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Starch biosynthesis, its regulation and biotechnological approaches to improve crop yields

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**Abbreviations:** ADPG, ADPglucose; AGP, ADPG pyrophosphorylase; AGPP, ADPG pyrophosphatase; A/N-inv, alkaline/neutral invertase; BT1, Brittle 1; F6P, fructose-6-phosphate; G1P, glucose-1-phosphate; G6P, glucose-6-phosphate; GBSS, granule bound starch synthase; GPT, glucose-6-phosphate translocator; GWD, glucan, water dikinase; HvBT1, *Hordeum vulgare* BT1; MCF, mitochondrial carrier family; MVs, microbial volatiles; NPP, nucleotide pyrophosphatase/phosphodiesterase; MIVOISAP, Microbial Volatiles Induced Starch Accumulation Process; NTRC, NADP-thioredoxin reductase C; OPPP, oxidative pentose phosphate pathway; Pi, orthophosphate; 3PGA, 3-phosphoglycerate; pHK, plastidial hexokinase; pPGI, plastidial phosphoglucoseisomerase; pPGM, plastidial phosphoglucomutase; PPi, inorganic pyrophosphate; pSP, plastidial starch phosphorylase; RSR1, Rice Starch Regulator1; SuSy, sucrose synthase; SS, starch synthase; T6P, trehalose-6-phosphate; Trx, thioredoxin; UDPG, UDPglucose; UGP, UDPG pyrophosphorylase; WT, wild type; ZmBT1, *Zea mays* BT1.

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