

MATURITY AND RIPENESS GUIDE

HOW TO USE THIS TOOL

- These charts are intended for use at the retail receiving point in the U.S.
- You should expect at least 90% of the mangos tested to fall within stage 2 or higher.
- Experience and good judgment are still your best tools. Actual results may vary from these findings.

EXPECTATIONS AT RECEIVING



- Mangos are harvested when physiologically mature, but not ripe.
- At receiving, you can expect the mangos to be physiologically mature, but not necessarily ripe.
- A physiologically mature mango will ripen normally with internal color changing from light creamy-yellow to dark yellow-orange color, increasing Soluble Solids Content (SSC-degrees Brix percentage) and decreasing firmness (lbs. - force) to become ready to eat.
- It is very typical to find mangos of differing levels of ripeness in the same load and in the same box.
- The pulp temperature of mangos at receiving should not be lower than 50 to 54°F (10 to 12°C) depending on the variety. Lower temperatures can injure mangos, causing flavor loss, ripening inhibition, and shorter shelf life.
- Red skin is not an indicator of maturity, quality or ripeness and should not be used to evaluate mangos at receiving. Green exterior color may or may not change to yellow or orange during ripening depending on the mango variety.
- Physiological maturity can be judged by a combination of factors, including internal color change, firmness, SSC (degrees Brix percentage) and fruit shape.

MEASURING MANGO MATURITY




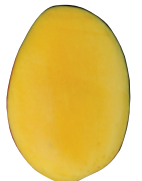

- Full, rounded shoulders at the stem end may be an indicator that the mango was harvested physiologically mature and will ripen normally.
- Internal flesh color, which first develops near the seed and then progresses outward as shown in these photos, is generally the best indicator of maturity and ripeness. Firmness (lbs. - force) and SSC (degrees Brix percentage) ranges are provided as an additional reference.
- To measure firmness with a fruit penetrometer, use a 5/16" (8mm) tip and test the mango flesh on the fullest part of the cheek with the skin removed.
- To measure SSC (degrees Brix percentage) with a refractometer, collect the flesh from an entire mango cheek or a plug taken down to the seed and juice the entire flesh sample.





These charts are meant to be educational and to provide a guideline for understanding mango maturity and ripeness. They do not represent U.S. Federal Grade Standards and should not serve as the basis for a contract or for an inspection.

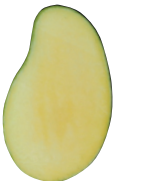
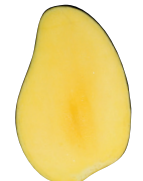







Tommy Atkins

					
STAGE	1	2	3	4	5
FIRMNESS	47-30	35-15	21-9	10-6	6-3
BRIX	5-7	6-10	9-12	10-14	13-16



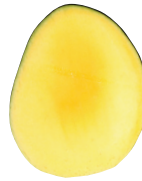
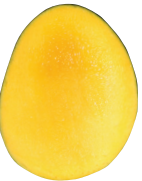





Honey

					
STAGE	1	2	3	4	5
FIRMNESS	47-22	29-12	18-6	5-2	3-1
BRIX	5-7	7-11	11-14	13-16	13-18



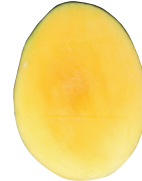






Kent

					
STAGE	1	2	3	4	5
FIRMNESS	48-22	29-14	21-11	11-5	6-1
BRIX	6-8	7-12	11-15	12-17	16-20



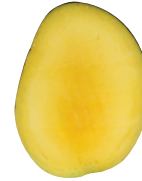






Keitt

					
STAGE	1	2	3	4	5
FIRMNESS	65-49	47-18	26-14	11-6	6-1
BRIX	5-7	7-12	9-13	12-15	13-17


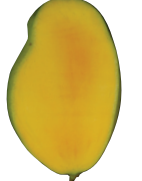
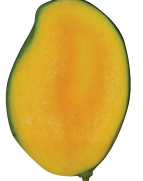




Haden

					
STAGE	1	2	3	4	5
FIRMNESS	52-25	35-16	17-8	9-4	6-2
BRIX	6-9	9-12	11-15	12-16	13-17



Francis

					
STAGE	1	2	3	4	5
FIRMNESS	25-16	19-12	11-8	9-5	5-3
BRIX	6-8	10-13	12-16	13-18	14-18