

Description of Selections 2005. (*indicates most promising, indent indicates probable discard)

Sexton (90-031-10) (Chandler x 85-008) (selected 2000): Kernels of this very precocious offspring of a Chandler x Chinese cross average 8.8 g. Color, which has been very good most years, was good again this year in several grower trials but not in the selection blocks. Nuts have smooth, round, solid shells and yield 53% kernel. Shells and seals can be weak in younger trees. The tree leafs a few days after Payne and harvest averages a week before Chandler. Yield has been excellent with little blight observed most years. Tree tends to have neck buds and weepy growth habit. Pruning will be needed to set tree structure and to prevent possible stunting from early over-cropping. It maybe suitable for hedgerows where limb structure is less critical, heavy early yield is an objective, and limited tree size is an advantage. It can have some 2nd flowering like Chico and these can result in a few small nuts. Released 2004. (Trials: Deseret, Stuke, Lang, Conant, Sierra Gold, Scheuring, Grunder, Crane, Driver, Crane Jr., Modest JC, Swall, Taylor)

Gillet (95-022-26) (76-80 x Chico) (selected 2002): This protogynous selection has good yield, 8.2 g kernels, and harvests mid-season, about two weeks earlier than Chandler. Nuts average 51% kernel and yield halves easily. Kernels have had excellent color, little shrivel, few veins, and no blanks. Seals and shell strength appear adequate but they should be watched, particularly in young trees. They may not be sufficiently strong for in-shell use. This is a large and vigorous tree that has had very little blight. This year it again had much less blight than other selections in an unsprayed block. Watch for a possibility of alternate bearing. Released 2004. (Trials: Conant, Scheuring, Grunder, Crane Jr., Modesto JC, Swall, Taylor)

Forde (95-026-37) (Lara x Chico) (selected 2001): This selection has had great color and excellent yield. The seedling tree clearly harvests earlier than Chandler, probably with Tulare and Vina, but young grafted trees are only a few days earlier. Continue to watch the timing. It has large, plump 8.9 g kernels, protogynous bearing habit, and 53% kernel yield. This is a large vigorous tree with little blight. Its strength, seal, fill, plumpness, and yield on young trees are better than Chandler and kernels show an absence of shrivel or veins. Its protogynous flowering suggests its additional potential as a pollinizer for Chandler. Released 2004. (Trials: Conant, Driver, Scheuring, Grunder, Modesto JC, Crane Jr., Swall, Stolp, Taylor)

90-023-37 (Tulare x Chase D9) (selected 1999): This is a protandrous selection with excellent yield harvests two weeks before Chandler and gives 55% kernel. This is a mid-season producer with nuts that are round in shape, have relatively smooth shells, and average 7.5 g kernels. The tree has an upright growth habit. Kernel color was good this year but has been questionable. This selection continues to show very strong yields in selection blocks. (Trials: Deseret, Stuke, Conant, Deardorff, Crane)

90-027-21 (Tulare x Sinensis #5) (selected 1998): This protandrous, upright, vigorous tree leafs out and harvests within a week of Payne. The shells are strong, well sealed, and shaped like Vina. Yield is very good and this could be an early in-shell selection. Nuts yield 48% kernel and kernels average 7.1 g. Kernel color has been mostly light but not excellent. Blight has been severe on unsprayed trees in wet years but little blight has been observed in sprayed blocks even though it leafs early. Nuts tend to have a white interior lining on the shell, sometimes don't fill well at the blossom end,

and have packing tissue with a rather woody center. Tree is upright, branchy, and likely easy to train. Kernel weight and percent are concerns but this selection continues to produce excellent yields. This also continues to show less boron sensitivity than other selections and maybe most suitable for high boron sites. Possible discard. 2003 (Trials: Deseret, Stuke, Conant, Deardorff, Scheuring)

90-027-23 (Tulare x Sinensis #5) (selected 1998): This short-season sibling of the previous selection leafs out close to Chandler but harvests about two weeks earlier. It exhibits good shell strength and kernel color. Kernels average 7.8 g and nuts average 51% kernel. Nuts are Vina shaped and have a striped appearance. Very good yield again this year, particularly at Kearney where it continues to harvest early. Vigorous, thrifty tree. (Trials: Deseret, Stuke, Conant, Deardorff, Carriere)

***90-031-12** (Chandler x 85-008) (selected 2001): This sibling of Sexton harvests several days earlier and nuts have smooth solid shells with a good seal, adequate strength, and 58% kernel. Kernels average 8.2 g and yield easy halves. Color is very good most years. Very precocious and strongly lateral bearing with good yield and only moderate blight. It leafs and harvests nearly two weeks before Chandler. (Trials: Sierra Gold)

91-076-24 (Howard x Sinensis #5) (selected 2000): Selected for its very early harvest date, this protogynous, short-season selection leafs mid-season but harvests approximately with Payne. Yield has been excellent with little blight. Nuts have light colored but rough, and often irregularly shaped, shells and yield 54% kernel. Seals and shell strength are probably not sufficient for in-shell but may be suitable for a cracking selection. Kernels average 7.7 g but color is probably not good enough. Kernel lobes have a wide gap at the stem end and veins are a consistent defect. Foliage yellows by August at Davis and shows severe boron damage at Scheuring's trial but remained green into fall at other locations. Probable discard 2004. (Trials: Sierra Gold, Scheuring, Conant)

***91-077-6** (Howard x 85-008) (selected 2000): This protandrous tree harvests close to Payne time but leafs about a week later than Payne. Yield has been excellent on this precocious selection but reduced in some years by blight. The large 8.9 g kernels have shown consistently excellent color with easy removal of halves. The large, round, smooth-shelled nuts average 55% kernel but shell strength and seal may prove insufficient. Not for in-shell use, but a good early cracking selection if shell strength is adequate. Excellent yield again this year. (Trials: Conant, Sierra Gold, Scheuring, Bonturi, Deardorff)

91-077-40 (Howard x 85-008) (selected 2001): This selection is characterized by precocity, excellent yield, protogynous bearing habit, and large kernels averaging 8.2 g. Color was excellent on the seedling tree but has not held up in selection blocks. Nuts are well sealed with 52% kernel and suitable strength, but maybe not appearance, for in-shell use. Harvest is mid-season or later. Yields have been huge for four years.

91-088-7 (Cascade x 56-224) (selected 2000): This mid-season in-shell selection is protogynous, yields 49% kernel, and has 8.8 g kernels. The light-colored shells have an attractive appearance with excellent strength, thickness, and seal for in-shell use but this tree was not precocious as a seedling, laterals break slowly. Yield has not been consistently strong and color has not held up over time. Probable discard 2005. (Trials: Deseret)

***91-090-41** (87-009 x Chandler) (selected 1999): This selection is notable for its light color relative to other selections in locations with generally poor color. It has an attractive shell appearance and growth appears to be upright. The nuts have thin shells and average 59% kernel. Seals and strength are not adequate for in-shell use. Yields remain strong, and color of the 8.4 g kernels has been light to extra-light with easy recovery of halves. Harvest is two weeks or more before Chandler and blight has been low. Grower comments and Diamond data suggest consideration for release. (Trials: Deseret, Stuke, Conant, Sierra Gold, Deardorff,)

91-094-18 (Cisco x 56-224) (selected 1999): Chosen for its excellent kernel color and appearance, attractive nuts with light shell color, and 56% kernel yield, this selection exhibits Chandler-like leafing and flowering phenology. It yields well and harvests 10 days to two weeks before Chandler. Nuts average only 7.2 g and tend to be variable in size. Looks great at Kearney (Mr. Green Tree) and had a huge yield this year at most locations. Possible discard 2003. (Trials: Deseret, Stuke, Conant, Deardorff, Crane)

91-096-3 (Cisco x Chandler) (selected 1998): This selection is most interesting for its absence of blight. Very little blight has been observed, even in bad blight years. This year, in a very bad blight year, it again had by far the least blight of mature trees in our unsprayed selection block. This selection appears far less susceptible than adjacent trees with similar phenology and the tree's fuzzy hull surface may play a role in resistance. Yield is strong and harvest date is at least two weeks before Chandler. Nuts average 51% kernel but nut size is a concern. Kernels average only 6.7 g. Kernels continue to show excellent color. (Trials: Deseret, Stuke, Conant, Noreen, Sierra Gold, Deardorff, Crane, Scheuring, Grunder, Carriere, Spanfelner)

92-068-2 (Chandler x Sinensis #5) (selected 2003): This is a very early harvesting, protogynous selection. Probably not strong enough for in-shell and shells are not well-filled. It harvests before Payne with 55% kernel. The 8.0 g blocky kernels are not plump and have a wide gap between the lobes but have very good color, almost no shrivel, few veins, and the tree has had very little blight. Probable discard 2004.

92-070-12 (Soleze x Chandler) (selected 1999): Attributes of this selection include excellent kernel color, easy removal of halves, excellent shell appearance, 7.7 g kernels, and 54% kernel yield. This harvests a week or more before Chandler and blight incidence has been low. Shells are very smooth textured and light colored but seals and shell strength are rather weak, tree produces blind wood, and consistent yield is a concern. Great nut appearance and very high value scores from Diamond crackout in multiple years and locations. Although yield in selection blocks is not as strong as Chandler, nut size is larger and more consistent. There is less variability and fewer small nuts. Possible discard 2003. (Trials: Deseret, Stuke, Conant, Deardorff, Crane Jr.)

92-080-11 (Tulare x Sinensis #5) (selected 2000): This large, vigorous tree harvests close to Payne and has excellent yield with little blight. The large 9.3 g kernels have mostly light but not really good color. The nuts yield 54% kernel and have a good seal. Shells are rather rough and shell strength and appearance are probably not suitable for in-shell. This tree looks good in the field with good branching and dense foliage that covers the large nuts well. Probable discard 2004. (Trials: Deseret, Conant)

92-081-17 (Tulare x Manregian) (selected 2003): Selected for its early harvest date, kernel color, large plump 9.0 g kernels, and solid shell. Nuts yield 55% kernel. Blight was severe in 2003 but otherwise low and color has been very good most years. Large tree with dense canopy but shows boron sensitivity and harvest dates have varied. Yield has not been consistent and may not be strong enough. Continue to watch. (Trials: Scheuring)

***93-026-6** (Chandler x Sinensis #5) (selected 2001): Good yield with harvest averaging about a week after Payne or two weeks before Chandler. This protogynous selection has large Hartley-shaped nuts with solid shells and seals that yield 49 % kernel. The 8.6 g kernels have had mostly light to extra light color. Stem end holes should be watched but were acceptable this year. Although Hartley-shaped, the shells can be irregular and may not be consistent enough or have sufficient strength for in-shell use. Veins and tip shrivel are consistent defects. (Trials: Driver, Deseret, Stuke, Crain, Conant, Noreen, Sierra Gold, Scheuring)

****93-028-20** (Chandler x PI 159568) (selected 2001): Tulare timing large, oval, very attractive nuts. This selection leafs like Chandler but harvests about two weeks earlier and has had very little blight. The attractive, solid shells have good seals and 55% kernel. The very plump, Sunland-shaped kernels average 8.9 g and color is excellent. It may not have a strong enough yield and needs to be watched further. (Trials: Conant, Sierra Gold, Spanfelner)

94-019-29 (Vina x 67-013) (selected 2001): This tree was selected for its great yield, harvest 2 weeks before Chandler, and shell traits suitable for in-shell use. Kernel color has been very good. This tree has shown severe blight susceptibility when not sprayed but has been blight free in selection blocks. Tree is upright and vigorous. Nuts average 53% kernel and average kernel size is 8.0 g. (Trials: Noreen)

94-019-45 (Vina x 67-013) (selected 2001): A large, vigorous, branchy, and heavy cropping selection with moderate blight susceptibility and 8.3 g kernels. Leafing date is similar to Chandler but it harvests more than a week earlier and nut traits are suitable for in-shell use. Nuts yield 53% kernel. Color has been good but tip shrivel is a concern some years and harvest date may be spread out. (Trials: Conant)

94-019-85 (Vina x 67-013) (selected 2001): Attractive features of this selection are a harvest date similar to Payne, Hartley-shaped nut, and good kernel color. Unfortunately the shell remains too thin and rough for in-shell. Yield has been good most years. Nuts yield 60% kernel with easy halves, and kernels average 8.3 g. It may be suited for an early shelling variety but watch the yield consistency. The tree appears to show stress symptoms. Leaves didn't abscise normally one year at Davis and hull russetting was observed this year at Chico. Continue to watch in selection blocks. (Trials:

Bonturi)

94-020-5 (Vina x PI159568) (selected 2001): This was selected as a good yielding early in-shell with excellent color. It averages 7.9 g kernels and has great shell strength. It harvests mid-season and averages 50% kernel. The tree is large and vigorous. Watch ease of removal, possible PFA, and spreading or sweepy growth habit. (Trials: Stolp, Conant, Sierra Gold)

94-020-19 (Vina x PI159568) (selected 2002): Aug 2002: This selection harvests about two weeks before Chandler and leafs a week after Payne. It was selected as a potential early in-shell for its kernel color, very solid shell and seal, attractive shell appearance, and 8.4 g kernel size, and 49% kernel. Yields have been good but not outstanding. Laterals were slow to leaf again this year and color was not good. Watch in selection blocks. (Trial: Sierra Gold)

****94-020-28** (Vina x PI159568) (selected 2005): This protandrous selection has Payne-time harvest date with good yield. The nuts contain 54% kernel and have a smooth, attractive shell that yields easy halves. The very plump kernels average 8.2 g with good color.

****94-020-35** (Vina x PI159568) (selected 2001): This early in-shell selection harvests within a week of Payne with moderate blight and good yield. Shells are very solid and have excellent strength for in-shell use but are pointed and have a rough inner surface, which along with excellent fill, may impede halves. Kernels have had good color and average 8.2 g. Nuts are long and oval like Sunland and the thick shell accounts for nuts averaging only 48% kernel. Tree appears to have a spreading weepy or willowy growth habit. (Trials: Stolp, Moore, Conant, Sierra Gold)

94-020-72 (Vina x PI159568) (selected 2001): This large vigorous tree was selected for its excellent yield, near absence of blight, large plump 8.6 g kernels, and very solid, well filled shells. Kernel color has been good most years and nuts yield 51% kernel. Harvest date is mid-season. Nuts yield halves easily and shells are suitable for inshell but harvest is not early enough. Continue to watch.

95-002-1 (Chico x Manregian) (selected 2001): This was chosen for its early harvest date, within a week of Payne, its suitability for in-shell use, and its yield. Round nuts with good shell appearance yield 53% kernel and the large kernels average 9.1 g. Kernel color is marginal and veins detract from kernel appearance. Tree shows considerable blight and shells can have a white unattractive coating on the interior. Probable discard 2005.

95-002-13 (Chico x Manregian) (selected 2001): This selection harvests close to Payne, has thick shells, good strength and seal, round, light-colored shells, and good yield. Excessive fill makes removal of halves a bit difficult but the large nuts with very plump 8.0 g kernels and 49% kernel yield are well suited to in-shell use. Color has not held up in selection blocks and blight susceptibility when unsprayed is a concern. Probable discard 2005.

95-003-28 (Chico x Vina) (selected 2001): This is an early in-shell selection that harvests with, or before, Payne, has great yield, and can have excellent kernel color. Nuts have shells that are solid and attractive with a very good seal and 48% kernel. Kernel color was not as good this year as in the past. Kernels average only 7.0 g. Blight and nut size are a concern.

95-007-13 (77-012 x Serr) (selected 2001): A Serr seedling that harvests close to Payne, has good yield and a solid, attractive shell, this early in-shell candidate had great color as a seedling but color is not holding up in selection blocks. Nuts yield 53% kernel and kernels average 8.2 g. New foliage has been noted to have a wilting appearance in late summer at some locations and it had a lot of black nuts at Kearney. Continue to evaluate it in selection blocks and grower trials. (Trials: Stuke, Conant, Scheuring)

****95-011-14** (67-013 x Chico) (selected 2001): This protogynous selection harvests with Payne and is characterized by great yield, excellent shell color and appearance, and mostly Chandler-like extra light kernels averaging 7.8 g. It may have sufficient shell strength for in-shell use but strength and seals should be watched and nut size is not good. Nuts yield 57% kernel with very easy removal of halves. Blight can be serious but was low relative to other varieties in our unsprayed block this year. This selection shows summer heat damage to the foliage and some summer nut drop. Kernel quality and harvest date are excellent if the tree can be managed and its appearance tolerated. (Trials: Sierra Gold, Scheuring, Conant, Moore, Bonturi, Spanfelner)

95-011-15 (67-013 x Chico) (selected 2001): Another selection with very good yield and kernel color, this tree has a solid shell and seal suitable for in-shell use but doesn't have the shell appearance of its above sibling. The harvest date is about ten days before Chandler and nuts average 52% kernel. Kernels weigh about 7.5 g. Color has been mostly light to extra light. Blight is a serious concern when unsprayed but was not bad this year and the tree appears to have some summer nut loss. (Trial: Sierra Gold)

95-011-16 (67-013 x Chico) (selected 2003): This was selected for its strong mid-season harvest of large, light colored kernels. Kernels are frequently extra light and average 8.2 g. Nuts have very solid attractive shells and give 54% kernel. Watch for variable nut size.

95-011-22 (67-013 x Chico) (selected 2001): A very high yielding selection with mostly light to extra light kernels and a mid-season harvest date. Nuts produce 53% kernel and have shell and seal strength suitable for in-shell. Nut size is a concern. Kernels average 7.2 g but have declined to less than 7 g on the seedling tree. (Trials: Conant)

95-013-6 (Vina x Howard) (selected 2003): This tree was selected for its harvest date near Payne time, light kernel color, easy halves, and solid shell suitable for in-shell use. It is a large vigorous tree. It had large, long kernels as a young tree but kernel weights have been under 7 g the last four years and nuts average only 48% kernel. Hulls are thick so the nuts look bigger on the tree than they really are. The original seedling tree is in a declining area of the block. Watch in selection blocks. Probable discard 2004.

***95-013-12** (Vina x Howard) (selected 2003): Selected as an early in-shell possibility, this tree produces good yield about a week after Payne. The large, attractive nuts have a rounded Vina or Hartley shape, very solid shell, and average 49% kernel. Large, light kernels average 8.2 g and yield halves easily. Consider as a lateral bearing, earlier harvesting Hartley replacement. The original tree has severe crown gall. Watch in selection blocks.

95-018-23 (Tulare x Chandler) (selected 2003): Excellent yield of mostly extra light kernels and harvests about a week after Payne. A short season selection that leafs after Chandler and has low blight. Shells are thin and have inadequate strength for in-shell use. Nuts yield 53% kernel and easy halves but fill could be better and kernels average only 7.4 g. Watch in selection blocks (Trials: Scheuring, Carriere)

95-026-16 (Lara x Chico) (selected 2003): Selected for its early in-shell traits, this protogynous tree harvests with Payne, has very good kernel color, excellent yield, and very little blight. Nuts yield 51% kernel and have solid shells and seals. Nuts average only 6.9 g and nut size is the major concern with this selection. Watch in the selection blocks.

95-026-17 (Lara x Chico) (selected 2003): This protogynous, short season, and relatively late leafing selection leafs out after Chandler but harvests more than two weeks earlier. Yield is good and the tree has had little blight. Nuts average 51% kernel with solid shells but kernels average 7.3 g and nut size is a concern. Watch in the selection blocks.

95-026-21 (Lara x Chico) (selected 2001): A protogynous selection with very good yield and little blight that harvests about two weeks before Chandler. Nuts average 53% kernel but kernel weights have declined to only 6 g on the seedling tree and average only 6.9 g over all. Kernel color has been very good most years and kernels come out in halves easily. Seal and strength are good and shells have light color. Watch on more open spacing and rootstock but probably inadequate nut size. (Trials: Conant)

95-026-22 (Lara x Chico) (selected 2001): This protandrous tree harvests within mid-season with good shell strength and seal and good nut size. Kernels average 9.1 g and nuts yield 49% kernel. Kernels have generally been large, shiny, and light. Blight incidence has remained very low. The rough textured shells are very solid and can have inner roughness as well. If nuts are too well filled, kernels can be a bit difficult to remove in halves. This tree continues to have good nut size and yield in a crowded situation. (Trials: Conant, Scheuring, Sierra Gold, Carriere, Taylor, Stuke)

95-026-24 (Lara x Chico) (selected 2003): A protogynous mid-season selection with little blight, this tree has excellent yield and light to extra light Chandler-like kernels. Shell strength is better than Chandler and harvest is earlier. Kernel size has declined in a crowded orchard but averages 7.7 g and 52% kernel. Watch in selection blocks. (Trial: Scheuring)

95-026-29 (Lara x Chico) (selected 2001): A good yielding protogynous selection that harvests very close to Payne. Nuts are suitable for in-shell use, yield 52% kernel, and the average kernel size is 7.5 g. Kernel color has been mostly light or extra light. Blight incidence is low but the tree looks ratty at harvest and this year some nuts were russeted. There was not much growth the last two years and the tree appears to be losing vigor. Watch in the selection blocks.

96-013-13 (Howard x Chico) (selected 2003): This protogynous tree was selected for its excellent yield, light kernel color, good shell appearance, and mid-season harvest. It had better yield than Tulare trees around it the last three years, equivalent harvest date, and better color. The light colored, smooth, attractive shells are solid and adequate for in-shell use. Nuts produced 53% kernel but kernels averaged only 6.8 g. Watch vigor and nut size in selection blocks on rootstocks.

97-003-11 (Tulare x Mixed Chinese – Phase II) (selected 2004): Selected for its mid-season harvest, strong yield, Chandler leafing date, and large, plump, light colored kernels averaging 9.3 g. The large well-filled nuts yield 57% kernel. Shells are rough and seals should be watched.

97-003-23 (Tulare x Mixed Chinese – Phase II) (selected 2005): This is has a mid-season harvest. Nuts have a very attractive smooth and light colored shell and give 54% kernel. Kernels have excellent color and easy removal but average only 6.4 g on the seedling tree. Look at this on rootstock.

97-003-40 (Tulare x Mixed Chinese – Phase II) (selected 2005): This is a protogynous mid-season selection with good yield. Nuts have a very solid strong shell and seal resulting in only 48% kernel. Color of the 7.4 g kernels has been good.

97-003-46 (Tulare x Mixed Chinese – Phase II) (selected 2005): This selection harvest very early, approximately with Payne and has large plump 8.6 g kernels with good color and easy removal. Shell strength and seal are probably not good enough for in-shell use. Nuts average 58% kernel.

97-003-65 (Tulare x Mixed Chinese – Phase II) (selected 2005): This selection has excellent color and large 8.3 g kernels with solid shells and 52% kernel but the harvest time may be too close to Chandler and yield needs to be watched further.

97-003-79 (Tulare x Mixed Chinese – Phase II) (selected 2005): This is a mid-season selection with exceptionally large 10 g kernels. Removal of halves is very easy, color is light but maybe not excellent, and the shells are solid, yielding 55% kernel. (Trial: Sierra Gold)

97-003-91 (Tulare x Mixed Chinese – Phase II) (selected 2005): This selection has excellent yield in a grower trial and rather Hartley-shaped nuts. Color has been excellent and kernels average 7.5 g but harvest date may be too close to Chandler.

97-003-96 (Tulare x Mixed Chinese – Phase II) (selected 2005): This selection harvests about ten days after Payne. Nuts have a solid shell and seal with 51% kernel. The kernel color has been very good and kernels average 7.8 g. Pay attention to veins and watch this on rootstock. (Trial: Sierra Gold)