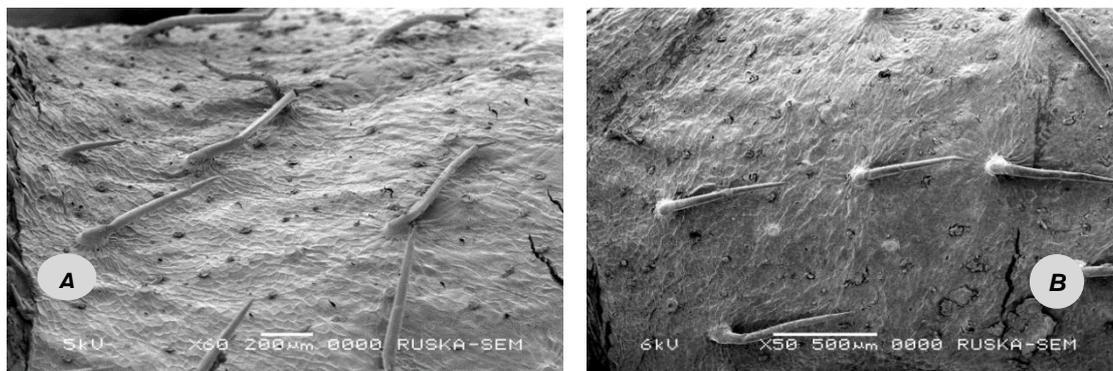


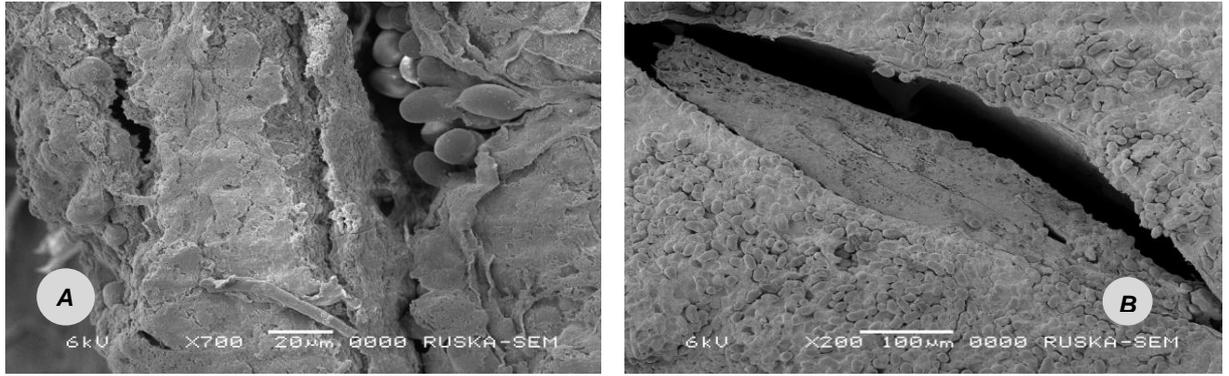
Supplementary Fig 1 SEM of ML 267 and MGG 295 mungbean genotypes showing a large locular space with epidermal pores and cracks. Podwall (pw), Seed coat (sc), Locule (lo) and Cotyledon (Co).



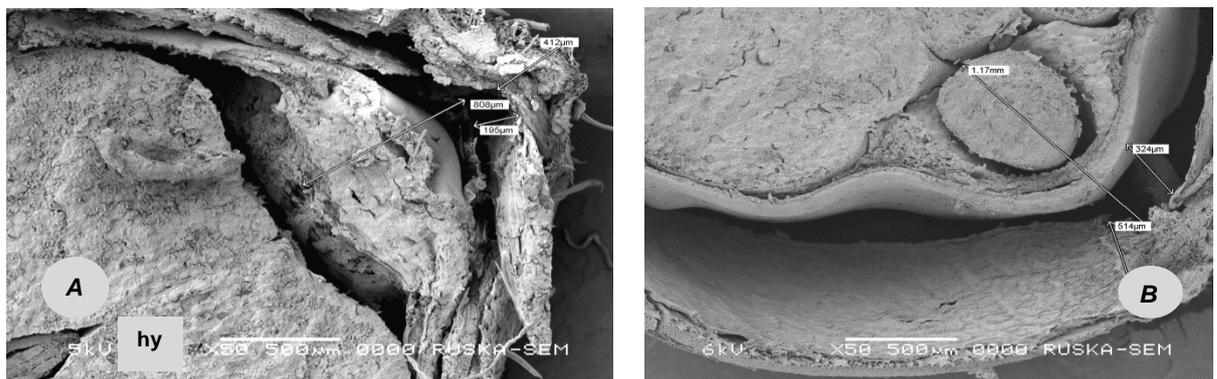
Supplementary Fig 2 SEM of mungbean genotypes (LGG 450 and K 851) showing withered, damaged trichomes on outer surface of the podwall.



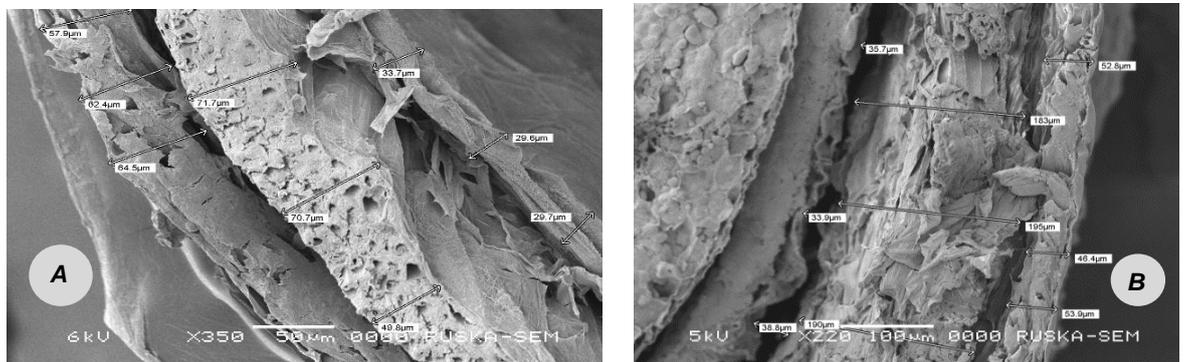
Supplementary Fig 3 SEM of mungbean genotypes (ML 267 and MGG 295) showing the turgid trichomes on outer surface of the podwall.



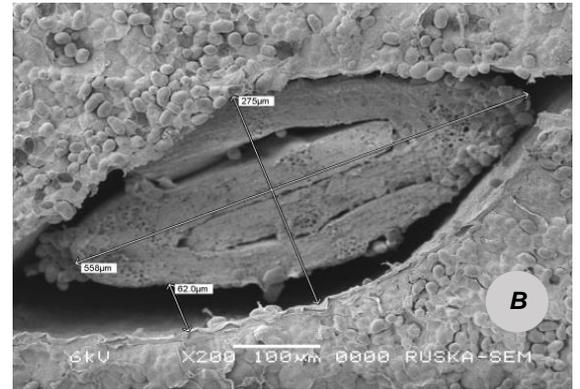
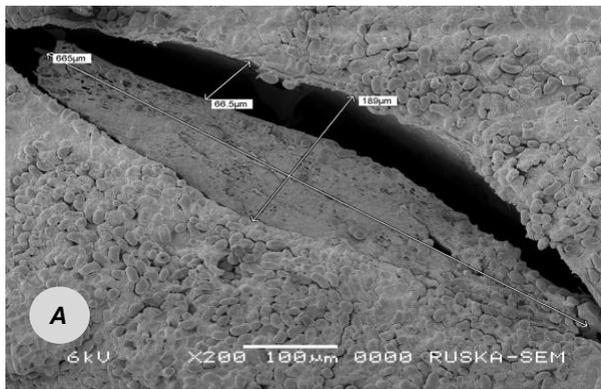
Supplementary Fig 4 SEM of (A) LGG 450 seed coat sub hilum showing compact podwall (pw) and seed coat (sc) with clean starch granules (sg) of endosperm without protein deposition seen in the locular cavity; (B) ML 267 showing starchy embryo (se) with embryonic cavitations indicates provision for storage of water around the embryo.



Supplementary Fig 5 SEM of LGG 450 and K 851 mungbean genotypes showing the thickness of cuticle and pod wall: Micropyle (m), Vascular bundle (vb), Placenta (pl) and Hypocotyl (hy).



Supplementary Fig 6 SEM of podwall and seed coat (A) ML 267 showing thinner multicellular mesocarpellary tissue to large locular space. (B) LGG 450 showing packed podwall (pw) layer with cavitative cells (cc) and very narrow locular space (ls) of multicellular, thicker mesophyll tissue and cotyledon (co).



Supplementary Fig 7 Comparison of SEM of figure (A) ML 267 showing longitudinal and elongated embryo and large space around it showing linear growth getting ready for germination (B) LGG 450 also a relatively starchy endosperm with 558 x 215 µm embryo and large space around the embryo showing the status of embryo unready for germination: Sg, starch granule; se, starchy embryo.