

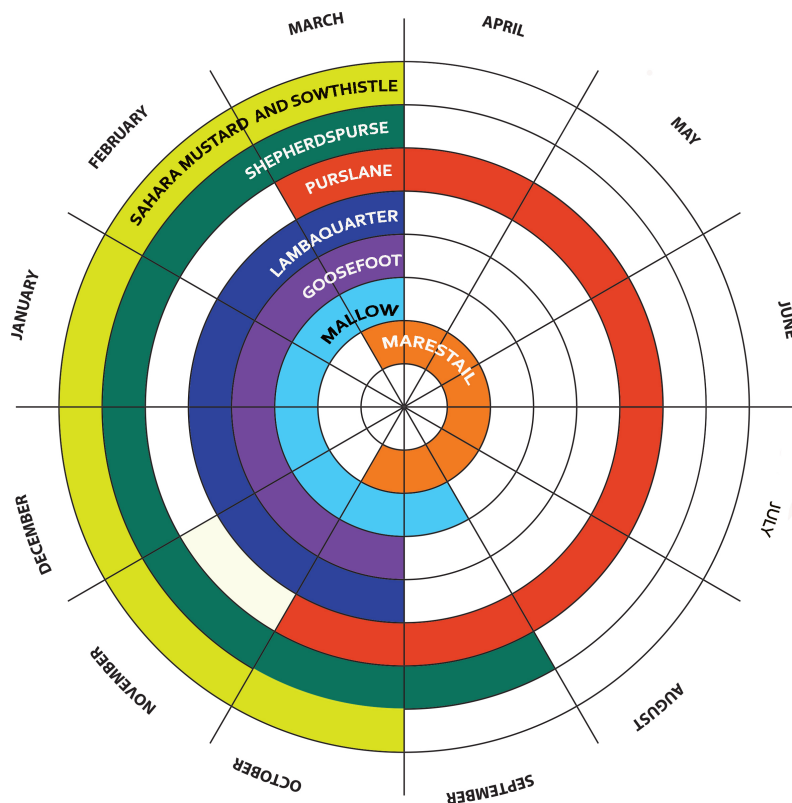
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Weeds Seasonality

Plant growth and development is synchronized with weather patterns that repeat yearly. The biological responses conditioned by the changing seasons and the environment is what we are discussing in this update.

Weather conditions affect crops and weeds in their flowering, dormancy, growth pattern, etc. Consequently, we have a classification of weeds with winter annuals, summer annuals, biennials, perennials. There are other classifications of weeds by the place they grow and growth habits. We will refer in this article only to the seasonal behavior of some weeds in the low desert. The following chart show the period of highest activity for seven weeds we have in our area. Some of these species have tested positive to INSV (Impatiens Necrosis Spot Virus) and are hosts for the insect Western Flower Thrips vector of this disease that could be damaging to the lettuce industry in AZ.



We wanted to share some observations from our weed survey of Yuma County. When we have mild winters some of our summer weeds survive in certain warm microclimates. We have observed this with Purslane (*Portulaca oleracea*). It is documented that Purslane takes 168 hours to germinate in January in our area (Tickes, 2010) and we have seen cotyledons emerging as well as plants that are surviving the cold temperatures in the Texas Hill, Gila and Yuma Valley and at the Yuma Mesa areas. Below some images that show plants that are not very vigorous but still surviving this month, which is remarkable for a summer annual.

Another summer weed that we have seen growing in certain areas surviving the winter is Pigweed (*Amaranthus palmeri*). Again, plants are underdeveloped but surviving in Dome, Yuma Mesa, Gila Valley. We have not seen much germination for pigweed, which is consistent with the data published by Tickes in 2010.

(GIF here)

Weed seasonal behavior changes according to the environment. As an example, little mallow (*Malva parviflora*) can be annual in colder weathers but in Arizona acts as biennial. The same can be said about camphorweed, white and yellow sweetclover.

Environment fluctuations produce a strong effect in biodiversity in general. In some years we have seen winter weeds such as goosefoot surviving way into the summer. On the other hand, we see summer weeds survive the winter. This complicates the predictability of weed infestation especially with a lack of a distinct season or a well-defined season. This demonstrates the importance of scouting fields and the excellent work PCAs and growers are doing in Yuma

Reference:

Kittie F. Parker. 1981. An Illustrated Guide to Arizona Weeds. University of Arizona Press, Tucson, Arizona.