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THE STORAGE AND HANDLING OF GRAIN

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1.0 INTRODUCTION

Grain sold from the farm generally proceeds through a series of grain storage facilities before it reaches the ultimate user. The storage facilities, called grain elevators, provide storage space and serve as collection and transfer points.

There are three broad categories of grain elevators associated with grain marketing operations; country, sub-terminal, and terminal.

The primary function of country grain elevators is to receive grain from the farms by truck for future delivery to a secondary elevator or processor. Country elevators serve as the major outlet for grain sold from farms and are extremely important in the grain-producing regions of the United States.

In general, sub-terminal elevators are located away from metropolitan areas and are the only large grain-handling facilities in the immediate vicinity. They tend to be large, but their capacity is an incidental characteristic. Some sub-terminals are smaller than the largest country elevators, while others are larger than some terminal houses. Sub-terminal elevators rely on country elevators in their area to provide them with grain by either rail or truck. The sub-terminal generally has transit

privileges for grain. The manager sells directly to terminal elevators, processors, and exporters instead of selling to interior dealers or commission merchants. Many sub-terminal elevators have facilities that were formerly available only in terminal elevators.

Terminal elevators are large elevators generally located at significant grain trade centers. The function of the terminal elevator is to store the grain without deterioration in quality and to blend it if necessary so as to conform to the needs of buyers. Grain handling operations are similar at the country, sub-terminal, and terminal elevator, but the sub-terminal and terminal elevators are usually the first to thoroughly clean, dry, separate, and store the grain at proper temperature and humidity. Grain moving out from terminal elevators is ultimately used for food, feed, export, or industrial purposes. In the following sections, the discussion will consider only the country and terminal categories with the sub-terminal elevators being incorporated into the terminal elevator group.

The definitions which characterize country elevators, sub-terminal elevators, and terminal elevators are somewhat arbitrary; however, there are certain generally accepted guidelines which differentiate the three, as presented in Table 1.1.

Table 1.1 DEFINITIVE GUIDELINES FOR COUNTRY, SUB-TERMINAL AND TERMINAL ELEVATORS

Elevator Type	Receiving	Receiving Leg Capacity	Shipping	Storage Capacity
Country	Receives grain by truck only, primarily from farmers	10,000 bushels per hour or less	Shipped out by truck and/or rail	15,000 to 2,000,000 bushels
Terminal[1,2]	Receives grain by truck and rail and may include receiving by barge, if located on a navigable river	35,000 bushels per hour or more	Shipped by rail, barge or ship	2,000,000 bushels and greater[3]
Sub-terminal	Capacities are incidental - sell directly to terminal elevators, processors and exporters.			

1. Inland terminal elevator - functioning as a storage or transfer house. Some of the receipts or shipments may be by barge in addition to rail and truck.
2. Export terminal elevator - located at a seaport. Receives grain by truck and rail and possibly barge with shipments by ship.
3. Elevators with capacities in excess of 50,000,000 bushels have been built at a single location.