

5 2 5 = - Calendula officinalis

gradinar, A @ O 4 0 20 N = 8 2012 - 19:04:44

! 5 < 5 9 A B 2 > (@ > 4): ! ; > 6 => F 2 5 B = 8 (Compositeae)

8 4: @ 0 4 8 = A : > / ! B 0 9 = > & J D B O I > E 4 = > 3 > 4 8 H = >

8 < 5 B > = 0 = 5 2 5 = 0 5 A : @ 8 B D 0 : B J B, G 5 F 2 5 B 5 B > = 5 C 2 O E 2 0
 ; 5 A = > . " > @ 0 A B 5 = 0 2 A O : J 4 5 : @ 0 9 ! @ 5 4 8 7 5 < = > < > @ 5, = >
 2 5 G 5 5 5 4 = > > B = 0 9 - @ 0 7 ? @ > A B @ 0 = 5 = 8 B 5 F 2 5 B O ? > A 2 5 B 0. B
 @ > 4 0 ; 5 = 4 C ; 0 A 0 8 7 2 5 A B = 8 > : > ; > 3 0 2 8 4 0. 7 ? > ; 7 2 0 B A 5 : 0 B >
 : > < ? > = 5 = B 7 0 F 2 5 B = 8 < 0 A 8 2 8 8 ; 8 7 0 @ 0 7 0 = F 2 O B ? @ 5 7 F O ; 0 B 0
 3 > 4 8 = 0. 0 @ 0 4 8 F 5 = = 8 B 5 ; 5 G 5 1 = 8 : 0 G 5 A B 2 0 @ 0 A B 5 = 8 O B 0 A 5
 > B 3 ; 5 6 4 0 B > B ? > G B 8 2 A 5 : 8 4 > <.

0 B 8 = A : > B > < C 8 < 5 : 0 ; 5 = 4 C ; 0 (Calendula) 8 4 2 0 > B " : 0 ; 5 = 4 8 " -
 " ? J @ 2 8 B 5 4 = 8 > B < 5 A 5 F 0 ", 0 1 J ; 3 0 @ A : > B > = O < 0 = C 6 4 0 > B
 B J ; : C 2 0 = 5. 5 2 5 = J B 5 8 7 < 5 6 4 C = 0 9 - B 0 G 5 = B 5 F 2 5 B O 2
 3 @ 0 4 8 = 0 B 0 = 0 1 J ; 3 0 @ : 0 B 0. G 0 @ > 2 0 B 5 ; = 8 B 5 < C F 2 5 B > 2 5 A 5
 8 7 ? > ; 7 2 0 B 8 : 0 B > C : @ 0 H 5 = 8 5, 8 : 0 B > ; 5 : 0 @ A B 2 >. A B 0 @ 8
 2 @ 5 < 5 = 0 5 1 8 ; 8 2 0 6 = > < 0 3 8 G 5 A : > @ 0 A B 5 = 8 5, ? @ 8 B > 2 0 2
 < 0 3 8 8 7 0 > 1 8 G 8 7 4 @ 0 2 5.

4 8 2 > A J A B > O = 8 5 = 5 2 5 = J B A 5 A @ 5 1 0 ? >
 ! @ 5 4 8 7 5 < = > < > @ 8 5 B >, 2 @ 0 = 8 = 0 0 = 0 @ A : 8 B 5 > A B @ > 2 8.
 J ? @ 5 : 8 ? @ 8 2 8 4 = 0 B 0 A 8 = 5 6 = > A B B > 9 5 4 > A B 0 A B C 4 > C A B > 9 G 8 2
 - A ? > : > 9 = > ? > = 0 A O 4 > < 8 = C A 5 3 @ 0 4 C A 0, 0 : > @ 5 = 8 B 5 < C
 G 5 A B > ? @ 5 7 8 < C 2 0 B 8 = 0 ? @ > ; 5 B A 5 @ 0 7 2 8 2 0 B 8 F J D B O B.

5 2 5 = J B 5 5 4 = > 3 > 4 8 H = > B @ 5 2 8 A B > @ 0 A B 5 = 8 5. > @ 5 = J B < C 5
 A ; 0 1 > @ 0 7 2 8 B. @ 8 4 > A B 0 B J G = 0 E @ 0 = 8 B 5 ; = 0 ? ; > I A B J 1 ; > B >
 A 8 ; = > A 5 @ 0 7 : ; > = O 2 0. " > @ J 1 5 A B >, : @ 5 E : > 8 2 8 A > : > 50-60 A <.
 8 A B 0 B 0 A 0 5 ; 8 ? A > 2 8 4 = > C 4 J ; 6 5 = 8, 1 5 7 4 @ J 6 : 8, A B J ? 8
 2 J @ E > 2 5 8 A 6 ; 5 7 8 A B 8 2 ; 0 A 8 = : 8, : > 8 B > > B 4 5 ; O B A ? 5 F 8 D 8 G 5 =
 0 @ > < 0 B. & 2 5 B > 2 5 B 5 A 0 @ 0 7 ? > ; > 6 5 = 8 = 0 2 J @ E 0 = 0
 A B J 1 ; 5 = 8 B 5 @ 0 7 : ; > = 5 = 8 O. & 2 O B, : 0 B > F 2 5 B 0 = 0 = 5 2 5 = 0
 1 > B 0 = 8 F 8 B 5 = 0 @ 8 G 0 B : > H = 8 G : 0. > 3 0 B > B 5 A 0 C A B @ > 5 = 8 > B
 5 4 8 = @ 5 4 5 7 8 G 5 A B 8 F 2 5 B > 2 5 8 8 < 0 B ? > - B J < 5 = 4 8 A : > B
 B 8 G 8 = : > 2 8 F 2 5 B > 2 5, 3 8 > ? @ 5 4 5 ; O B : 0 B > ? @ > A B 8. < 0 A > @ B > 2 5
 A : 8 G 5 A B 8 8 < = > 3 > : @ 0 A 8 2 8 F 2 5 B > 2 5. @ 8 B O E 4 8 A : = O < 0,

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/ & " /

!B @ 0 = 8 F 0 2/4

70 I > B > B > 9 5 7 0 ? J ; = 5 = > B 5 7 8 G 5 A B 8 F 2 5 B > 2 5. & 2 5 B > 2 5 B 5
4 > A B 8 3 0 B 4 > 10 A < 2 4 8 0 < 5 B J @. 0 9 - G 5 A B > 1 0 3 @ 0 B 0 8 < 5
> @ 0 = 6 5 2 >- 6 J ; B 0 . ! 5 ; 5 : F 8 > = 8 @ 0 = 8 A 0 A > @ B > 2 5 A @ 0 7 ; 8 G = 8
= N 0 = A 8 = 0 6 J ; B 0 B 0 1 0 3 @ 0, = > 1 5 ; 8 B 5 8 4 > A 5 3 0 > A B 0 2 0 B
< 5 G B 0 = 0 A 5 ; 5 : F 8 > = 5 @ 0. & J D B 5 6 J B ? @ > 4 J ; 6 0 2 0 > B @ 0 == 0
? @ > ; 5 B 4 > : J A = > ? @ 5 7 5 A 5 = B 0 . ! 5 < 5 = 0 B 0 A 0 4 J 3 > 2 8 4 =>
8 7 2 8 B 8, A = 5 @ 0 2 = 0 ? > 2 J @ E = > A B 8 A 0 ; 5 : 8 - > : > ; > 1 2 0 1 @ > O 2 1
3 @ 0 <.

0 A B 5 = 8 5 B > F J D B 8 > B N ; 8 4 > : J A = 0 5 A 5 =. & 5 ; 8 O B
2 5 3 5 B 0 F 8 > = 5 = ? 5 @ 8 > 4 = 0 = 5 2 5 = 0 5 1 3 5 - 1 3 8 4 = 8, : 0 B > B > 9 A 5
= C 6 4 0 5 > B ? > ; > 6 8 B 5 ; = 0 B 5 < ? 5 @ 0 B C @ 0 7 0 F 5 ; 8 O ? 5 @ 8 > 4 > B
? @ 8 1 ; 2 0 - 3 0 3 @ 0 4 C A 0.

B 3 ; 5 6 4 0 = 5 8 3 @ 8 6 8 :

O A B >:

% 0 @ 0 : B 5 @ = > 7 0 = 5 2 5 = 0 5, G 5 = 5 5 2 7 8 A : 0 B 5 ; 5 = : J <
C A ; > 2 8 O B 0 = 0 > B 3 ; 5 6 4 0 = 5. 8 @ 5 5 = 0 2 A 8 G : 8 2 8 4 > 2 5 ? > G 2 8.
> = 0 A O ? > ; C A O = : 0 B 0, 2 J ? @ 5 : 8 G 5 ? >- : @ 0 A 8 2 8 A 0 4 > 1 @ 5
> 3 @ 0 2 0 = 8 B 5 > B A ; J = F 5 B > F 2 5 B > 2 5. 0 9 - F 5 == > B > : 0 G 5 A B 2 >
= 0 = 5 2 5 = 0 5, G 5 = 5 5 2 7 8 A : 0 B 5 ; 5 = : J < B > ? ; 8 = 0 B 0.

" 5 < ? 5 @ 0 B C @ 0 :

0 9 - F 5 == > B > : 0 G 5 A B 2 > = 0 = 5 2 5 = 0 5, G 5 = 5 5 2 7 8 A : 0 B 5 ; 5 =
: J < B > ? ; 8 = 0 B 0. ; 0 4 8 B 5 @ 0 A B 5 = 8 O ? > = 0 A O B ? > = 8 6 5 = 8 5 = 0
B 5 < ? 5 @ 0 B C @ 0 B 0 4 > > : > ; > = O : > ; : > 3 @ 0 4 C A 0 ? > 4 = C ; 0 B 0.
> @ 0 4 8 B > 2 0 B @ C 4 = > A B 8 ? @ 8 > B 3 ; 5 6 4 0 = 5 B > < C = O < 0.

> ; 8 2 0 = 5 8 B > @ 5 = 5:

@ J A B B 0 A 5 ? > 4 4 J @ 6 0 2 8 = 0 3 8 ; 5 : > 2 ; 0 6 = 0 8 A 5 = 0 B > @ 0 2 0
2 A O : 0 A 5 4 < 8 F 0.

> 4 : 0 A B @ O = 5:

: > 8 A : 0 B 5 4 0 8 < 0 B 5 ? 8 I => F J D B O I = 5 2 5 = 4 > 4 J ; 1 > : 0 5 A 5 =,
@ 5 4 > 2 = > > B A B @ 0 = O 2 0 9 B 5 ? @ 5 F J D B 5 ; 8 B 5 F 2 5 B > 2 5 8
? 5 = 7 8 @ 0 9 B 5 2 @ J E G 5 B 0 B 0 = 0 @ 0 7 : ; > = 5 = 8 O B 0.

0 7 < = > 6 0 2 0 = 5:

5 2 5 = J B A 5 @ 0 7 < = > 6 0 2 0 ? > 4 2 0 = 0 G 8 = 0 : G @ 5 7 4 8 @ 5 : B = 0
A 5 8 B 1 0 = 0 A 5 < 5 = 0 B 0 8 G @ 5 7 ? @ 5 4 2 0 @ 8 B 5 ; = > > B 3 ; 5 4 0 =
@ 0 7 A 0 4.
> A J 1 8 @ 0 B 5 A 5 < 5 = 0, A J 1 8 @ 0 9 B 5 3 8 ? @ 5 4 8 4 0 A 0 = 0 ? J ; = >
C 7 @ 5 ; 8, 7 0 I > B > ; 5 A = > 5 > @ > = 2 0 B. " 5 C 7 @ 0 2 0 B 4 > 1 @ 5, : > 3 0 B >
@ 0 A B 5 = 8 O B 0 A 5 8 7 @ 5 6 0 B, = 0 2 J @ 6 0 B A 5 = 0 A = > ? G 5 B 0 8 A 5
8 7 A C H 0 B = 0 ? @ > 2 5 B @ 8 2 > < O A B >. < 0 9 B 5 ? @ 5 4 2 8 4, G 5 = 5 2 5 = J B
5 : @ J A B > A 0 = > ? @ 0 H 2 0 I > A 5 @ 0 A B 5 = 8 5 8 0 : > = 0 1 ; 8 7 > A 5
> B 3 ; 5 6 4 0 B @ 0 7 ; 8 G = 8 A > @ B > 2 5, = O < 0 4 0 ? > ; C G 8 B 5 A 5 < 5 = 0 > B

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!B @ 0 = 8 F 0 3/4

65 ; 0 = 8 O A > @ B.

! J A A 5 < 5 = 0 A 5 @ 0 7 <=> 6 0 2 0 ? @ 5 7 ? @ >; 5 B B 0 ? @ 8
B 5 <? 5 @ 0 B C @ 0 1 4 4 > 16 ° ! (; 5 A =>). 8 := 5 = 0 A 2 5 B ; >.

@ 5 4 8 B 5 ; 8 8 1 >; 5 A B 8:

8 A B = 8 2 J H : 8 8 1 @ 0 H = 5 A B 0 < 0 = 0 8 3 >; 8 > E ; N 2 8, B @ 5 B 8 @ 0 A 5 A
? > 4 E > 4 O 1 8 ? @ > 4 C : B 8 7 0 : C ? 5 = 8 > B 0 3 @ > 0 ? B 5 : 8 B 5.

@ 5 7 8 < C 2 0 = 5:

5 A 5 = 0 ; 0 3 0.

! > @ B > 2 5:

0 9 - ? > ? C ; O @ = 8 A 0 4 2 0 A > @ B 0 = 5 2 5 =: Standard Pasific 8 Erfurter Orangefarbigen,
: 0 B > 2 B > @ 8 O B A > @ B 5 = 0 9 - : > < 5 @ A 8 0 ; 5 = 8 B J @ A 5 = > B
B J @ 3 > 2 F 8 B 5, ? > @ 0 4 8 2 8 A > : > B > A J 4 J @ 6 0 = 8 5 = 0
1 8 > ; > 3 8 G = > 0 : B 8 2 = 8 2 5 1 5 A B 2 0.

7 ? >; 7 2 0 = 5 = 0 5 2 5 = : 0 B > 1 8 ; : 0 :

A 8 G : 8 G 0 A B 8 = 0 = 5 2 5 = 0, A J 4 J @ 6 0 B > : > ; > 0,02% 5 B 5 @ 8 G = >
< 0 A ; >, 3 % : 0 @ > B 8 = > 8 4 8, 4 % A ; C 7 5 1 8 2 5 1 5 A B 2 0 8 A 0 1 > 3 0 B 8 A
D 8 B > = F 8 4 8, 0 ; : 0 ; > 8 4 8 8 5 = 7 8 < 8. ! B > 2 0 A 5 > 1 O A = O 2 0
; 5 G 5 1 = > B > 8 < 4 5 9 A B 2 8 5 8 H 8 @ > : > B > 8 < ? @ 8 ; > 6 5 = 8 5 2
= 0 @ > 4 = 0 B 0 < 5 4 8 F 8 = 0. ! ; 8 A B, = 0 < 0 7 0 = A ? G 5 ; 5 = < 5 4, A 5
? > : @ 8 2 0 B B @ C 4 = > 7 0 @ 0 A B 2 0 1 8 @ 0 = 8, 3 = > 9 = 8 F 8 @ 5 8,
2 J 7 ? 0 ; 5 = 8 2 5 = 8. D 5 : B J B 5 8 7 : ; N G 8 B 5 ; 5 = . & 2 5 B > 2 5 B 5 A 5
8 7 ? >; 7 2 0 B : 0 B > 7 0 ? 0 @ : 0 A 2 > 4 0 8 : 0 B > < 5 E ; 5 <, 7 0 ? J @ 6 5 = 8
A J A A 2 8 = A : 0 < 0 A. < 0 B ? @ > B 8 2 > 2 J 7 ? 0 ; 8 B 5 ; = > 4 5 9 A B 2 8 5.
0 B > 2 0 A 5 ? @ 8 ; 0 3 0 B 7 0 ; 5 : C 2 0 = 5 = 0 ; 8 3 0 2 8 F 0 B 0 = 0 C A B 0 B 0, = 0
A B > < 0 H = 0 O 7 2 0 8 ; 8 3 0 A B @ 8 B. @ 8 5 < 0 B A 5 : 0 B > G 0 9, ? @ 8 3 > B 2 5 =
> B 5 0 0 < ; 2 @ O 1 0 2 > 4 0 8 2 A. ; F 2 O B. ! B 0 7 8 7 0 ? 0 @ : 0 < > 6 5 4 0 A 5
< 0 6 0 B 8 2 J = H = 8 @ 0 = 8. ' 0 O B > B = 5 2 5 = 8 ; 8 2 A < 5 A A 4 @ C 3 8 1 8 ; : 8
4 5 9 A B 2 0 C A ? > : > O 2 0 I > = 0 = 5 @ 2 = 0 B 0 A 8 A B 5 < 0. ' 0 9 > B ; 8 A B 0 8
> B F 2 5 B > 2 5 A 5 ? @ 5 ? > @ J G 2 0 : 0 B > 6 ; J G 5 3 > == > A @ 5 4 A B 2 >,
? @ 8 1 > ; : 8 2 A B > < 0 E 0 8 2 G 5 @ 2 0 B 0. " > 9 5 > B ; 8 G = > A @ 5 4 A B 2 >
? @ 8 ; 8 ? A 0 = 0 0 ? 5 B 8 B, ? @ 8 6 J ; B 5 = 8 F 0 8 3 ; 0 2 > 1 > ; 8 5, ? @ 8
1 > ; 5 A B 8 = 0 4 0 ; 0 : 0 8 ; 8 7 0 ? > 4 > 1 @ O 2 0 = 5 = 0 A J = O. 5 2 5 = J B
7 0 4 J ; 6 8 B 5 ; = > B @ O 1 2 0 4 0 C G 0 A B 2 0 2 G 0 5 = 0 B 0 A < 5 A = 0
E 8 ? 5 @ B > = 8 G = > 1 > ; = 8 8 = 0 2 ; 8 7 0 1 8 2 ; : 8 < 0 : B 5 @ 8 C < 0.
> 1 @ 8 A 0 @ 5 7 C ; B 0 B 8 B 5, : > 3 0 B > A 5 C ? > B @ 5 1 O 2 0 B 8 7 2 ; 5 : > B
= 5 2 5 = ? @ > B 8 2 < 0 7 = 0 : > A 0 8 ? J @ E > B. ! ? 8 @ B = 0 B 0 = 0 A B @ > 9 : 0
A 5 ? @ 5 ? > @ J G 2 0 ? @ 8 @ 0 7 H 8 @ 5 = 8 ? > @ 8 = 0 ; 8 F 5 B >. > ; 5 7 = > 5
4 0 A 5 7 = 0 5, G 5 2 A 8 G : 8 G 0 A B 8 = 0 @ 0 A B 5 = 8 5 B > 8 < 0 B
1 0 : B 5 @ 8 F 8 4 = > 4 5 9 A B 2 8 5 8 > A > 1 5 = > A @ 5 1 C A B 0 D 8 ; > : > : 8 8
A B @ 5 ? B > : > : 8. 0 B > 2 0 1 C : 5 B > B = 5 2 5 = 2 A B 0 O B 0 5 A 8 3 C @ = >
? @ 5 4 ? 0 7 = > A @ 5 4 A B 2 > ? @ 8 3 @ 8 ? = 0 5 ? 8 4 5 < 8 O. A B 5 A B 2 5 = > 5,
G 5 0 : > = 5 2 5 = J B 5 = 0 2 A O : J 4 5 > : > ; 2 0 A, 1 5 < C A 5 @ 0 4 2 0 B 5
: B > F 2 5 B 5 8 ? > @ O 4 : > 1 5 3 > 8 7 ? > ; 7 2 0 B 5 : 0 B > ; 5 : 0 @ A B 2 >.
0 : > < ? @ 5 A 8 A 5 ? @ 0 2 8 7 0 ? 0 @ : 0 > B = 0 @ O 7 0 = 8 F 2 5 B > 2 5 / 2 A. ;

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!B @ 0 = 8 F 0 4/4

8 ; 8 3 A. ;. 8 7 A C H 5 = 8/ 2 ; 8 B J @ 2 @ O 1 0 2 > 4 0. A B 0 2 O B A 5 4 0 ? @ 5 A B > O B
2 G O A 0 8 A 5 ? @ 5 F 5 6 4 0 B. 0 ? > O 2 0 A 5 < 0 @ ; O 8 ; 8 ? 0 < C : 8 A 5
? > A B 0 2 O 2 J @ E C : > 6 0 B 0 / ? 0 7 O B A 5 > G 8 B 5 /. @ 8 = 0 ; 8 G = 8 1 @ J G : 8
A 5 ? @ 0 2 8 ? @ 5 7 4 5 =, 0 ? @ 8 = 0 1 @ J G : 0 = 0 : > 6 0 - 2 A 5 : 8 4 5 =.
0 7 5 = 8 7 2 ; 5 : > B A 2 5 6 8 F 2 5 B > 2 5, ? @ 5 A B > O ; 8 4 0 4 = 8 2 7 5 E B 8 =
/ > ; 8 > /, A 5 < 0 6 5 7 0 ? > 1 J @ 7 > 8 7 3 ; 0 6 4 0 = 5 = 0 1 @ J G : 8 B 5 8 ? @ 8
? @ 5 A = 8 : > 6 = 8 1 5 ; 5 7 8.