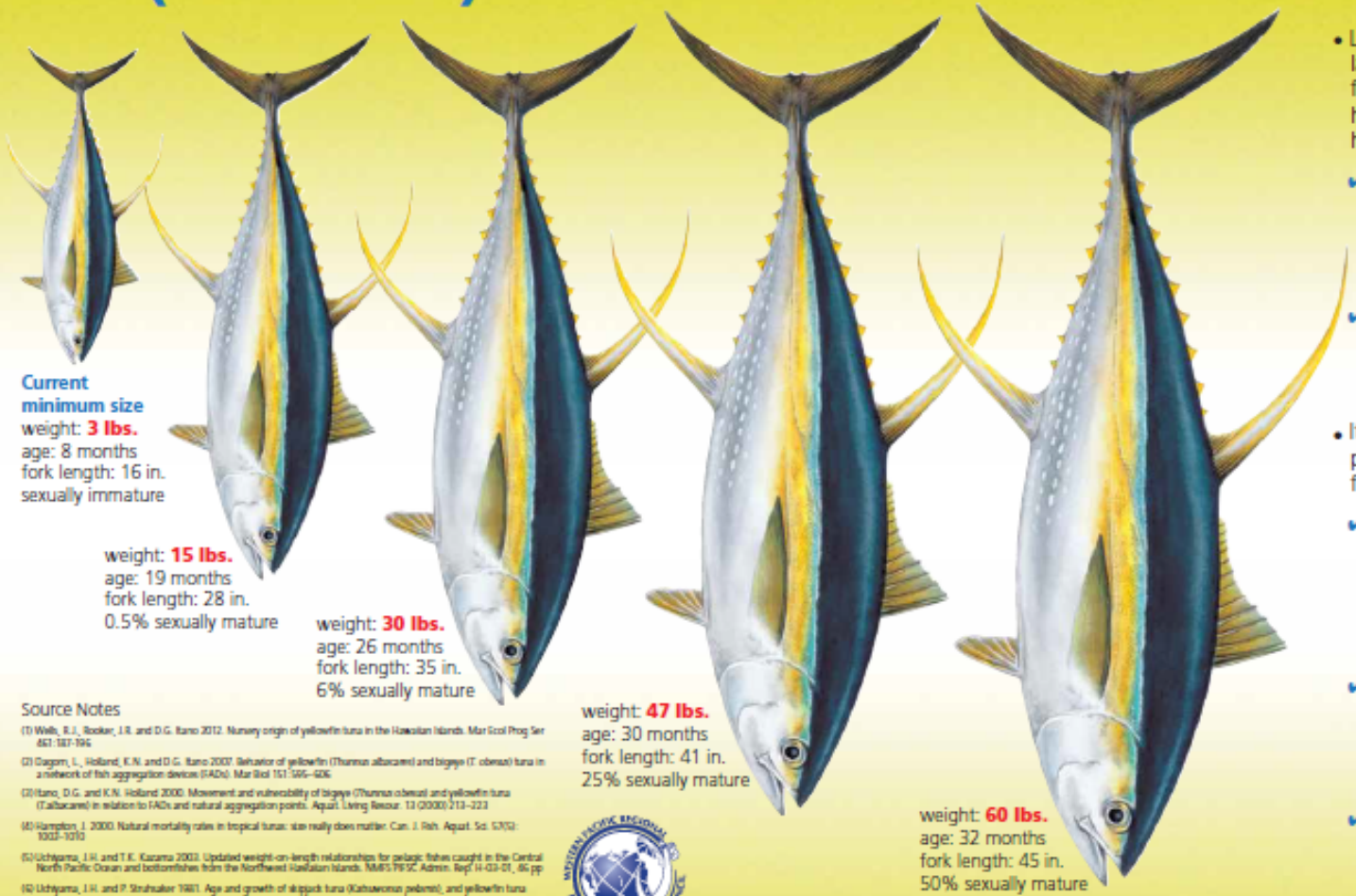
# Ahi (Yellowfin) Minimum Size: Should It Be Changed?



**Current minimum size**
weight: **3 lbs.**
age: 8 months
fork length: 16 in.
sexually immature

weight: **15 lbs.**
age: 19 months
fork length: 28 in.
0.5% sexually mature

weight: **30 lbs.**
age: 26 months
fork length: 35 in.
6% sexually mature

weight: **47 lbs.**
age: 30 months
fork length: 41 in.
25% sexually mature

weight: **60 lbs.**
age: 32 months
fork length: 45 in.
50% sexually mature

- Local fishermen cannot rely on large influxes of yellowfin tuna from other regions to maintain high catch rates and replace harvested stocks[1]
  - ✔ Close to 90% of 1–2 year old yellowfin tuna (15–30 lbs) sampled in Hawaii in a recent study were locally spawned in Hawaiian waters[1]
  - ✔ Tagging studies show that the vast majority of yellowfin do not leave Hawaiianwaters throughout their lifetime[2,3]
- It makes sense to maximize the production and potential benefits from our 'local stock'
  - ✔ Natural mortality rates of Hawaii yellowfin drop to their lowest levels at fairly small sizes (about 24" or 10 lb)—many will survive and grow after this age[4]
  - ✔ If we do not harvest yellowfin at very small sizes but wait a little later, these fish will not be lost to natural mortality or migration
  - ✔ Yellowfin that reach two years old (about 30 lb ) will quickly growto reproductive size and contribute to local spawning and stocks[5,6,7]

Source Notes


(1) Wells, R.J., Rooker, J.R. and D.G. Itano 2012. Nursery origin of yellowfin tuna in the Hawaiian Islands. Mar Ecol Prog Ser 461:187-196

(2) Dagorn, L., Holland, K.N. and D.G. Itano 2007. Behavior of yellowfin (Thunnus albacares) and bigeye (T. obesus) tuna in a network of fish aggregation devices (FADs). Mar Biol 151:595–606

(3) Itano, D.G. and K.N. Holland 2000. Movement and vulnerability of bigeye (Thunnus obesus) and yellowfin tuna (Tailbacares) in relation to FADs and natural aggregation points. Aquat. Living Resour. 13 (2000) 213–223

(4) Hampton, J. 2000. Natural mortality rates in tropical tunas: size really does matter. Can. J. Fish. Aquat. Sci. 57(5): 1003–1010

(5) Uchiyama, J.H. and T.K. Kazama 2003. Updated weight-on-length relationships for pelagic fishes caught in the Central North Pacific Ocean and bottomfishes from the Northwest Hawaiian Islands. NMFS PIFSC Admin. Rep. H-03-01, 46 pp.

(6) Uchiyama, J.H. and P. Struhsaker 1981. Age and growth of skipjack tuna (Katsuwonus pelamis), and yellowfin tuna (Thunnusalbacares), as indicated by daily growth increments of sagittae. Fish Bull. 79 (1), 151-162.

(7) Itano, D.G. 2000. Reproductive biology of yellowfin tuna (Thunnus albacares) in Hawaiian waters and the western tropical Pacific Ocean: Project Summary. JIMAR SOEST Pelagic Fisheries Research Program Report 00-01, 69 pp.


Illustration Les Hata, © Secretariat of the Pacific Community

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(1) Wells, R.J., Rooker, J.R. and D.G. Itano 2012. Nursery origin of yellowfin tuna in the Hawaiian Islands. Mar Ecol Prog Ser 461:187-196
(2) Dagorn, L., Holland, K.N. and D.G. Itano 2007. Behavior of yellowfin (*Thunnus albacares*) and bigeye (*T. obesus*) tuna in a network of fish aggregation devices (FADs). Mar Biol 151:595–606
(3) Itano, D.G. and K.N. Holland 2000. Movement and vulnerability of bigeye (*Thunnus obesus*) and yellowfin tuna (*T. albacares*) in relation to FADs and natural aggregation points. Aquat. Living Resour. 13 (2000) 213−223
(4) Hampton, J. 2000. Natural mortality rates in tropical tunas: size really does matter. Can. J. Fish. Aquat. Sci. 57(5): 1002-1010
(5) Uchiyama, J.H. and T.K. Kazama 2003. Updated weight-on-length relationships for pelagic fishes caught in the Central North Pacific Ocean and bottomfishes from the Northwest Hawaiian Islands. NMFS PIFSC Admin. Rep. H-03-01, 46 pp
(6 Uchiyama, J.H. and P. Struhsaker 1981. Age and growth of skipjack tuna (*Katsuwonus pelamis*), and yellowfin tuna (*Thunnus albacares*), as indicated by daily growth increments of sagittae. Fish Bull. 79 (1), 151-162.
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