



ZHONGYANG JISHU  
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# 种养技术指点通

· 种植技术 ·

宁夏科学技术协会 编



黄河出版传媒集团  
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yz ' { +2[ \_ &' { | } # . << ; < \* ~ !

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3 4 5 6 7 8

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GHI J '(0'+, , , -2'3)!5#!"5#%#-(63163-034

KLMN .67/867/0'81672'9: !; "-034

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=NABCDE&FG !!!!!!!!!!!!!!!!!!!!!!! !!"  
HNVI yz' { !!!!!!!!!!!!!!!!!!!!!!! !!#  
J N K L M N O !!!!!!!!!!!!!!!!!!!!!!! !!\$  
pH> ?@PQR' { !!!!!!!!!!!!!!!!!!!!!!! !"%  
=N@PDE&ST !!!!!!!!!!!!!!!!!!!!!!! !"%  
HN@PU\$DVWDXYZ !!!!!!!!!!!!!!!!!!!!!!! !%%  
J N@PPy[ hST !!!!!!!!!!!!!!!!!!!!!!! !%&  
\N ^QR\_ ' ' { !!!!!!!!!!!!!!!!!!!!!!! !#"  
pJ > abQRWKL MNO' { !!!!!!!!!!!!!!! !#'  
=Nlc' { !!!!!!!!!!!!!!!!!!!!!!! !#'  
HNdef gV !!!!!!!!!!!!!!!!!!!!!!! !(#  
J N h i j k !!!!!!!!!!!!!!!!!!!!!!! !()  
\N bgV !!!!!!!!!!!!!!!!!!!!!!! !(\$  
mNKL MNO' { !!!!!!!!!!!!!!!!!!!!!!! !'(  
p\ > noQRgV' { !!!!!!!!!!!!!!!!!!!!!!! !)"  
=Npq1r' { !!!!!!!!!!!!!!!!!!!!!!! !)"  
HNpqQRI & !!!!!!!!!!!!!!!!!!!!!!! !)#

" !!" "

pm> stuvQR' { !!!!!!!!!!!!!!!!!!! !"#  
=NstuvCwv' { !!!!!!!!!!!!!!!!!!! !"\$  
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\N|thCgV' { !!!!!!!!!!!!!!!!!!! %"'  
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!Nwvt "y#\$ !!!!!!!!!!!!!!!!!!! %()  
p!> %&QRW%&' ()r !!!!!!!!!!!!!!!!!!! %('  
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JN? %&. /"y !!!!!!!!!!!!!!!!!!! !"#  
\N) O"y !!!!!!!!!!!!!!!!!!! !' &  
mN%&Qz +gV' { !!!!!!!!!!!!!!!!!!! !')  
!N%&12Whi !!!!!!!!!!!!!!!!!!! !''  
3N%&~ 456' { !!!!!!!!!!!!!!!!!!! +!+  
7N%&DXy 56' { !!!!!!!!!!!!!!!!!!! +!\$  
8N%&i bgV' { !!!!!!!!!!!!!!!!!!! +!&  
9N%&efgV' { !!!!!!!!!!!!!!!!!!! +!)  
9=N%&KMNO' { !!!!!!!!!!!!!!!!!!! +!(  
9HN%&' (W)r ; ; !!!!!!!!!!!!!!!!!!! +!'  
9J Nk=, >%&O)r !!!!!!!!!!!!!!!!!!! ++!

| ~ ! |

?C97C@A# @BCDEFG+HC?) IJKLM  
NOPT) 1{ , Q' } CR3STO?C98CU= VW3  
PPH! HI nXUZY/ \/' ^L\_ ' abYKL#L\_ c  
T def#ghi j Gkz L\_ #l PKmLNmKL#nL  
\_5aoL\_9i ETU=pU' T) , Q' } QCw/" qO  
GT) rst b) I guKLMNCw/l vowOi p  
9Hm?x} W3CKLyz{ /#} ~) U\_ | ! B' (   
dNUq" #L\$%EguCP\_ ' & ' ( \#L;) OCI  
v#\* +z Y\_ | , - g. >N/O>ND1 >C, - . 2o  
R34] N! 567N&\_8TC53. 2#2[ \_&' { |  
}' 9guP\_ ' : <&' KLMNZ; G#6<=>6C\_  
' ;?@# @A( &' NMBCvN\_ ' RDN' { E qN5  
3R\$NWF' z\_&GHI G7I JK#( \CvN( \L  
MN( \#L#NOPQRSTy^' owXUu^' #V;  
FW. 2A(XCFY#&' KLMNZ[ \ =qb] O  
^ 5@\_ ' a^ 5@bO\_ ' &' KLMNc d\_ ' ef  
oghOL\_9i \_ ' i Ctj #' z\_&GHi Ckl OL  
\_9iUu#mnoI : C\_ ' pqo\_ ' ef ' r #J. H  
\_ ' STst Guv6CL\_ RS\* +w@CKL^' NKL  
xy#PQL\_9i 5zCzD; ' #PQ{ | TyC^' O  
2[ \_&' { | } , - Ti' ( \_ ' : <#} C#y\$'

" !! " "

{ %&' \$#o= " #STGoS%G&=z# ' ( ) ~' ( yzN\$ \* b@V' { # Wu' z\_ ' Ty^' NWF' z\_ &GHN&' ( \# LC\_+, hO

h " - I 7I a @JFW8

=o#. />Oh- I 01#\$234^z Y95' ( A ( FWNu, GQCST&#g6\ - I z 7Cb@GO

HoST \8Oh- I ?@9G2[ Xy: ; ' ( \_ ' V 6<@C: <# =>' ?@A2[ B9C' ( UuoA( x y# CDEaFyCbGRHo{ @CVI JO{ b#g6\ - I z 7C \8GO

Jo#} KFO- I Lt \* +MN: O#PQLN: OC ST01t kGR#S' zu@TxwUCdl oV\$WX# \$&B \ &# Wu\ - I CYCGO

\ou7PZO- I \* +/ \ \ ' zC], ^' o7tG H# ^a\_ ' C7j ab#cabdCueuf#EgC42 cUZ\5GtC\* +#01Wu' z, @C], VSO

; hij; #/ kwj l Oh- I ^o' zEmj oL\_ rF C' ( b@' { ST, h#oo' ^BY, - RDCp. @I O- I C34#u@a] q\* L\_9i [ r' ' V6z5 o#Le{ z5#/ Qa&&' zs: a] 9t uov@Yx y\$ \* w2o' { #vWFwX\_ ' Ty^' oUu^' CE g#V; ijFW. 2A(XCFY#PQ' ( xV; ' Ny z' ( Uu. 2#&' KLMNZ[ b] O

# @

!"#\$n%o

" !!# "

p = > ? @ A B y z ' {

? @ A B z { E / } A B N - V A B N " A B F # G M h D  
# T \$ z E # % u ! " ! # " & ' # ( ) # \* # + W #, H # a - l  
\* . 9 H ) / 0 # 1 2 3 4 N # a + W 5 6 # v 7 H - A D 8 9 u  
p : \* . ; = i 2 < Y i # 1 = > 1 # ? D # @ A # D Z ; B O C a  
D E g F N D G H I N J K L M 7 C M ] # 0 @ r P Q u # = R  
d v 1 C # v S E C [ T o = y Q U C 3 V g W ? " # v X Y =  
= - ? S 1 d v v \$ Z / @ H O @ A B / { | e j c o = y Q  
/ S C ) O . # v T U C B C O . ^ U = R \_ a S ' # n S 1 v  
\$ Z / @ H O ~ V A B v a b ! s c a % & n C y z d e # ) 9  
c i { P y z i j t N D A f w t N ; f g t N S ' = R t C C  
A ( h i # = ' & \$ \$ n y z a % ( ) Z j # A 1 % Z / # A P ' k  
s # ( G ) 9 F W 7 1 A ( O

= N A B C D E & F G

\$( D m F G

E " F n y } ~ y A B : \* o n y = o n + o H p 3 q #  
v r = g y ( ) s t T ' u D X # ! # & o v o i { 7 5 C m  
n g y # ) ~ 4 9 w k l g 7 5 D X x y # ( ) C 9 ' u + t ;

" ! ! " "

| y\$' { %&' "yz' {

e#Pz <w{ | w# 9| t} K#~! " #j | 4\$w%F  
j &u3qO

E!FU\$DXy !oHp= " oHp# 3q=89+t  
y#bz %DXoUmCmngy#N' w{ \$wCFu# e  
C1ug#z %() DX#bz %e ^\* + 4CCgy#GA  
B() , C- q[ \* O

E'F89y " oHp= # o) p# 89+t =89{ @#  
. gyABC; 7i { AD89#() g/ , C#o~01/z  
%DXCmngyO

E#FY2gl y #o) p= \$ oHp# , 34PI 2=  
gl y#o() , C45CmngyO

E'F{ @y \$o) p= %o6# eg/ 7@=; e8T  
91#) : ; < O

&' ABDXUmC= > YZCI v

E\$F d? CI v AB@MnDAhz E#I vyBC\*  
H#dr >yCDECF GGd? #d? () ""! #""#AB' H  
I #d?) CJ oKB 1I vv ""+,-. @] #d? /0P' L  
912"+3-4+#^ g{ M) NKCO? dGP #Qd' MByz  
ABO

E&Fwr AB() v9] ^H516%CI w#R | \$wS  
P 16%@Hg9g/ DX#\$w 17%" 1"%g=T ^UPV 3  
dC9# eugj ' HWX#a \$wl & 16%#DXYZ / #  
YX{ | g[ \ \$w%F #^ Q5] ^ #CA1\_ ' ' CQ ;  
DXy 4M~CSwG 1#%#&"%#a w 17%\$1"%#wr u&  
!6%} \_ ' ABDX#b | u&!"%); 91#9] #) U' "  
#yO

" !!# "

p=> ?@AByz' { |

EIF! ~ AB3qycd! ~YZ#U\$DXyc! ~#  
! ~' eCz%DXo() , C9a\_' #nj oY2gl yO  
a! f 9d# 2gKt #hi [ 4uwQ! ~#4j ) ; WR  
910

EIFf + AB3qyoUTydI NKd?YZ#ABy  
z 9' ^kf # Qd9s' ^kf #mf' ^no#pqr {  
d?r s #kNDXyd?Nr' ^9u#j Nf #< +gu  
v #wx() yr s #7gCz # Tz %9{ Omj uwuN#  
| MsC#} r { z %91oKM~! UDCABC "\$Nr #  
<' \$z # @vb5 "\$NKO>5 "\$\ %CYZ] #9^  
&} DXUmO

E'Fe ^ AB' kHe #dI kMce ^#7I \* + (N  
) N\*#j mG #N N N N N N N N ODXRyd (M#  
) j yd) N\*ckMO

HN7I yz' {

#\$: \* 53

yz ABC5 3o@y#DAAB() Oy# =To 48  
9N () N(eoyLRmCO

E#f, () : \* DAH=T 5@, () : \* #hAB()  
g3nKL #6# @st 8k N@K 7N@ 89: ; CWX()  
?yy#@g63qk 8#KM<#) nyz #bn&u@ =+O  
ayy' ecu@(eo89: \* #h 6b| yz %n3^  
+ =O

E&F(e: \* # \$WX@KL >?C() (e?yy#@  
@AB#' (! &))) C#DAE\*\*) " '") C#+FGPG #")

" !!\$ "

| yS' { %&' "yz' {

C#H- ) !"" C##"\$F I D!""! !%" C#J MK !"" CLy  
&' +MOkQ(ev[ dNNO] #Q(eP) QH#@ (" )  
&' C[ RQ(ev mySz O{ (#) Z# S! T #fj U  
d#VS, ( )O5i { O(o) p#(eP) [ di { , ( )#  
)o] p, ( ) ; eg/W3d) # o; e91 # p&n/3  
qR# nR m{ CXyz CY #O

E(F89: \* 89&%o] p{ @j 5+#WNK' OZ  
B' ( [ \ ' ] ^ # \$ # ' ov q\_gSY n# nj U' d'  
Y#R# nR m von \* o += u @ & CXyz CY #O

&+ 9a# \$ + k 9

E#F9a# \$bx # \$c' dw#d 9Dk 2@o~eC  
f X#l vd? DENlr >yNyBC\* HCd? #d? I OG  
kPO~?@f gGU# ~bhyz #7I oABT5^+i  
3aMEH#Wd?) Cj GEH<B #CABwDaMO

E&Fk9NLse yz ~#v , ov>. d? #Qy~Le  
[ e #>. ' k #L - G\* > -!.! /E"#"\$#"F^Be (' %!'  
l l l j # [ eI mn@1C (" \$@HOk 9? o #o) p %&&  
"&& &' #ou &" (' &' #7 S + qS >r G (" ( ) " &' #  
@r Ps sr @] G~ #t S' 7 Su () ! &' #vS' t S  
u (' ! &' #Suf 9+' ] #t j S) ' Nf #fj gSyz #  
SsLC@Ca8e 1&""\* 1!"" l l l j #HU= r wd #j ]  
y #y # ^ v xa8e .C > \$yo\$z RCy{ oz { ' ~  
L@#NHy | : \* oP: d?I +O

(+Qzy #

E1FQzy ABCQzy @} z GU.yG~ ~ ~ { ' ^  
3q#h ( ) vdz UT U#4M~ CUT nr G 1&( +1(( #

" !!% "

p=> ?@AByz' { |

} z ABvp! n| 3qR#PDxqCDX2' | z C() #  
A1cuOvXX) ] / 9i #Qz Myo "o] p! # \$ o  
) ] pO

E!Fy### \$ y#CH1/v\_' A1+" H## \$ "a  
=N( 9#@KL; MN#+N@A&N() @: ; N( e \$D%  
BC' + &N) I C, E' N() Ci y / (%&&" ' &' N  
####!' I FC() Qz G~#~h)v \*i N#az, Cy  
# #vyz ~ UZ+ Y#=T #' \$I @HGFYy#####(\$I  
G. Yy#)##\$ \$I G) Yy#&)\$I G+' yOny~ y  
#@@AB #+\$ \$' !\$\$\$ C#DAE \*\*\$( +' \$C#, FGPG  
#' \$ \$C#H- ) ' \$ \$C# \$, FI D' \$ \$) ' \*\$ C#JMK '\$ \$  
CLy! \$+ MOyz ~ Qy#C() st CT6 - #a bT5  
/ U#cu g. O

E%FBVDz yz Dr <Txy#C, ?M) C/k#=  
T #' \$I @Hy#Dr ZRG (\$ &' # %RG! \$ &' . ! 1  
###\* #(\$I Cy#Dr GZR (\$ &' # %R #+ &' # 1G  
) \$+### \$I Cy#Dr GZR' &' # %R #(&' OQz ~ #  
} ZRgQz S#SC>r Gy#C% C#=Tyz >r G%,  
' &' #Rdj SP)- # \$ &' >O OESsd#{ j } %RQ  
] y# #() 1=qI 2HOvy# 3q4' ' d#Qy# 5q.  
6vL! Ny# 7[ L' se#8Xse' ^vxy#.4j @  
dQS 49#PD: Fu39) #@wuf Oy# +=j +gy  
z # ~; z' ( #@qy# <f OQzj ' A#d&~4NXN  
g =pHn| 43q~ >No. ?@A' A#BC9 ~MLo  
Ky E#u D<KLMCUD#Egcu @Wudw#VUR  
3qO

" !!&"

| y\$' { %&' "yz' {

E!Fd?BF+vAES@ yz ~vyz Fz GHI E  
oH- ) B " I I | #j #7I NOAB9; KoTCK#qzj  
dI J KHLE' @MNOAEF#GuPr \$%&OAEQR#  
7I Nv=nDKh\_SA# CMnDSATU@] OAE  
o=yd? ^VE#vABnj q~#WVW; SACXAYN  
WADN+NAHI Z@#4&KHL7I ?@&I r yL  
[ ; CSA#\u@NvBy=nDKh\_SAO] \_N\_ N  
\_A\_N \_I , ayL[ UC=3W; SA#vz Ez z g&  
xb+g#C] h?Eo' A" " Hca' /\_' #ABY#y  
zv' &' ] #y. ' } YP\_' #b9+dTCvAEO@O  
1G!! (%eF#j #5; fg2Jhl Lj Ji 1 "%")%I  
I #j #abLOj \*)Tzca)#\*%e' j t#1k5; o  
I #VSyL[ 93dOKHL@?d?(m#O] uG{ +N  
o#conoGHpG4uC=yq9nj q~dI (mC#  
\$GvAEO&KHL^vd?FDEr sj g# '@' I b  
Ooj gE#vd?Dt 5Vo?Eu) \_' } vNO

!, X[ gV

E\*F) wN\ANRd ABqzj #n~I ) wvA\*\$+  
m#cu@Axy \*,)%+I I #j z f (%I I v{ TJh.g|  
j #I ) wvA "!!m# ovvKh\_SADX() gyu  
@' A^O' A^7I ?G) ; ^VE#@vW; ?EXNv  
=nDoMnDCKh\_SA#CCABr | Cp; ?E@'  
/\_' OO] Y\$wod?=} \_' kC#v\$wI Nd?=  
} ~gLO#vA] b' U#v \$wuNd?=} UNSAD  
X() gLO#vA] bUCNO=nDKh\_SA#&! ;  
y#Lj @ \*%, ' u] ' A^+)' "%eF.!(); y#Lj @

" !!' "

p=> ?@AByz' { |

!"! !#eFOABCT5' dku#6D^' d#y. ) w~u  
' ~>O!ej UZ) wRd#NH() "3d) oVU#f  
] ' .Rd' ^9y#@q\_ ' z%UmODX=( Zj #  
6) wOA#\$1CSA^j P %[ j w? @#C() DX  
awO

ESF!e =T!e!m#p=mv %& o) ] pL~e#@  
a8eG7# LM1^Be.pHmv' oH) pqu%(&  
' &' #L!(| |)j ^Be#2\*(| |)j (GCWqe#v #  
oH) pABz%c: ); DXQ(), Cs)#hH); e  
\*Tdug#<' 9eOA1/); DX#VUAB(), C.  
pJ mL^Be!(| |)j #~Oj ' 6L@(GI (e#p\  
mv +oH) p+=89j #Ls]^Be\*(| |)j O. +  
@(&-) GH, \* 2",\*- -G\* .",\*- ) GH, \* ; ) !e#  
+. vqyN-Oyo89+=j J L!m#PA] bb/O

E!Fof Nuf | P+gDSuf OABi Ooi q@uf  
' /#7gDCzK.| 1[ 69] dVC2() i { j #wr  
u#Nr C#d? 3<#KMogUDQy. #<| PSA]' #  
tj O&uvNf #t 4f \#" 0o() PCU' [ 4" # #  
sl g{ d?\%DE# 56f OovtT+tj 7H] X8  
9#@q 9bd?# { kf 4j () Cz #: Ac<v{ Td  
?\%gUZO

E'F Mg~Ooev89 #o&(#&# ; G~OMBg  
y#+gevz%OH#Tz%ur' (\$#(&' #, e+(%  
/(eugg~O# | ^ ^g6ae <C; ek#ou+g/  
1z%DX#VU! BAEQ() s=#aw&() C, C#  
~O=Tv{ T) >UZ#aw&; a?B.+oH) p89

" !!( "

| y\$' { %&' "yz' {

{ @#{ T@\ @<Az %[ d#89wZKt #25; ev  
890

E!FBN5CGM t j 9\* \g# \5] 9#wx#8=  
ND. j Et Nf #F} z ATN() Øqj 7HCGH9I  
J #yGKu) : } z ( ) ○

J N K L M N O

"# 7I KM

E'FLMP) CK Kb841NLMP>?4j OKP'  
9; a2ODPLA>?z %C9] d+#; a7I o4+=  
y# +DQ: ; o) Td&gCr { C#KPC ^' 9d?>  
?#d?\%2dwl u: ! >?# E" yC>?\$z GRv  
~SO

T\* &() z?j } r { y#Tto(eCz #z %DX9  
+xy# eU1Pw] CH91.v9] #6yz?i { 41  
WC7&u+Vv(e2(eWTt bv^#z?j y(eC  
z #abTt v>?#2WkNy#} Cz.LMP>?9H)  
dS# { [ d; e1t #4j ; eX4WPKt #>?9] )  
dS#) HXY4241W7&#@j K7ZC#4+Qz C  
z #z %\* gl &9{ ○

NO538@=TCd?BFEBFvz?Cd?2a[  
\Cd?E] Ud?BF>^FOOu^59J 23<r 2) r  
z?Cy#y8#d?wr I I #4Uv "\$o=%ovyZR  
3y#O[ 4yzg#d?ow; wr I Ou^4I #@!&' H  
I E (&&C!)!' x\_1 "&&&C! \*+' @AB%&&&Ci oTO

E\$F' AK Kb84%&#P4j CQvaNC=>] #%

" !!) "

p=> ?@AByz' { |

&#P} UmADC1NL#r 3NLu' 9] 2t f Cr s  
3nPbCCz EHONLv\%Cz %H' } [ U# | \ %  
Cz %d' } vz ? O

T\* 8/I | M; e#c>?) Nl 2ol , #6yv; eH  
uU/ ( !e' u4WCY\* d&#vuNYZ] d&Q5U  
u{ kCCdi 2edi ff +bCK7#; f) uUf k\*  
K7Zui # yYz?C, - NV{ gNhbC{ i \* # k  
3l Woyz?; eDXymN) { \* i # ) vz ? g#z ? i  
j C; e{ gN) Hi { n{ i j .Y2yUD; @gl 2Og  
z ? #SI 2Cz 2\* i Um#gl gl , XY' WCf L\*  
K7O

NO53&asi X[ Nr C#v " ov; eR} af 8#  
' AKg/RoUK#JK6yUYK%<O&evK; # 4  
j +gJ L' ADox\_01#2 #x\_01 &&\$C!&M  
PB&&\$Ci ; ) J L. 2 &%' wB!\$\$\$! !'\$\$ Ci ; )  
J L O

E'FABpK Kb8@&q6Pr sCpA@mPODp  
AE! "#%&"\$"' ( &)'\*,\$+,) (\*)\*FCpt @W@uvO AD\* I #  
Pt /vw' O7' x\* +\$+Q yADPt oC1NlyO  
NyzC\_ ' +{ #NlyOD' N#di O| aQ} \* Rj O  
Nly[ UgADMned! ; NL#vuwouNYZ] K  
di { C1Nly#Nly[ Uj AD! ; NL2Nly/v  
[ UUZ6>?O

T\* 8AP>?} ~! z%DX2Sj R{ 9; #) N N  
l 9uYM#v) [ dvz? ^6y3Yfk\* # i { " Co  
{ G# 1W=Y4W' f xK7#POHZuj C\$#AD%D

" !!\* "