

!" #&/

4;O <548G=>3> 70AB>AC20==O ?@5?0@0BC

"(!" "- /

!;:04;V:0@AL:>3> 70A>1C:

4VNG0 @5G>28=0: cynara scolymus;

1 :0?AC;0 :0 5:AB@0:BC ACE>3> (7;5:1) (5:AB@035=B 2>40 >G8I5=0) C ?5@5@0EC20==V =0 ACEC @5G>28=C 100<3 01> 300 <3;

4>?>28=8: ;0:B>78 <=>3V4@0B. :@5<=VN 4V>:A84 .>:W4=89 1572>4=89, .:LFVN AB50@0B, :@>A?>2V4>; >1>;=0 :0?AC;8 :A84 (171), 6>2B89 70EV4 FCF (110), 65;0B8= (4>7C20==O 100 <3) 01> B8B0=C 4V>:A84 (171), 70;V70 >:A84 G5@2=>89 (172), 70;V70 >:A84 G>@=89 (172), 65;0B8= (4>7C20==O 300 <3).

V:0@AL:0 D>@<0. □0?AC;8.

"25@4V 65;0B8=>2V :0?AC;8 7 :@8H5G>N V :>@?CA<<>@0=652>3> ;>;L>@C (4>7C20==O 100 <3) 01> 2V4 >@0=652>:>@8G=52>3> 4> :>@8G=52>3> ;>;L>@C (4>7C20==O 300 <3). 3@0=C;L>20=89 ?>@>H>: 2V4 A2VB;>:>@8G=52>3> 7 AV@8- 2V4BV=;> 4> B5<<=>@8G=52>3> 7 AV@8< 2V4BV=;> >;L>@C. >?CA:0TBLAO =0O2=VABL 2;:NG5=L 1V;>3> ;>;L>@C, ?>@>H:C V 03@530BV2 G0AB>: ?>@>H:C.

0720 V 465==O 28@>1=8:0.

"«\$0@<0F52B8G=0 :>@>2 O».

#:0W=0, 61013,

\$0@<0>:B5@0?52B8G=0 3@C?0. 0A>18, I> 70AB>A>2CNBLAO ?@8 70E2>@N20==OE ?5GV=:8 V 6>2G>282V4=8E H;OEV2. 0A>18, I> 70AB>A>2CNBLAO ?@8 1V;V0@=V9 ?0B>:>3VW.>4 "!" 05%.

@5?0@0B @>A;8=>3> ?>E>465=O, I> 5:AB@0:B 0@B8H>:0. '8=8BL 6>2G>3V=C, 35?0B>?@>B5:B>@=C, A5G>3V=C 4VN.

\$0@<0>:>3VG=89 5D5:B >1C<>2;5=89 :>< 1V>;>3VG=> 0:B82=8E @5G>28=, I> 2E>4OBL 4> A;:04C ?@5?0@0BC: F8=0@8=, E;>@>35=>20 :8A;>B0, 0A:>@1V=>20 :8A;>B0, :0@>B8=, 2VB02=0 4VNG0 @5G>28=0 ?@5?0@0BC F8=0@8= <0T, 2 >A=>2=>E>;5@5B8G=C 4VN. %>;5:V=5B8G=0 4VO 28@065=0 C <5=HV9 @1V=>20 :8A;>B0, :0@>B8=, 2VB0:@0ICNBL ?@>F5A8 >1

@5?0@0B AB82G>284V;5=O, 7=86CT @V25=L E>;5AB5@8=C C :@>2V, AB8F8BV2, G8=8BL A5G>3V=C V 3V?>;V?V45 4VN. <5=HCT 2V4GCBBO ?5@5?>2=5=O 01> @>7B03=5=O H;C=0, CAC20T A?07 !?@8OT 284V;5= N 7 >@30=V7A5G>28=8, :@50B8=V=C, 0 B0:>6 B>:A8=V2 (C B. G. =VB@>A?>;C;, 0;:0>W4V2, A>;59 206:8E <5B0;V2).

>:070==O 4;O 70AB>AC20==O, 8A:V=57V0 6>2G=8E H;OEV2 70 3V?>B>=VG=>3V?>:V=5B8G=8< B8?<<, E@>=VG=89 =5:0:L:C;L>7=89 E>;5F8AB8B, E@>=VG=89 35?0B8B @V7=>W 5BV>:>3VW, E@>=VG=0 =8@>:20 =54>AB0B=VABL, E@>=VG=V V=B>:A8:0FVW (35?0B>B>:A8G=8<8 @5G>28=0<8, =VB@>A?>;C:0<8, 0;:0>W40<8, A>;0<8 206:8E <5B0;V2), 48A?5?A8G=V @>7;048 (206:VABL 2 5?V30AB@VW, <5B5>@87<, =C4>B0, 2V4@86:0).

@>B8?>:070==O.

V428I5=0 GCB;82VABL 4> :>5=BV2 ?@5?0@0BC/V=H8E @>A;8= @>48=8 A;:04=>F2VB8E (09AB@>28E), =5?@>EV4=VABL 6>2G=8E 01> A5G>282V4=8E H;OEV2, =03=>T=O (52G=>3> 2G=>:0<O=0 E2>@>10, 3>AB@89 35?0B8B, BO6:0 ?5GV=:>20 =54>AB0B=VABL, 3>AB@V 70E2>@N20=O =8@>:.

0;56=V 70E>48 157?5:8 ?@8 70AB>AC20==V.

5@54 ?5@H8< ?@89><<< ?@5?0@0BC ?@>:>=AC;LBC9B5AO 7 ;V:0@5=AC;LB0FVW ;V:0@O =5 70AB>A>2C9B5 ?@5?0@0B 4>2H5 2AB0=>2;5=>3> B5@ 0AB>A>2C20B8 7 >15@56=VABN ?@8 70E2>@N20=OE, I><<6CBL ?@8725AB8 4> =5?@>EV4=>ABV 6>2G=8E H;OEV2 B0 ?@8 BO6:8E 70E2>@N20=OE ?5GV=:8. /:I> A8<8 70E2>@N20=O =5 7=8:0NBL 01> ?>ABV9=> @5F8482CNBL 01> C 28?04:C 28=8=5=O 4V0@5W 01> 1>;N 2 682>BV ;V:C20=O ?@5?0@0B< A;V4 ?@8?8=8B8 B0 ?@>:>=AC;LBC20B8AO 7 ;V:0@5 # ?5@V>4 ;V:C20=O A;V4 CB@80;:>3>;N. @8 B@820;>AC20=V ?@5?0@0BC 7=86CTBLAO @V25=L 07>B2 @5G>28= V E>;5AB5@8=C C :@>2V. @5?0@0B7C, B>

A>1;82V 70AB5@565==O.

I>2O7:>2> ?>2V4> 0HC ?>?5@54=N @50:FVN =0 ?@89>< ?@5?0@0BV2 FVTW 3@C?8.

0AB>AC20==O C ?5@V>4 203VB=>ABV 01> 3>4C20==O 3@C44N.

0AB>AC20=O ?@5?0@0BC C ?5@V>4 203VB=>ABV <>6;825 70 ?@87=0G5=O< ;V:0@O BV;L:8 B>4V, ;>;8 >GV:C20=0 :>@8ABL 4;0<0B5@V ?5@528ICT ?>B5=V9=89 @878: 4;0 ?>40. 0 =5>1EV4=>ABV 70AB>AC20=O ?@5?0@0BC 3>4C20=O 3@C44N A;V4 ?@8?8=8B8.

40B=VABL 2?;820B8 =0 H284:VABL @50:FVW ?@8 :5@C20==V 02B>B@0=A?>@B< 01> @>I>BV 7 V=H8<8 <5E0=V7<0<8. 5 2?;820T.

VB8. 0AB>A>2C20B8 4VBO< 2V> 2V4 6 @>:V2.

!>AV1 70AB>AC20==O B0 4>78.

>7C B0 B@820;VABL 70AB>AC20==O ;V:0@ 2AB0=>2;NT V=482V4C0:L=> 70;56=> 2V4 BO6:>ABV 70E2>@N20=O!

@89<0B8 70 15-30 E2 4> W48. □>@>A;8< V 4VBO< 2V>:> 2V4 12 @>:V2 ?> 200-300 <3 3 @078 =0 4>1C.

VBO< 2V>:> 2V4 6 4> 12 @>:V2 ?> 100 <3 3 @078 =0 4>1C.

"@820;VABL :C@AC ;V:C20=O AB0=>28BL 2-4 B86=V. V:C20=G>6=0 ?>2B>@8B8 ?VA;O ?5@5@28 2 1-2 3>482H8 7 ;V:0@5

5@54>7C20==O. 8?04:8 ?5@54>7C20=O =5 >?8A0=V. >6;825 ?>A8;5=O ?>1VG=8E 5D5:BV2 ?@5?0@0BC.

V:C20=O: 2V4<820=O H;C=0, A8<0B8G=0 B5@0?VO. !?5F8DVG=89 0=B84>B 2V4ACB=V9.

>1VG=V 5D5:B8.

@8 B@820;>AC20=V ?@5?0@0BC C 28A>:8E 4>70E <6;82V 4V0@50, 1V;L C 25@E=V9 G0AB8=V 682>B0, =C4>B0 V ?5GVO, 0;5@3VG=V @50:FVW.

# @07V 28=8=:5==O 1CAL-O:8E =5728G=8E @50:FV9 >I>2?O7:>2> ?>@04LB5AO 7 ;V:0@5< I>4> ?>40;LH>3> 70AB>AC20=O ?@5?0@0BC.

70T<<4VO 7 V=H8<8 ;V:0@AL:8<8 70A>10<8 B0 V=HV 2848 270T<<4V9.

/:I> 8 ?@89<0TB5 1CAL-O:V V=HV ;V:0@AL:V 70A>18, >I>2O7:>2> ?@>:>=AC;LBC9B5AO 7 ;V:0@5< I>4> <>6;82>ABV 70AB>AC20=O ?@5?0@0BC!

@5?0@0B <>65 ?>A;01;N20B8 4VN 0=B8;>03C;O=BV2 B8?C :C<0@8=C (D5=?@>:C<=>, 20@DO@8=), I> 28<030T :>@5:FVW 4>78 >AB0=VE. @8 >4=>G0A=>AC20=V ?@5?0@0BC 7 3V?>07>B5 V 3V?>E>;5AB5@8=5 70A>10<8 <6;825 ?>A8;5=O 3V?>07>B5> V 3V?>E>;5AB5@8=53> 5D5:BV2.

"5@ABV. 3 @>:8 (4>7C20==O 100 <3), 2 @>:8 (4>7C20==O 300 <3).

#<>28 715@V30==O. 15@V30B8 2 >@83V=0;L=V9 C?0:>2FV ?@8 B5□. 15@V30B8 C =54>ABC?=>

#?0:>2:0. 0?AC;8 ?> 100 <3 10×2, 10×6 C 1;VAB5@0E C :>@>1FV 01> ?> 300 <3 10×□□0×6 C 1;VAB5@0E C :>@>1FV.

0B53>@VO 2V4?CA:C. 57 @5F5?B0.