

Тема 16. THE MECHANIZATION. COMBINE-HARVESTERS

I. VOCABULARY

auger — шнек, шнековий конвеєр
bar — пруток, стрижень
beater — вітер
to consist of — складатися з
cutter bar — різальний апарат
to divide — ділити
drum — барабан
flow — потік
grain — зерно
harvest — врожай
reel — мотовило
self-propelled — самохідний
space — простір
speed — швидкість
to thresh — молотити
unit — одиниця, агрегат, секція, блок, вузол
capacity — потужність, продуктивність
chaff — полова, січка
concave — підбирання, дека
crop — врожай, біологічний врожай
to direct — направляти
divider — той, хто ділить
to fall (fell, fallen) — падати
to be angled — бути нахиленим
combine harvester — комбайн
to separate — відокремлювати
sieve — сито, решето
straw — солома
tank — бак, резервуар
trailer — причіп

II. TEXT

COMBINE HARVESTERS

Combine harvesters are used to harvest various crops. The combine harvester cuts the crop, threshes it, separates the grain from the straw and chaff. The mechanism of a combine harvester can be divided into three sections. They are cutting,

threshing and finally separating the grain from the straw and chaff. To cut the crop a reciprocating tyre cutter bar is used. There is a divider at each side of the cutter bar. It separates the crop to be cut from that which will be left for the next round. The crop is cut while held against the cutter bar by the reel. After the crop is cut, the reel directs it to the cutter bar platform. The reel is one of the main parts of a combine harvester. It has tines which can be angled to provide better cutting of the crops. A large auger moves the crop to the centre of the platform. By means of tines the auger directs the crop to the main elevator which lifts the crop to the threshing mechanism. The threshing mechanism consists of a front beater, a heavy rotating drum, a concave, and a rear beater. The main elevator is used to lift the crop to the front beater. It delivers the crop to the drum and concave. The front beater increases the speed of the crop as it moves to the drum. Some combines do not have a front beater. In these combines the work of the front beater can be done by the main elevator. Threshing takes place between the drum and concave. There are spaces between the concave bars, so the threshed grain can fall through on the grain pan. To reduce the speed of the crop as it leaves the cylinder is the task of the rear beater. The rear beater is the part of the threshing mechanism which both reduces the speed of the crop and directs it to the separating mechanism. To separate the grain from the straw is the main function of this mechanism. The separating mechanism consists of two parts: the straw walkers and the grain sieves. The grain is separated from the straw by the rising and falling action of the straw walkers. They are driven by two crankshafts. The grain separated from the straw moves through the straw walkers and is directed to the grain pan under the concave. The separating unit is used to sort the grain and chaff on the grain pan. This unit consists of two sieves and a fan. The vibrating action of the sieves separates the threshed grain. The fan provides a flow of air to keep sieves clean. The harvested grain is directed to the grain tank. Big combines have an auger in the grain tank to provide the proper flow of the grain. Grain tank capacities vary from 1 to 50 tones. A high capacity auger is used to deliver the threshed grain from the grain into a trailer.

III. ANSWER THE FOLLOWING QUESTIONS ON THE TEXT:

1. What machines are used to harvest various crop?
2. What operations does the combine harvester do?
3. In what sections can the mechanism of a combine harvester be divided?
4. What are these sections doing?
5. What type of a cutter bar is used to cut the crop?
6. What is there at each side of the cutter bar?
7. What does a divider do?

8. Where does the reel direct the crop?
9. Where does a large auger move the crop?
10. What does the threshing mechanism consist of?
11. What is used to lift the crop to the front beater?
12. Where does threshing take place?
13. What is the task of the rear beater?
14. What does the separating mechanism consist of?
15. What is used to sort the grain and chaff on the grain pan?
16. What does the separating unit consist of?
17. What does the fan provide?
18. Where is the harvested grain directed?
19. What is used to deliver the threshed grain from the grain tank into a trailer?