

40938 to 40969—Con. (Quoted notes by A and G. L. C. Howard.)

40941 to 40969. TRITICUM AESTIVUM L.

(Triticum vulgare Vill.)

"*T. compactum* Host. Dwarf wheats. Ears exceedingly dense and short, rarely over 5 cms. long, outer glumes keeled in the upper half and rounded in the lower half, straw very short and stiff, grains rounded.

"There are four varieties of dwarf wheats grown in the Punjab. These wheats are drought resisting and are generally grown on inundation moisture with little rain. They are also said to be good yielders and type 7 has a good reputation for bread making. Owing to the smallness of their grain they can, however, be used only for indigenous consumption and they are therefore being gradually replaced by common wheats. They agree with the common wheats in time of ripening and showed themselves exceedingly susceptible to early rust, *Puccinia triticina* Eriks., when grown at Pusa; in fact, they were almost destroyed by it. They are, however, fairly resistant to yellow rust. The ears are short and erect, the straw stiff, short (generally about 3 feet 6 inches or 4 feet), hollow throughout, as in common wheats, but much stouter.

"Humphries remarks that 'types 4 and 7 are extraordinarily small in the berry, so small that millers would hesitate to buy them if they contained any small seeds, because the machinery used for extracting the small seeds would take out simultaneously a very large proportion of the wheat berries themselves.'"

40941. *T. compactum*. "Type No. 4. Var. *erinaceum* Kcke. Ears bearded, with short bristly spreading awns very irregular in length, awns red; chaff smooth and dark red; grain very small, round, rather a light dirty red in colour, very difficult to distinguish from a dark amber, hard on the whole, with a few soft grains; ear length 50 mm.; D.=38; straw shows no pink colour. To this type belongs the Makkhi of Chiniot."

40942. *T. compactum*. "Type No. 5. Var. *linaza* Kcke. Ears beardless; chaff felted with short hairs, white with a pinkish tinge due to the pink colour of the edges and the veins of the glumes; grain round, small, but larger than in type 4, amber coloured, hard on the whole, with a few soft and mottled grains; ear length 49 mm.; D.=38; straw pinkish, turning black or greyish pink on ripening. This type was only met with in small quantity in the Makkawali of Dera Ghazi Khan."

40943. *T. compactum*. "Type No. 6. Var. *wernerianum* Kcke. Ears beardless, but with occasional very slight bearding; chaff smooth, white with a pinkish tinge; grain round, about the same size as in type 5, a clean light red, all soft; ear length 44 mm.; D.=39; straw has no pink colour. This type was only found in small quantity in the Makini of Multan."

40944. *T. compactum*. "Type No. 7. Var. *humboldti* Kcke. Ears beardless; chaff smooth, white with a pinkish tinge; grain round, about the same size as in type 5, but possibly a little smaller, amber coloured, consistency very variable, hard, soft, and mottled grains found in about equal proportions; ear length 45 mm.; D.=41; straw pinkish, turning black on ripening. This is the