

2009 National Floriculture Career Development Event

Problem Two

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According to the information provided, how many 18 count flats of impatiens and geraniums can you expect to produce and which grouping of statements are true?

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Seed Information and Production Schedules for Selected Annuals

| Common name | Scientific name | Approximate seeds per ounce | Germination light requirement ^a | Germination soil temperature (°F) | Germination time (days) |
|-----------------------|---------------------------------------|-----------------------------|--|-----------------------------------|-------------------------|
| African Daisy | <i>Dimorphotheca auratiaca</i> | 10,000 | D | 60–70 | 7–15 |
| Ageratum | <i>Ageratum houstonianum</i> | 200,000 | D or L | 70–80 | 7–10 |
| Alyssum | <i>Lobularia maritima</i> | 90,000 | D or L | 75–79 | 7–15 |
| Amaranthus | <i>Amaranthus tricolor</i> | 45,000 | D or L | 70–75 | 8–10 |
| Aster (China) | <i>Callistephus chinensis</i> | 12,000 | L | 70–80 | 8–10 |
| Baby's breath | <i>Gypsophila elegans</i> | 25,000 | D or L | 70–80 | 10–14 |
| Begonia (fibrous) | <i>Begonia</i> × <i>semperflorens</i> | 2,000,000 | L | 70–75 | 14–21 |
| Begonia (tubercous) | <i>Begonia</i> × <i>tuberhybrida</i> | 2,000,000 | L | 65 | 15–20 |
| Browallia | <i>Browallia speciosa</i> | 125,000 | L | 75 | 7–10 |
| Candytuft | <i>Iberis coronaria</i> | 9,500 | D or L | 70 | 7–14 |
| Celosia (crested) | <i>Celosia cristata</i> | 34,000 | L | 75 | 5–10 |
| Celosia (feathered) | <i>Celosia plumosa</i> | 39,000 | L | 75 | 5–10 |
| Chinese forget-me-not | <i>Cynoglossum amabile</i> | 5,000 | D | 60–70 | 5–10 |
| Clarkia | <i>Clarkia elegans</i> | 90,000 | L | 65–70 | 5–14 |
| Cleome | <i>Cleome spinosa</i> | 12,500 | D or L | 60° (night) 85° (day) | 7–21 |
| Coleus | <i>Coleus</i> × <i>hybridus</i> | 110,000 | L | 65–75 | 10–15 |
| Cornflower | <i>Centaurea cyanus</i> | 7,000 | D | 65–70 | 10–15 |
| Cosmos | <i>Cosmos bipinnatus</i> | 5,000 | L | 70–75 | 5–14 |
| Dahlia | <i>Dahlia</i> × <i>hybrida</i> | 2,800 | D or L | 79–80 | 7–10 |
| Dusty miller | <i>Senecio cineraria</i> | 90,000 | L | 72–75 | 10–15 |
| Forget-me-not | <i>Myosotis aplestris</i> | 44,000 | D | 55 | 10–14 |
| Gaillardia | <i>Gaillardia pulchella</i> | 15,000 | L | 70–80 | 15–20 |
| Garden pinks | <i>Dianthus chinensis</i> | 25,000 | D or L | 70–75 | 5–7 |
| Geranium | <i>Pelargonium</i> × <i>hortorum</i> | 6,200 | L | 70–75 | 5–12 |
| Gomphrena | <i>Gomphrena globosa</i> | 5,000 | D | 70–80 | 14–20 |
| Impatiens | <i>Impatiens wallerana</i> | 52,000 | L | 70–75 | 15–18 |
| Lobelia | <i>Lobelia erinus</i> | 1,000,000 | D or L | 75–80 | 6–20 |
| Marigold (African) | <i>Tagetes erecta</i> | 9,000 | D or L | 75–80 | 5–8 |
| Marigold (French) | <i>Tagetes patula</i> | 9,000 | D or L | 75–80 | 5–8 |
| Morning glory | <i>Ipomoea purpurea</i> | 1,000 | D or L | 80 | 7–14 |
| Moss rose | <i>Portulaca grandiflora</i> | 280,000 | D or L | 75–80 | 7–10 |
| Nasturtium | <i>Tropaeolum major</i> | 175 | D | 65 | 10–15 |
| Nicotiana | <i>Nicotiana glauca</i> | 200,000 | L | 70 | 7–14 |
| Pansy | <i>Viola</i> × <i>wittrockiana</i> | 20,000 | D | 63–68 | 7–14 |
| Periwinkle | <i>Catharanthus roseus</i> | 10,000 | D | 75–85 | 10–15 |

Sample of schedules for various commonly grown ornamental plants

| Plant | Seeding Date | Germination (emergence) | | Growing-on | | Hardening | | Transplanting | | Selling Period |
|------------------------|--------------|-------------------------|----------|------------|----------|-----------|----------|---------------|----------|---|
| | | Days | Temp.°F | Days | Temp.°F | Days | Temp.°F | Date | Temp.°F | |
| Ageratum | 1/7 | 6 | 75 to 80 | 10 | 60 to 65 | 10 | 50 to 55 | 2/2 | 60 | April 10 to 20 May 10 to 20 |
| | 3/31 | 5 | 75 to 80 | 8 | 65 + | 8 | 65 + | 4/21 | 65 + | |
| Alyssum | 1/26 | 4 | 75 | 10 | 60 to 65 | 5 | 50 to 55 | 2/18 | 60 to 65 | April 10 to 20 May 10 to 20 |
| | 3/31 | 4 | 75 | 5 | 65 | 10 | 50 to 55 | 4/19 | 60 | |
| Aster | 2/22 | 4 | 75 | 10 | 60 to 65 | — | — | 3/7 | 60 to 65 | April 15 to 20 May 10 to 20 |
| | 4/1 | 4 | 75 | 10 | 60 to 65 | — | — | 4/15 | 65 | |
| Begonia | 12/12 | 21 | 75 to 80 | 21 | 60 | — | — | 1/23 | 60 | April 12 to May 1 |
| Coleus | 1/5 | 8 | 75 to 80 | 20 | 60 to 65 | 7 | 55 to 60 | 2/11 | 62 to 65 | April 10 to 20 May 10 to 20 |
| | 3/31 | 5 | 75 to 80 | 12 | 65 | — | — | 4/20 | 62 + | |
| Dusty Miller | 12/15 | 18 | 75 to 80 | 21 | 60 | — | — | 1/28 | 60 | April 10 to 20 |
| Geranium (seed) | 1/2 | 6 | 75 to 80 | 21 | 60 | — | — | 2/4 | 60 | April 12 to 30 |
| Impatiens | 1/3 | 6 | 80 | 21 | 60 | — | — | 2/4 | 62 | April 12 to 30 |
| Marigold —Dwarfs | 1/5 | 8 | 70 to 75 | 10 | 60 | 12 | 50 to 55 | 2/8 | 60 | April 10 to 20 |
| —Large flowered | 1/5 | 8 | 70 to 75 | 10 | 60 | 12 | 50 to 55 | 2/8 | 60 | April 10 to 20 May 10 to 20 |
| —Dwarfs | 4/1 | 6 | 70 to 75 | 6 | 60 to 65 | 10 | 60 | 4/23 | 60 | |
| Pansy | 10/16 | 10 | 75 | 15 | 55 to 60 | 12 | 45 to 50 | 11/23 | 50 to 55 | March 20 to April 20 March 30 to April 25 April 15 to May 1 |
| | 11/6 | 10 | 75 | 15 | 55 to 60 | 12 | 45 to 50 | 12/15 | 50 to 55 | |
| | 1/14 | 7 | 75 to 78 | 7 | 55 to 60 | 12 to 20 | 50 to 55 | 2/15 to 20 | 58 | |
| Petunia and Snapdragon | 11/20 | 6 | 75 | 10 | 60 | 16 | 45 to 50 | 12/22 | 60 | March 25 to April 5 April 10 to 20 April 20 April 30 to May 5 May 5 to 12 May 15 to 18 May 25 May 27 to June 3 |
| | 12/3 | 5 | 75 | 7 | 55 to 60 | 16 | 45 to 50 | 1/4 | 60 | |
| | 12/12 | 5 | 55 | 7 | 55 to 60 | 16 | 45 to 50 | 1/9 | 60 | |
| | 1/7 | 5 | 75 | 5 | 55 to 60 | 12 | 45 to 50 | 1/30 | 60 | |
| | 2/25 | 5 | 75 | 5 | 55 to 60 | 12 | 55 to 60 | 3/18 | 60 | |
| | 3/15 | 5 | 75 | 5 | 55 to 60 | 12 | 55 to 60 | 4/6 | 60 | |
| | 4/1 | 5 | 75 | 5 | 55 to 60 | 12 | 60 | 4/21 | 60 | |
| | 4/7 | 5 | 75 | 5 | 55 to 60 | 12 | 60 | 4/29 | 60 | |
| Phlox | 12/21 | 12 | 65 | 21 | 55 to 60 | — | — | 2/1 | 55 | April 15 to May 5 |
| Portulaca | 1/24 | 4 | 75 | 14 | 60 to 65 | 12 | 55 to 55 | 2/25 | 60 | April 20 to 30 May 10 to 20 |
| | 3/31 | 4 | 75 | 8 | — | — | — | 4/14 | 65 | |
| Salvia | 1/24 | 6 | 75 to 80 | 6 | 55 to 60 | 6 | 50 to 55 | 2/12 | 60 | April 10 May 10 to 20 |
| | 3/31 | 6 | 75 to 80 | 8 | 60 to 65 | — | — | 4/14 | 65 | |
| Verbena | 12/29 | 7 | 75 | 21 | 55 to 60 | 14 | 55 | 2/1 | 55 to 58 | April 15 to May 1 |
| Vinca | 12/15 | 12 | 75 to 80 | 3 | 55 to 60 | 14 | 55 to 60 | 2/15 | 60 + | May 1 to June 1 |

(Source: *Tips on Growing Bedding Plants*, second edition, Ohio Cooperative Extension Service, The Ohio State University, 1989)

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