

Plants for Solving Resource Problems

Common Threesquare

Species: *Schoenoplectus pungens*

Common Name: Common
Threesquare

Plant Symbol: SCPU10
Accession Numbers: Fort Boise
Selection (9057578), Wayne Kirch
Selection (9067642), Malheur Selection
(9057610) and Market Lake Selection
(9057648)

Source: The Aberdeen PMC has released four performance tested ecotypes of common threesquare from the PMC service area. The Fort Boise Selection was collected from the Fort Boise Wildlife Management Area (WMA) west of Apple Valley, ID. It was selected for use in Land Resource Region (LRR) B West. The Wayne Kirch Selection was selected for use in LRR D South. It was collected from the Kirch WMA in Nye County, NV. The Market Lake Selection comes from the Market Lake WMA, north of Roberts, ID and was selected for use in LRR B East. The Malheur Selection was selected for use in LRR D North. The collection site was at the Malheur National Wildlife Refuge near Burns, OR.

Site Information: Common threesquare is a commonly occurring wetland species found throughout temperate North America.

Method of Selection: Twelve common threesquare collections from the Aberdeen PMC Service Area were evaluated from 1991 to 1995. All collections were evaluated for survival, overall growth and spread, vigor, and potential seed production. The PMC



Common Threesquare

released one selection from each LRR in the PMC service area. The released selections are the accessions with the best overall rating against others from within its respective LRR.

Description: Common threesquare is a perennial, rhizomatous wetland plant found at low to mid elevations in backwater areas of streams, ponds, reservoirs and lake fringes. Plants are generally found in mixed stands, often with Nebraska sedge, creeping spikerush and Baltic rush. Stems

are erect and triangular and may reach over 1 m (3 ft) tall. Leaves occur on the lower third of the stem, are elongated and 2 to 4 mm wide. The inflorescence is a lateral cluster of 1 to 7 sessile spikelets subtended by an involucre bract that appears to be a continuation of the stem. Scales are yellowish to reddish brown. The fruit is a brown lenticular achene 2.2 to 3.3 mm long with a slender beak.

Use: Common threesquare is suitable for erosion control, constructed wetland system applications, wildlife food and cover, wetland restoration and creation and improvement of plant diversity in wetland and riparian communities. Dense roots make this an excellent choice for soil stabilization, and the above ground biomass provides protection from erosive wave action and stream currents. Waterfowl feed on the seed and use the stands for nesting. Muskrat and beaver will eat the rootstocks and young shoots.

Insect and Disease Problems: There are no known problems with insects or diseases. Aphids will feed on the stems, but rarely cause significant damage.

Environmental Considerations: These selected class releases are from a species native to the Intermountain West and have no known negative impacts on wild or domestic animals.

Area of Adaptation: Common threesquare is found in wet meadows, marshes, streams, ditches, seeps ponds and lakes throughout the western U.S. Plants are generally found in areas of standing water ranging from 10 to 15 cm (4 to 6 in) in depth. Plants can survive periods when the water table is more than 1 m (3 ft) below the surface.

Soil Adaptation: This species grows on fine silty clay loam to sandy loam soils generally in fresh water areas. It will tolerate moderate levels of saline conditions (EC<14).

Planting and Harvesting: Germination can be enhanced by wet prechilling the seeds in a mixture of water and sphagnum moss at 20° C (35° F) for 30 days. Seeds require light, moisture and heat for germination. For greenhouse propagation, place seeds on soil surface and press in lightly to assure good soil contact. Do not cover seed. Soil should be kept moist, and the greenhouse should be kept hot, 32 to 38° C (90 to 100° F). Germination should begin within one to two weeks. Maintain soil moisture until transplanting. Plugs should be transplanted at 30 to 45 cm (12 to 18 in) spacing. This allows plants to fill in interspaces within one growing season. Soils should be kept saturated with no more than 5 to 8 cm (2 to 3 in) of standing water during the first growing season. Fluctuating water levels during the establishment year will facilitate spreading. Seed can be collected by hand stripping, clipping with hand shears or by using a gas powered seed stripper.

Seed Maintenance: Generation 0 (G0) seed is maintained at Aberdeen PMC. Later generation seed (i.e. G1) is not produced, maintained or available through the USDA-NRCS Plant Materials Center. To make collections of these common threesquare releases, contact the appropriate managing agency for the original collection site.

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