

Supplementary Table S1. Sequences of the five analyzed PPRs and their predicted PQSs. Sequences of the five analyzed PPRs are represented in black color letters, while the sequence representing the 5'UTRs are represented in red color letters (first exon) followed by black color letters (second exon). PQSs found in the sense (coding) DNA strand regarding transcription are highlighted in yellow. Sequences complementary to the PQSs found in the antisense (template) DNA strand regarding transcription are highlighted in yellow. G nucleotides probably involved in G4 structures (forming G tracts) of PQSs found in the sense (coding) DNA strand are shown in bold and underlined. In the case of PQSs found in the antisense (template) DNA strand, C nucleotides complementary to the G nucleotides probably involved in G4 structure (forming G tracts) are shown in bold and underlined.

Gene	Gene ID	PPR sequence and PQS found
JAZ8	GRMZM2G114681	CAATTTTAGTCAAAAGTTATAAATTTTGCTAAATTTATATAATAA AATAATATTATAGTACTAAATAAGTATTTCTTTAATTATATTTCT ACAATATAACTATTTAATATTGCAACTTTTGTTATTATTTTTTAC AAATTTAATAAAAGTTAATACTTGTTTTGACTATTGGTGAAAGTT AAAATGACTAAGGAAAGAAGTAGTAGTAAAAGAGAAGCGTCGTGC GCACATGGCACAGGTGATGGCTAGAAACCATAAAACAAAAACCGTC GCGGCACGCCACCCGCTAAAGTCCGAAGCCCCCGTGACACAATTC CTTTACCTAGGAGTACACATATTATTTATTTATTACTTGTTTACT TTTTTTTTTATTTAGTGCCTTTTGCTAGCTTTCCCCCGACACCAAC TGACCTGATTCAATATTTTCATCGGCACAGTGGGCCCAACCGCGCT GCGCCCATCGTGGTCCGAACAGGAACCACGTGGGA CCCCTTCCCC GCGCGGAGAATCCCAAGGCCCAACCC GCCACCACCGCGCCAGTCG CCTCGTGCGCTCCCCGTCCCGAACACGTGTCTCTATCGATGAC CCGCACACCCGGCTCCGTGGCACGGTGGACGCTCGGCCGCCGCAAA CCCTTCCACCGACATGCGGGTTCCGTCCATCTCTGCCCCAGATGT CAGTGACGTGCACGGGACTCACCGCGGTGCAGCGGGAAGGGCGTC GTGCCGTACCACGTGGGGGACTCGACCGGGGAACCGATAAACGTG GCGCGGGCCCCGCCGAGAGAGACGCGCCCGATCCGGTCACCGCGG CTCGGGCCCCGCCGCTCTAGTCGCCAGTCGCCATGCGGACCACTC AATTATCTCCTCCGTTTCTTAGCCATTGTCAGCTGAGTAATCTA ATACCCCTCGTTTCCAATTAAGAAAGGATCGCAGGCCATTAAACAA GCACACACGGGAGGCCTACAAAGACGAGAGGGAGAGGAGAACGG TCAAGGCTGCG CGCGCGCATCGTCATCAGTTCAGTCAGTCGAG GTCGAGGGGCGGACGAGGAGCTGAGGAGAGAGAAGCTTCAAGGAG TTGGGGACTTGGGGGTGCGGAGCTGTCCGTCTTTCCCCCTCCCCCT CCACCCACCAGCTACCTCGGGAGGGCAAGGCAAACATCTGCGGCC TCCTTTCCCGAACCCGGGTGG
WRKY	GRMZM2G040298	TGCCATAGCTGAACCCCCAATTGAATAATAATCGCGTGAGAGCAC GATCGAAGGAGTCGCCAATGCAAAAGAAGAAGAAAAAACTATGGC TTCGTGTTGCGGTGGATGTATGGAACGCGTGATGTCTATTTCCAT CCAAAGAATCTGCGGTTGGATTATTGGATCTGTGTGCAACACACC AAGCCGCTGCTAAGCAATATATATGACAGCGTCAAAAGGTTAATT TGACCCAGGCCAGGATATCATATCATAACATATCATATCTAGAAT AGAAACTAGACTCACTCTACTAGAAGAAGAAGAAGAAGCAATGTA AAATTCTGAAGCTGGTAGCGACGTATATCGTTGATTCTTCAACCAA GCAACCGAATACGACGACAAGTCACGACCTGAATTACCACGGCCT TTACTCCTGTCTCCTAGCCTGACGTGTCTGCCGAAATATCCGACG CCTCTAGCTAGATTCTTTTTTATCGGAGTAGGCGCGGGCAGAAGA ATTCCGCCCCGGCGCGGTGTGCAGCTGTCAACGTTTAACCCCTCG ATAGAAACGCGCGT GGGATGGATGGGGATCTGCCGGGC CTCC GCCGTAGTCCGGGACGAGCGGCCACTGCACTGCCATGCACGCACG TCGCAGTTCCAGGGCACTGTTGCCGCGCGTGGGCATGACGGCGAA CCGAGCTCTGCTGCTGGTTTGGTTCTCGACTCCAACCGAAAACAC GCACCAACCACTCCAATGCATGATGATATGCGTACGTTAATAATT AATGCATATGCTACTTCTCATCTAATTCCCGAATCCCGAACGAAC GATGACAGATGAGGGGACGACGACGATCCATCATCAAAGGCATGG ATGGATGGATGGACATGGCGATAGTTGGGGAGACGTCGCCGTCGC ACGCTCGTCTCTGCTCTTCTCAAGAGAGCAGCTTGTCTGGCTGTCT CTCCTCTCCTCTTTGTTTAAGTTTCGTCCCCCGCGCGCGGTCTCCA CGCCTTGCTC AGCCTCAGCCCTCAGGCCTCAGCCAGCGTGCGCGC CCACAACCCCTCACGTCTGTCCTCCCGCCAATCACACCGCACGAACCG AGGACGACGGGACACCACCGTCACCGCGACGTAGTAGTAGTACTA CATGCATAGCATAGCCTCGTGGAGTCGTGGTAGTAGTAGTTAGT TTTGCTCGCTTCCACACCGCACCGCCGTTCCTTTTTTATATCCC GCGGATGCGCCTGCCTCTGCCTCGGGGTCGGGGGGGCAGCTGGTG ACATCGGATTTCGATCAGGCCGAGAAGATCGAACTGCTCCGATCC GGCGCTTAATTTCTCTCTCTCTCTCTCGGGCTAGCTGCCCGGGCA A
MAPK1	GRMZM2G053987	CACAAACAATGGCCTATCTCTCTCTGACTCCCATCAGCTCGTCGA GCCTAGTGACGGCCCCACGTCTTGATCTGAGAACCGTACGGAAATG

		<p> ATACTCGCCGCCAAAAGAAAATTGCGAAACCATAGATAGGATGGC CGTAACTTCAGCAATCTGTCTCTCCACACAGAAAGATGGAGACG TGCAAAATAAATAGGAATCCGGAGATACTTTGCTCAGCTCGCGTA TCACGCGGGAACAATAGAAAAGTTGGGCTTCGCAATCATTCATGGC ATCGGTTTCTTAAGCCCTCCCTTGTTCCAATCGCCGGGGCAACA CTGTACTGCTAGCAGTACACATCAGTTTGTATTAGGGGTTCCCTC AATCCTCATCCATTAGGATATTTTCCTGACAAAAAAGAAAAAGAA AAGAATGGGCACCTTGCACTGGAACTAGTTTCAGTTCTGCATCGA GCCGCCAAGCATCGACCTTGCTTTTGCAGGGGCCAGTGCTTGTG CTTGTGCGACCAATAGTGAAACTGGATTTCGTTAAACAAATCTTGAG CATATATATTGAATGTGTGCGGATCTGTTTAGAGACGCCGGGACCG TCCCAAATCTGCCTGCAGGAGGCATTTCGGGAACATTGGGGCTGTA CCGGACATCTTGAAATCCTTGTTGTATAGTTTTCTTTTTGAGAGA GCAGCCGGAAGAAGATACACCACGTGATCACACCACACTACTAAG TCAAGTTACACTTGAGCCTTCTCACTGCTGAAGTTTAGCACTTAC CTCCGGACCGCGGCCGATGTCAACAACCTATAATAGGCCATAGCT TGGAGTCGGGAGTCGGGACTCGGCTTTCCACACGTTGCCACTGAG CCACTGAGGACGACGACACGGGCGGTCAAAGCCACCGCGGCAGG CACGGCCAGCCACGCACGCAGACCGCATCATCAGCCATGGCCCAA CGCCCAAGCGCCGCAGACCGGACGTCATTCCCTGACGCGTCCCCG TCCAATCCGGCGCCGGCGCCAGCAAAATCAACGCGTCGGCGGCTA TCGGCCAATTGCCAATTCCTCCCGCCGAACGCTGAGACCCTGACA CGGTGGCCACCATCGCAGCAGGGCACCCCTGCCTCCTCCTCCTC CACTCACCAGCCCCAACCGCGTGCGACGTCCGTTATCCGATCTGGT GGGTGCGTGTCTCGTTTGACCGTTGAAGAGCCCTGCCCGCCGTC GGATCCGAACAGCTTCCCTTCCATCAGATTCAGAGCGCCGTCCGC AGCCGATAGCAACAGTGCCCGTCCCGCTCACTTTCGCTACCT TCCTCAGCCGGAGTCGTGGGCAGAGCAGAGCGATCGAGGCTGCT TCAGCAGTTCAGCTGCAGCCGCGCGCCCGCCGTCCCGAGTCCCC ACCTTCTTTTATAAATCCCACGCCTGCGCTTCTCTTTTGACGAA TCGGTGCGGAGGGGAGAAAGATAGGAGTCAATTAATTTGCCTGTT CTGCTTGCTGCTGACCTTGTGAGTGAGCCGCCGGTCTTCCCCTTC CTCGCCGAGGGGAAATAATAAGGCAGCCACAGCCAGGGCCGCCCC GAGGAAGAAG </p>
ACO1	GRMZM2G007249	<p> GATTCACTGTCATATGATGAACTAGTTGACTTGCTAAAAGAATAT ACTCAAAGTCATTAGAAAGAAAAAATAAATGTGACAAAGTTA AAAACTAAGAATAAAGCTATGTTTGGAACCTTAGAGCTAATAGTT AGCTAGCTAAGAAATTGTTAGATGGGTTGAGTCAGTTAATGGACT AATTGTTAGCTTTGAGTTAGCTAACAATTAGATGAGGCATTAGCT AGGGGTCTAGCTATTAGTTCTAGAGTATTCAAACAGAACCTAAGT CTTTATATGATAGGTGTTACATAGACATAAAAAATTAATGATAAAG TAAGATATGAAAATCAAGCTATGTCGTCCAATGCTAAAGAGTTTA AATCTTCTCTTAGAGATATAAAAGAAAAATATGATAAACTTGATA AAAACAAACGAAGAGTTTATGATATATTTGTTTAAAAAATTGA CCGTGACAATATTGTTGCTGCTTATAACACATGATACTACTAACA AAAGAGTTTTTCATATAACACATTATTACCAACAGATATCATCGGC GTCTCATTCCCTTTCAGACGCTCAGACGCCCCGGGTGGGCGGTGGC GGCACGGCGGTCCCGCATCGAGACGGTTTGCCATGGGCCGCTCA ACCTTCGCCACGGAGACAAAATGGCATTTGCCATACTGTGCCATA TGGCTTGCCATCCCCAAGTTGAGTGCTCGACCACGGAAGCGCACC TCACCCCATCCATCCGCCACTGTCGACGGCTGCCCTTCCCCGAGC TGACGGCCAGCCCAGCCAAGCCAAGCTGGAGTGCAAGAGAATCCC GTGCGTGTCATGCTGAGGGCCCCGCGACGAGACGGGCCAACACGCGT CGCCACATGGGCGTGGCGCGTGGGTGCCCACAGGTCAATGCGC CTGTCTGTGTCAGCAAGAGCAACAACCAAAAAACAACCTGCTGCTG GCTGCTGTCTGTTGACAAGTCGGGAAAGCTCGTCCACTTCCAGTT CCACTCCGCTAGAAAGCTTGAAGTTGGATGCCGAGCCTATAAATG GCGACCGACCCCGGCACTTCCACTCACCGCACTCCAGCGTTTCAG CATTAGACACGAGAGCTCCTAGTAGCCAGACCAGTAGTCCCGCGA CCCTGTGAGAGAAACAGACAGAGCAAC </p>
AP2-EREBP	GRMZM2G085678	<p> TTCCAAACAAAATGGCAACAGTTTTTTTTTCTGGAAAGCACCCAA ACGGGAAAGTTGTGGGAGAGGGAACACAACATTTAAGTGTGCAAA </p>

		<p>GTCGTAATCTGCAACCAAACATTTTCAGCAAAGACTCCAGCTCCC TTTCAAAGAACCCAAAATTATTAGAATGTTTGGATACAGCGAAGG ATCTGATCTTACTATAAACATTTGTCATCCTAAGACAAGAGTAAG CTTATTGCTGAAGCAGACTACCATAAACCTTTAGAGCTACCGTCT TGTGGATAGTTTCAGAGGTTAACGAAAGAAAAGCCAAGTTCAGTG AAATGAAATGAAATTTTCTACAAACCGAAGCACACGAGATGTTCA ATGGAGAAGAAATGAAGTTACGTGTAGACAGATTATTATAGCCTA ACTTCATAACCATTTTGC AACCTGATTCTATTGTGAGAATATAG CGAAGCCAAAATGTAAACATACTATCAAATTCTCCACTGAACAAC AGTTCAGTCTACTCCCATATTATAAGTGACAGAAAAAAAAAACTT TTATATTTCTTCATTGAACAAGTATCCATCAACTGAGCACACACC ATCATCATCACCAGTCTGTACCTGCAGCTACCTCAGACAAGCTTA AATGCCAACCATCTCCAAGCAATTCCAGAACTAACACCCCAGGAC AAAGGCACCTTGTCAATTCTCATAACAGGTCGCACTGAAATCA CTCTAAACACACAATCTATATTCAGTTCAAGAACAATTCAGTGA AATTTCAACATCCATTACATATTTATAGAGAAAAAATTGGGTGA CGGAACACGACTAGAGATTCCAAATGAAGCAAAAGAATTTTGACG TTATCTCAAAAATATGCAGTAAATATTCCAACACCCCTAAGTTTCA GCACAAGTCTTACCTATATGCTTTGCCGCAGTGCCACGCTTCCA GTGATACTCAACAATATGATTGGCCCCAGTAGCTCTGGAAAAAGA GATGAAGTTATCCAAAACAGATGTACATTAACCCTACATAAACTA CTACTAGGACTATGTGGATCAACTTAGGGTTGCCCCACAAATAAA TGTGGCAGCCATGGGTGTAGGTGAGAGTGTTTATTACCACTGTAC TAGCAGGGAAGGTGGTTATGCTATGCATACACACAGTTCACCGAC AGCCACACCTGCAGACACCATGTGGCCCCCCTTCAGTTGCCCC TCCCCTCATCTTTTGCCTCTATAGTTTATCCATTGACGCACGCT TGGTCTACTGCTCTTGGCCCCAGCACCCCTGCTCTCCAGTCAGTG TATGCCGCCTTCTATCAAGGTGGCTTGGTGACTGGTGAGTGAAAA CTAGGTCCAGACATATTCTCCACTCCTTTCTCTCTTACTACCTA CGCAGCTAACCACATTTATCACTCACTGCAGAAGCAAGTACAGGC TGGGCAGTTTATATTCACTCAAACCAGCCGTTCTCCCCCACAC GGCCACACACACTTCACTTCATAGGCGCCCCAGCAGAGCTCATCT CTGCCTCCTGTGTCTTCTCC</p>
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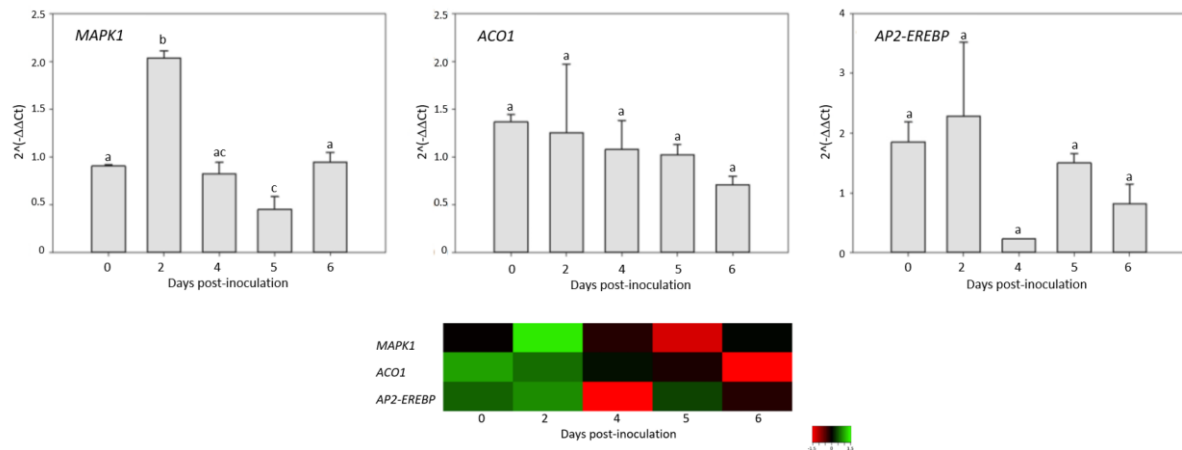
Supplementary Table S2. Oligonucleotide sequences to evaluate G4 structures *in vitro*. Oligonucleotides were designed to contain the complete selected PQSs flanked both at 5' and 3' ends by five additional nucleotides corresponding to the reference sequences informed in the reference maize genome.

Gene	Gene ID	Oligonucleotides
<i>JAZ8</i>	GRMZM2G114681	GTGGC- GGGTGGGGCCTTGGGATTCTCCGCGCGGGGAACGGG- TCCCA
<i>WRKY</i>	GRMZM2G040298	CGCGT-GGGATGGATGGGGATCTGCCGGGCGGG-CTCCG
<i>MAPK1</i>	GRMZM2G053987	AAGGT-GGGGACTGGGGACGGGCGGG-CGGCG
<i>ACO1</i>	GRMZM2G007249	AGACA- GGGCATTGACCTGTGGGCACCCACGCGGGCCACGCCCAT GTGGG-CGACG
<i>AP2-EREBP</i>	GRMZM2G085678	GATGA-GGGGAGGGGCAACTGAAGGGGGGG-CCACA

Supplementary Table S3. Oligonucleotide sequences flanking PQS and no-PQS regions (ectopic regions).

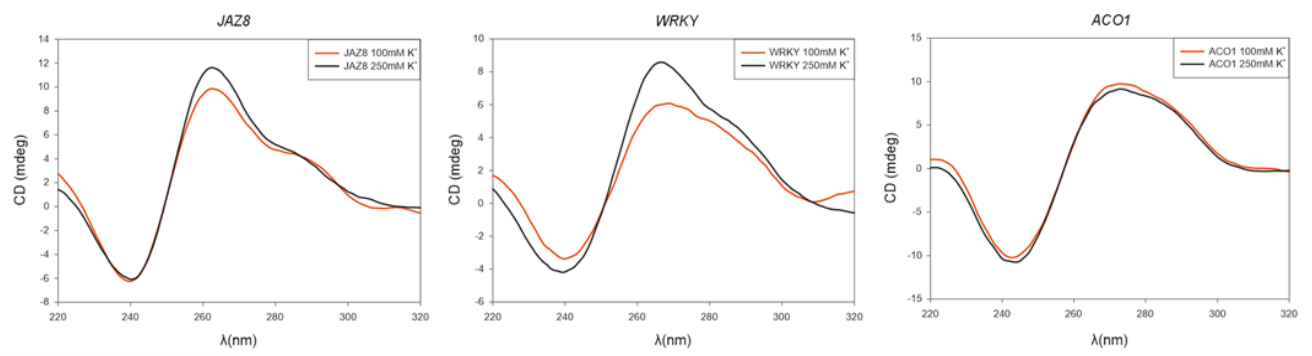
Upstream no-PQS regions (ectopic regions)	Sequence	Product length (bp)
pJAZ8-fw	TATGGATGTGGATGCCGATG	174
pJAZ8-rv	AACTGTAGAATTTGGGCGCC	
pWRKY-fw	TGGCAGCGATTCCCAAATTG	149
pWRKY-rv	ACAGACTAGCTAGAGACCCCA	
pMAPK1-fw	GCCGCCAAAAGAAAATTGCG	195
pMAPK1-rv	GGGAGGGCTTAAGAAACCGA	
pACO1-fw	TGGCTAAAGGTGAATGCAAGG	183
pACO1-rv	GCTCTAAGGTTCCAAACATAGCT	
pAP2-EREBP	ACAAACCGAAGCACACGAGA	178
pAP2-EREBP	TGGGAGTAGACTGAACTGTTGT	
PQS-Target Regions		
JAZ8-G4fw	ATTTTCATCGGCACAGTGGGC	172
JAZ8-G4rv	GTGCGGGTCATCGATAGGAC	
WRKY-G4fw	TGTCAACGTTTAACCCCTCGA	180
WRKY-G4rv	GAACCAAACCAGCAGCAGAG	
MAPK1-G4fw	CGCTCACTTTCTCGCTACCT	153
MAPK1-G4rv	CGTCAAAGAGGAAGCGCAG	
ACO1-G4fw	GAGAATCCCGTGCGTGCAT	176
ACO1-G4rv	CGAGCTTTCCCGACTTGTC	
AP2-EREBP-G4fw	GCAGGGAAGGTGGTTATGCT	147
AP2-EREBP-G4rv	AGAGCAGTAGACCAAGCGTG	

Supplementary Figures

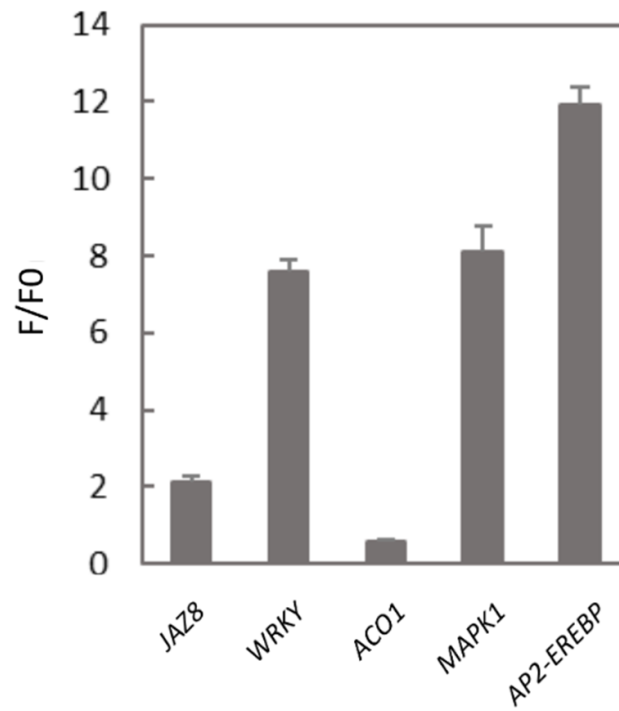


Supplementary Figure S1. Differential expression profiles of selected genes following inoculation with *T. atroviride*.

Relative expression levels of selected genes were determined by RT-qPCR between 0 and 6 days after inoculation with *T. atroviride*. Each bar graph represents the mean value of $2^{-\Delta\Delta Ct} \pm$ standard deviation of three independent biological replicates across different time points post-*Trichoderma* inoculation. Genes analyzed include Mitogen-activated protein kinase 1 (MAPK1, GRMZM2G053987), 1-aminocyclopropane-1-carboxylate oxidase (ACO1, GRMZM2G007249), and Ethylene-responsive transcription factor (AP2-EREBP, GRMZM2G085678). The heatmap illustrates the differential expression profiles of the selected genes compared with uninoculated controls. The figure was generated using the Heatmapper web tool (<http://www.heatmapper.ca/>).



Supplementary Figure S2. CD spectra of oligonucleotides corresponding to the PQSs identified within the PPRs of *JAZ8*, *WRKY* and *ACO1* folded in the presence of 100 and 250 mM KCl.



Supplementary Figure S3. ThT fluorescence assay for selected PQSs. Bar graph of fluorescence enhancement (F/F_0) of ThT when exposed to selected PQSs folded in the presence of 100 mM K^+ . Each bar represents the mean of three technical repeats and error bars correspond to standard deviation (SD). Considering a threshold of 5-fold fluorescence increase as G4 formation evidence, results indicate the formation of G4s by *MAPK1*, *WRKY* and *AP2-EREBP* PQSs, although a slight increase in fluorescence was observed for *JAZ8* PQS.