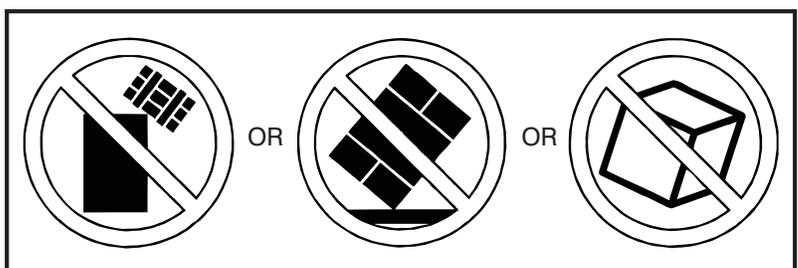
USE NO HOOKS



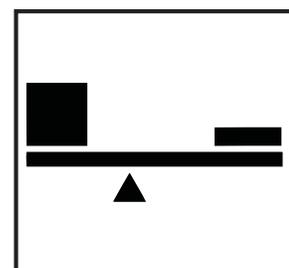
DO NOT STACK



LIFT HERE



DO NOT TUMBLE



HEAVY WEIGHT THIS END

TM: B4-9D

SAMPLE BILL OF LADING

Type or Print Legibly — And Bear Down
Crease at Perforation — Tear Apart

COLLECT

UNIFORM BILL OF LADING
Original – Non-negotiable – Domestic

Origin		<input type="checkbox"/> Check Here if Money Classification Shipment				
Destination City and State		Receipt Number	Shipper's No.			
Consignee's Name and Address		Date Shipped	12 - 34 - 56			
Shipper's Name and Address		Paid in Part	Advances			
		Priced By	Storage			
		Declared Value	Other			
			Value Charges			
No. Pcs.	Kind of Packages, Description of Articles, Special Marks and Exceptions	Wgt. Subject to Correction	Rate Basis or Class	Express Charges		
				Total		
				C.O.D.		
				C.O.D. Service Charge		
SHIPPER'S COPY		Tariff	Section	Rate Table	Scale	Collect Service Charge From Consignee
						<input type="checkbox"/> YES <input type="checkbox"/> NO
		Date	19	Number Pieces	Hour	A.M. P.M.

SAMPLE EXPORT DECLARATION

U.S. DEPARTMENT OF COMMERCE — U.S. CENSUS BUREAU — Economics and Statistics Administration — BUREAU OF EXPORT ADMINISTRATION						
FORM 7525-V (7-20-2000)		SHIPPER'S EXPORT DECLARATION		OMD No. 0507-0152		
1a. U.S. PRINCIPAL PARTY IN INTEREST (USPPI) <i>(Complete name and address)</i>			ZIP CODE	2. DATE OF EXPORTATION	3. TRANSPORTATION REFERENCE NO.	
b. USPPI EIN (IRS) OR ID NO		c. PARTIES TO TRANSACTION <input type="checkbox"/> Related <input type="checkbox"/> Non-related				
4a. ULTIMATE CONSIGNEE <i>(Complete name and address)</i>			6. POINT (STATE) OF ORIGIN OR FTZ NO. 7. COUNTRY OF ULTIMATE DESTINATION			
b. INTERMEDIATE CONSIGNEE <i>(Complete name and address)</i>						
5. FORWARDING AGENT <i>(Complete name and address)</i>						
8. LOADING PIER <i>(Vessel only)</i>		9. METHOD OF TRANSPORTATION <i>(Specify)</i>		14. CARRIER IDENTIFICATION CODE	15. SHIPMENT REFERENCE NO.	
10. EXPORTING CARRIER		11. PORT OF EXPORT		16. ENTRY NUMBER	17. HAZARDOUS MATERIALS <input type="checkbox"/> Yes <input type="checkbox"/> No	
12. PORT OF UNLOADING <i>(Vessel and air only)</i>		13. CONTAINERIZED <i>(Vessel only)</i> <input type="checkbox"/> Yes <input type="checkbox"/> No		18. IN BOND CODE	19. ROUTED EXPORT TRANSACTION <input type="checkbox"/> Yes <input type="checkbox"/> No	
20. SCHEDULE B DESCRIPTION OF COMMODITIES <i>(Use columns 22-24)</i>						
D/F or M (21)	SCHEDULE B NUMBER (22)	QUANTITY - SCHEDULE B UNIT(S) (23)	SHIPPING WEIGHT (Kilograms) (24)	VIN/PRODUCT NUMBER/ VEHICLE TITLE NUMBER (25)	VALUE (U.S. dollars, omit cents) <i>(selling price or cost if not sold)</i> (26)	
27. LICENSE NO./LICENSE EXCEPTION SYMBOL/AUTHORIZATION			28. ECCN <i>(When required)</i>			
29. Duly authorized officer or employee		The USPPI authorizes the forwarder named above to act as forwarding agent for export control and customs purposes.				
30. I certify that all statements made and all information contained herein are true and correct and that I have read and understand the instructions for preparation of this document, set forth in the "Correct Way to Fill Out the Shipper's Export Declaration." I understand that civil and criminal penalties, including forfeiture and sale, may be imposed for making false or fraudulent statements, herein, failing to provide the requested information or for violation of U.S. laws on exportation (13 U.S.C. secretary, 305; 22 U.S.C. secretary, 401; 18 U.S.C. secretary, 1001; 50 U.S.C. App. 2410)						
Signature		Confidential — For use solely for official purposes authorized by the Secretary of Commerce (13 U.S.C. 301 (g))				
Title		<i>Export shipments are subject to inspection by U.S. Customs Service and/or Office of Export Enforcement</i>				
Date		31. AUTHENTICATION <i>(When required)</i>				
Telephone No. <i>(Include Area Code)</i>		E-mail address				
The "Correct Way to Fill Out the Shipper's Export Declaration" is available from the U.S. Census Bureau, Washington, DC 20233.						