



## Growing Edible Arizona Forests, An Illustrated Guide

Excerpt from [leafnetworkaz.org](http://leafnetworkaz.org)

### Edible Tree Guide

#### CHOOSE Planting Site and Design

- Wind

### Wind

Forceful winds can dry out air, trees and soil. At your site, are there particularly strong winds? What direction do they blow from? How do winds affect your trees and your own comfort?

Winds can be created by climate patterns, by the effects of mountains, and by local constrictions in canyons and even between buildings. Signs of strong, persistent winds can be seen in permanently wind-shaped trees. The prevailing wind directions in your area are the directions wind comes from with the highest percent of frequency, monthly and annually. The table Prevailing Wind Directions around Arizona, Monthly and Annual, shows wind patterns for selected wind gaging locations in Arizona.

To deflect and dissipate strong winds, plant hardy native edible trees as windbreaks upwind of buildings and sites. Plant more sensitive fruit trees downwind of hardy native trees and buildings in order to protect them from strong winds. Do not plant tender trees in locations where winds are concentrated such as in canyons or between buildings.

Climate change may bring stronger winds and more intense storms that could damage and uproot trees. Tree-care strategies to protect against winds include trimming dead branches regularly and moving water supplies farther out from tree trunks to encourage wider root growth and stronger anchoring of the trees.



*Arizona cypress trees make an excellent windbreak when they are planted close together. Note the consistent tilt of the trees toward the right (downwind) due to the force of the prevailing wind.*

# PREVAILING WIND DIRECTIONS AROUND ARIZONA, MONTHLY AND ANNUAL

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
CASA GRANDE AP, AZ (KCGZ).	N	W	W	W	W	W	W	E	E	ENE	N	N	W
DOUGLAS AIRPORT, AZ (KDUG).	E	N	N	W	WSW	W	S	E	E	E	E	N	N
FLAGSTAFF AP, AZ (KFLG). WI	SW	SW	SW	SW	SW	SSW	SW	SSW	SW	SW	ENE	ENE	SW
FORT HUACHUCA-SIERRA VISTA A	W	W	W	W	W	W	W	W	W	W	W	W	W
GILA BEND AP, AZ (KGBN). WI	N	W	W	W	W	W	W	W	W	W	N	N	W
GLENDALÉ-LUKE AFB, AZ (KLUF)	N	N	N	SW	SW	SW	SW	SW	N	N	N	N	N
GRAND CANYON AP, AZ (KGCN).	NE	NE	SSW	SSW	SSW	SSW	SSW	SSW	SSW	NE	NE	NE	SSW
KINGMAN AIRPORT, AZ (KIGM).	E	N	SW	SW	SW	SW	SW	SW	S	N	N	E	SW
NOGALES AIRPORT, AZ (KOLS).	SSE	S	E	E	E	E	SE	SE	ENE	S	E	SE	S
PAGE AIRPORT, AZ (KPGA). WI	W	W	W	W	W	W	W	S	N	W	W	W	W
PHOENIX SKY HARBOR AP, AZ (K	E	E	E	E	W	W	W	E	E	E	E	E	E
PHOENIX-DEER VALLEY AP, AZ (	E	E	SW	SW	SW	SW	SW	SW	E	E	NE	NE	SW
PRESCOTT AIRPORT, AZ (KPRC).	S	S	S	S	S	S	S	S	S	S	S	S	S
SAFFORD AIRPORT, AZ (KSAD).	E	E	WNW	WNW	WNW	WNW	W	E	E	E	E	E	E
SCOTTSDALE AP, AZ (KSDL). W	N	SW	SW	SW	WSW	WSW	SW	WSW	S	S	WSW	N	SW
ST. JOHNS AP, AZ (KSJN). WI	S	S	WSW	WSW	WSW	WSW	S	S	S	S	S	S	S
TUCSON INT'L AP, AZ (KTUS).	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE *
TUCSON-DAVIS MONTHAN AP, AZ	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE	SE *
WINDOW ROCK AP, AZ (KRQE).	WSW	SW	SW	SW	SW	WSW	S	S	S	S	SW	SSW	SW
WINSLOW AIRPORT, AZ (KINW).	ESE	SW	SW	SW	SW	SW	SW	ESE	SW	ESE	SE	SE	SW
YUMA MCAS, AZ (KNYL). WIND	N	N	W	W	W	S	SSE	SSE	S	N	N	N	S

SOURCE: <http://www.wrcc.dri.edu/htmlfiles/westwinddir.html>

NOTE: Prevailing wind direction is based on the hourly data from 1992-2002 and is defined as the direction with the highest percent of frequency. Many of these locations have very close secondary maximum which can lead to noticeable differences month to month.

\* SEE TUCSON WIND DATA BELOW TO PROVIDE MORE PERSPECTIVE BEYOND CONSISTENT SE PREVAILING DIRECTION ABOVE

SOURCE: <https://wrcc.dri.edu/cgi-bin/clilcd.pl?az23160>

<b>WIND</b>														
Mean Speed (mph)	50	7.9	8.1	8.6	8.9	8.8	8.7	8.4	7.9	8.3	8.2	8.1	7.8	8.3
Prevailing Direction through 1964		SE	SE	SE	SE	SE	SSE	SE	SE	SE	SE	SE	SE	SE
Fastest Mile														
-Direction(!!)														
-Speed(mph)	47	E	E	SE	SW	SE	SE	SE	NE	SE	SE	E	W	SE
-Year	47	40	59	41	46	43	50	71	54	54	47	55	44	71
Peak Gust		1962	1952	1955	1986	1984	1961	1971	1969	1960	1948	1951	1949	JUL 1971
-Direction(!!)														
-Speed(mph)	12	SW	E	SE	SW	SE	SW	SE	NW	SE	S	E	W	NW
-Date	12	55	48	53	55	55	47	66	76	71	49	46	47	76