CULTURE CONNECTION



By Paul Pilon

Gaillardia x grandiflora **Mesa Yellow**

This uniform variety is the first FI yellow-blooming gaillardia from seed



aillardia 'Mesa Yellow' is the first F1 yellowblooming gaillardia from seed. It was bred and introduced to the industry by PanAmerican Seed Company. 'Mesa Yellow' has numerous attributes that make it well suited to commercial production. It has a vigorous yet controlled growing habit, while branching freely and blooming early. With its uniform habit and flowering, 'Mesa Yellow' is well suited for production in small containers and is easy to schedule, grow and ship.

In the landscape, it forms attractive clumps reaching 16-18 inches tall

by 20 inches wide at maturity and blooms profusely from mid-spring through the summer months. 'Mesa Yellow' produces an abundance of intensely colored, deep-yellow, 3-inch daisylike flowers with round seed heads

atop upright, well-branched plants. Like other blanket flowers, 'Mesa Yellow' grow best under partial to full sun and are hardy in USDA Hardiness Zones 2 to 9 and AHS Heat Zones 12 to 1. Once established in the landscape, gaillardia are heat and drought tolerant. Blanket flowers are resistant to deer feeding, attract birds and butterflies into the garden, and can be used as accent and border plants in mass plantings and patio containers, and as cut flowers.

With its many desirable attributes and strong garden performance, 'Mesa Yellow' has been widely recognized and received many prestigious awards, including the 2010 Fleuroselect Gold Medal and 2010 All-America Selections Flower Award.

Propagation

Gaillardia 'Mesa Yellow' can easily be propagated by seed and is commonly sown in 288- or 200-cell plug trays; however, the seed is large, which also lends itself well to direct sowing in larger plug sizes. Cover the seeds lightly with germination mix or medium-grade vermiculite to help keep the seed moist during germination. The seed flats should be moistened and moved to a warm environment where temperatures can be maintained at 68-74° F for germination.

Starting gaillardia inside a germination chamber will increase both the germination rate and percent germination, while decreasing the time necessary for all of the seeds to sprout. During the germination process, keep the growing media uniformly moist but not wet. The seeds should sprout in four to six days. Once germinated,

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> they can be grown with temperatures from 65-68° F and the moisture levels reduced somewhat, keeping the media surface wet to the touch but not saturated. Fertilizers can be applied once the true leaves are present, applying 150-ppm nitrogen every third irrigation or 50-75 ppm with every irrigation, using a balanced, water-soluble source. At these temperatures, 'Mesa Yellow' will finish the plug stage and reach a transplantable size in five to seven weeks.

Production

Gaillardia 'Mesa Yellow' is suitable for production in quart to gallon or larger containers. Most growers plant one plug liner into each container. When growing blanket flower in gallon or larger containers, many growers plant two or more plugs into each pot to decrease production time, provide fullness and produce more blooms per container. They perform best when grown in a moist, welldrained medium with a pH of 5.8-6.4. Many commercially available peat- or bark-based growing mixes work well provided there is good water-holding ability and adequate drainage.

Gaillardia are moderate feeders and grow well under constant liquid fertilizer programs with rates of 75- to 125-ppm nitrates with each watering or 150-250 ppm at every other watering. Growers using controlled-release fertilizers get the best results by incorporating at a rate equivalent to 1.0 to 1.25 pounds of nitrogen per yard of growing medium. Time-release fertilizers can also be applied by topdressing using the medium-recommended rates.

They require an average amount of irrigation, with a preference toward the slightly dry side. During production, grow them at fairly consistent moisture levels and avoid moisture extremes. Extended periods of wet conditions or low light levels can result in plants with weak stems and growth. As plants mature, they will dry out more quickly and require more frequent irrigations. When required, water gaillardia thoroughly and allow the substrate to dry slightly between waterings.

When 'Mesa Yellow' is grown with adequate spacing and proper growing conditions, height

management strategies may not be necessary. However, under certain circumstances, it may be beneficial to tone the plants as needed using plant growth regulators. If controlling plant height is necessary, several of the commercially available PGRs are effective at controlling plant height when they are applied using the appropriate rates, frequency, and timing. Multiple spray applications of daminozide (B-Nine or Dazide) at 2,500-5,000 ppm or the tank mixture of 2,000- to 2,500-ppm daminozide plus uniconazole (Concise or Sumagic) at 3-5 ppm will effectively tone the plants under most circumstances.

Insects and Diseases

Although gaillardia can be produced relatively insect free, growers frequently observe aphids, caterpillars, leafhoppers, leafminers, slugs, spider mites and thrips during production. Of these pests, aphids and thrips are usually the most prevalent.

The most common diseases of gaillardia include aster yellows, bacterial leaf spots and wilts, Botrytis, INSV, powdery mildew, Phytophthora, Pythium, rust, Septoria, Thielaviopsis, and white



smut (*Entyloma polysporum*). In recent years, gaillardia white smut has become very problematic for some growers. Gaillardia smut appears as small white to yellowish-green spots up to one quarter inch in diameter. White smut is best managed



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with proper crop spacing, irrigating at a time of day when the foliage will dry quickly, and preventing water from splashing from plant to plant. It can be kept in check if detected early by applying fungicides weekly until it stops spreading. The fungicides effective at controlling this disease include Cygnus, Heritage, Pageant and Terraguard.

Insects and diseases can be detected with routine crop monitoring; control strategies may not be necessary unless the scouting activities indicate actions should be taken.

Forcing

Gaillardia 'Mesa Yellow' is a first-year-flowering perennial and can be easily be grown to flower during the first growing season. It is not necessary to provide a cold (vernalization) period as they do not require cold for flowering. However, there are no adverse affects observed for growers who choose to overwinter them.

'Mesa Yellow' is a facultative long-day plant and requires minimum 14-hour days to obtain the most uniform and fastest flowering. Plants grown under shorter day lengths will still flower, but the flowering is delayed and the number of flowers produced is also reduced. To improve plant appearance and flower number, grow them under high light intensities (3,000 foot-candles). When the day length is naturally short, create long-day conditions by providing day extension or night-interruption lighting.

The amount of time to produce flowering plants after the proper photoperiod is provided is a function of temperature. Gaillardia 'Mesa Yellow' grown at 68° F will take eight to nine weeks to reach flowering, while plants grown at 60° F will flower in 11 to 12 weeks. To optimize plant development and produce high quality plants, force gaillardia under high light levels with temperatures of 65-68° F.

Availability

Gaillardia 'Mesa Yellow' is brought to the market by PanAmerican Seed Company (www.panamseed. com). To obtain seed, contact your Ball sales representative (www.ballhort.com). Plug flats can also be obtained through your Ball sales representative or various reputable perennial plug producers.

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