

Blackeye Production Basics

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1. Blackeyes are a form (grain market class) of cowpeas, *Vigna unguiculata*) that evolved in Africa. Many other seed types of cowpea exist that are grown around the world for their grain, and as a vegetable, hay, and cover crop. Common beans (including Kidneys, Pinks, Pintos, etc) are a different species, *Phaseolus vulgaris*, that evolved in the Americas. Botanically, both are beans, even though some refer to blackeyes as 'blackeye pea'. Both species produce grain with similar nutritional characteristics; blackeyes cook much faster than common bean.
2. Blackeyes are much more heat tolerant than common bean and tolerate water deficits better due to their strong, well developed root systems.
3. Blackeyes prefer well drained soils-relatively better than most other crops on poor, sandy ground
4. Excellent rotation crop for corn, tomatoes, etc. A blackeye crop will fix more than 100 lb/ac N.
5. Tolerates higher salinity than corn, but less salt tolerant than wheat or cotton
6. Susceptible to Boron (above 2.5 ppm in water)
7. Little or no fertilizer needed-some growers use 40 lb/ac 'starter' at planting
8. Usually furrow irrigated, some sprinkler, some flooded production
9. Inoculation with Cowpea Rhizobia-different strain than for common bean
10. Main variety is CB46-good yielder but small grain size (20 gm/100 seeds)
11. CB46 is resistant to *Meloidogyne incognita* root knot nematode and Fusarium wilt race 3, but susceptible to *M. javanica* and Fusarium wilt race 4
12. Old variety CB5 has large plant size and larger grain (25 gm/100 seeds), resistant to *M. incognita* but susceptible to *M. javanica* root-knot nematode and susceptible to race 3 and race 4 Fusarium wilt
13. Matures in 85-90 days with May sowing, 75-80 days with June or early July planting; yields 25-30 cwt/acre; 'Double-Flush' yields 40-50 cwt/ac in about 125 days possible south of Fresno
14. Prices to grower typically are in the range of \$0.22-0.30/lb for 'A' grade

15. Easily overproduced-Strong competition from Texas in recent years
16. Single row on 30" or 40" bed-some plant 2 rows on 40" bed
17. Can be cut with bean knives or swathed. Threshed with common bean threshers such as C.B. Hay after two-three weeks of drying in windrows. Blackeyes produce much more vegetation than common beans so require more drying time in windrows. Rain during the drying period is relatively more harmful to blackeyes than common beans because the pods do not provide much protection from moisture and the seed readily takes in moisture that get through the pod.
18. Major pest is Lygus Bug-blackeyes are more susceptible than common beans and limas-attacks young flower buds, disrupting pod set and lowering yields. Later lygus damages seeds in developing pods which can lower the grade of beans produced. Monitoring of lygus populations and insecticide application timing is critical. Floral buds and developing pods need to be protected from lygus when the threshold of 1 lygus/sweep is exceeded. Drying fields of Safflower are a prime source of lygus that could attack nearby blackeye fields. Cutting of nearby lygus-infested Alfalfa fields can drive lygus into blackeyes so alfalfa cutting should be coordinated with lygus management of nearby blackeyes.
19. Aphids, caterpillars, spider mites, leaf miners, cucumber beetles, stink bugs sometimes problematic-see UC IPM Guidelines online at: <http://www.ipm.ucdavis.edu/PMG/crops-agriculture.html>
20. Same basic herbicides and insecticides as for common bean production (Blackeyes are considered a Dry Bean, along with other common bean classes for pesticide registration purposes)
21. Sow to obtain stand of 3-4 plants per foot-usually about 35 lbs/acre seed used (17,424 linear feet per acre for 30" beds x 4 seeds/foot =70,000 seeds x .21 gm/seed=14.6kg=32lb)

More detailed information on Blackeye bean production is published in:

BLACKEYE BEAN PRODUCTION IN CALIFORNIA, by A.E. Hall and Carol Frate, 1996. 23 pages. UC Publication No. 21518

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