

TABLE 11.—Comparison of the moisture content of certain parcels of wheat sampled during loading and discharging.

Parcel.	Sampled at Loading. Per cent.	Sampled at discharging. Per cent.
B.....	14.0	14.1
E.....	13.8	13.7
Y.....	15.0	14.7
C.....	13.2	13.1
D.....	13.6	13.5

When the weight of wheat which was discharged is compared with the amounts loaded, it will be seen that the loss which took place during handling and transportation was not excessive.

TABLE 12.—Comparison of quantities of wheat loaded and discharged.

Parcel.	Weight loaded. bushels.	Weight discharged bushels.
F.....	5,907	6,115
B.....	9,258	9,169
A.....	9,619	9,548
E.....	42,482	42,175
Y.....	4,062	3,993
C.....	14,559	14,459
D.....	13,322	13,375
	99,209	98,833

On the whole the loss is less than 0.4 per cent.

CONCLUSIONS.

The results of the investigations in connection with this shipment indicate that if certain precautions are taken wheat may be carried to Europe via the Panama Canal without damage. The following recommendations are therefore made.

(1) Only wheat which is quite sound in every way should be shipped by this route; It should be carefully tested for moisture and any lots containing an excessive amount should not be loaded into the vessels. It has not been possible to determine just how much moisture the grain may safely carry, but until some limit is definitely set, a moisture content of more than 14.5 per cent should be regarded as dangerous.

(2) The temperatures recorded by the thermometers against the false bulk-heads near the engine room and stokehold are evidently too high for safety, and an unventilated air space of nine to twelve inches cannot then be considered sufficient protection. It is recommended therefore, that when it is necessary to stow grain close to the engine room or stokehold, these spaces be either ventilated or extended. The records clearly show that it was only in these portions of the holds and close to the propeller shaft tunnel that dangerously high temperatures occurred. The conditions will vary in different ships but the adequate protection of the grain cargo in these parts of any vessel is one of the essential conditions for its safe transportation.