*OGMVFODF PG 4ZODISPOJ[BUJPO 5FDIOJR
JO 1BSFOUBM -JOFT PG 1FBSM .JMMFU)ZO

3UL\DQND XUXPXUWK\ 5 DQG 'HVSDQGH 9.

'HSDUWPHQW RI 6HHG 6FLHQFH DQG 7HFKQRORJ\ 8QLYHUVLW\ RI $JULFXOWXUDO 6FLHQFHV 'KDUZDG ,Q

&RUUHVSRQGLQ3JUDXXWDKNRRCU 0 'HSDUWPHQW RI 6HHG 6FLHQFH DQG 7HFKQRORJ\ 8QLYHUVLW\ RI $JULFXOWX
SSUL\D #JPDLO FRP

PDUJLQDO JRZHUS...KLULR GRZHUEKQKDYLRXU FRSXOODWKQJ[SHULPHQW ZDV FDUULHG RX
DOVR EH PDQLSXOODWHGFKGHWKLFKDXVRORQNQJLYHULEHUVHWHORROLI $JULFXOWXUDO 6-RZHQUFHV
DFLG IROLDU VSUD\ RI QLWURJHQ SKRNBNRXUXRQG7S5UHVRZLRPQJK\GDQWLRQ$
ZKLFK KDV-WRZHUWWKQHFH LQ WKH SUHWRHOWWDQ\HPWODOWLRSQH+SHULPHQW ZDV ODL
ZHUH PDGH WR DFKLHYH V\QRZRUKQEHHWZHHQ SDUHQWD
~RZHURQPDOH SDUHQW LV GD\V ODWHU FRPSDUHG WR WKH IHPDOH
SDUHQW

)ORZHULQJ EHKDYLRXU LQ SDUHQWDO OLQHV RI SHDUO PLOOHW K\EULG
%30+ UHYHDOHG WKDW ZLWK WKH DGYDQFHPHQW LQ GDWH RI VRZLQJ DW
IRUWQLJKWO\ LQWHUYDOWDQJKWURPRI -XQH WR VHFRQG
IRUWQLJKW RI 'HFHPEHU ZDV REVHUYHG GHFUHDVLQJ WUHQG LQ GD\V WR
}V\SHU-FRZHUWLOOQJHPDOH ,&0$ DQG PDOH SDUHQW 7357

0DWHULDOV DQG 0HWKRGV

H }HOOG[SHULPHQW ZDV FRQGXFWHG GXULQJ .KDULI DW 0DLQ
$JULFXOWXUDO 5HVHDUFK 6WDWLRQ 0$56 8$6 'KDUZDG ZKLFK LV
VLWXDWHG DW r 1 ODWLWXGH DQG r (ORQJLWXGH ZLWK DQ DOWLWXGH RI
P DERYH PHDQHVHS[SHULPHQWDO VLWH FRQVLVWHG RI
PHGLXP GHHS EODFNH[SRLOPHQW ZDV ODLG RXW LQ D VSOLW
SORW GHVLJQ ZLWK WZR IDFWRUV)DFWRU , 6WDJJHUHG VRZLQJ 6)DFWRU ,,
DSSOLFDWLRQ RI DGGLWLRQDO GRVH RI QLWURJHQ WR PDOH SDUHQW 1 0DLQ
IDFWRU FRQVLVWLQJ RI GVRZHUGDOWHPDOH O1LQH DW
6LPXOWDQHRXV VRZLQJ RI ERWK WKH SDUHQWV 6 6WDJJHUHG VRZLQJ RI ODWH
SDUHQW PDOH GD\V HDUOLHU WR IHPDOH 6 6WDJJHUHG VRZLQJ RI ODWH
SDUHQW PDOH VL[GD\V HDUOLHU WR IHPDOH DQG 6 6WDJJHUHG VRZLQJ RI
ODWH SDUHQW PDOH QLQH GD\V HDUOLHU WR IHPDOH :KLOH VXE SORWV RI
DSSOLFDWLRQ RI DGGLWLRQDO GRVH RI QLWURJHQ WR PDOH SDUHQW FRQVLVWH
1 5HFRPPHQGHG GRVH RI IHUWLOLOL]HU 13. NJ KD 1
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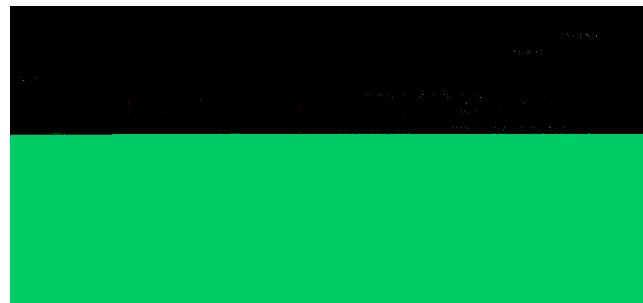
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7DEOH D\V WR SRZHU IOLQJ HPDOH SDUHQW ,&0$ DQGLQDXOHFFPGWDWHUH7SG7 VR DSSOLFDWLRQ RI DGGLWLRQDO GRVH RI1RQWULRQHLQFDWODWH SDUHQW UHVWRUHU

,UUHVSHFWLYH RI VWDJJHUHG VRZLQJ DSSOLFDWLRQ RI DGGLWLRQDO GRVH R QLWURJHQ VUHOYHIDOOGDWLRZHURSSDUDPHWHUV
+RZHYHU QXPEHU RI GD\V WRDRHHQQWRLSSODWLQLFFOOH LQLWLDWLRQ
DQG ≈RZHULQJ UHODWLYHO\ OHVV GD\V GD\V DQG
GD\V UHVSHFWLYHO\ DPD\EJH1GXWH WR$6QFUHDVH LQ
SODQW KHLJKW DQG PRUH QXPEHU RI OHDYHV OHDGLQJ WR IDVWHU JURZWK RI
UHSURGXFWLYH VWUXFWXUHV)XUWKHU LW ZDV DOVR UHODWHG WR JUHDWHU
DYDLODELOLW\ DQG WUDQVORFDWLRQ RI SKRWRV\QWKDWHV DW WKH PHWDEROLF
]RQH DQG LW-URKWZHUEGGLRXU RI WKH SODQWV GXH WR
DGGLWLRQDO DSSOLFDWLRQ RI QLWUGUQJHQ OHYHV DW '$6 6LPLODU
ZHUH DOVR UHSRUWHG E\ 3DQGXDVWU\ > @ LQ &6+ DQG 6KLYDSSD > @ LQ
'6+ VRUJKXP K\EULG 'KHGKL HW DO > @ LQ EDMUD 7DQZLU $ODP HW DO
> @ LQ PDL]H

H LQWHUDFWLHIIHFWRZHHQ VWDJJHUHG VRZLQJ DQG DSSOLFDWLRQ RI
DGGLWLRQDO GRVH RI QLVLJQORJFDQLQODWLRQVIRRZHG
GD\V WR SDQLFRZHLQLQWLDWLRQDQRZHULQHU FHQW
+RZHYHU WKH WUHDWPHQW FRPELQDWLRQ RI VRZLQJ RI PDOH SDUHQW GD\V
EHIRUH IHPDOH VRZLQJ DORQJ ZLWK DpLRQDO GRV@ DO GR€GO RZ
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