

Description of Selections 2006. (*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 8.6 g. Color has been very good most years and was good again this. Nuts have smooth, round, solid shells and yield 53% kernel. Shells and seals can be weak in younger trees but were very good this year. The tree leafs a few days after Payne and harvest has varied from 1 to 2 weeks before Chandler. Yield has been excellent with little blight observed most years. Tree tends to have neck buds and narrowly forked branches. 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. Its pollen shed overlaps the female bloom very well and it can have some 2nd flowering like Chico, resulting in some small and late harvesting 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, 8.0 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 and few veins or blanks. Seals and shell strength appear adequate but may not be sufficiently strong for in-shell use. Seals should be watched, particularly in young trees. They This is a large and vigorous tree that has had very little blight. 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 8.7 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 pollenizer 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 7.3 g kernels but seals are consistently weak. The tree has an upright growth habit. Kernel color was good this year but has been questionable and veins have been an issue. This selection continues to show very strong yields in selection blocks. Probable discard 2006. (Trials: Deseret, Stuke, Conant, Deardorff, Crane)

90-027-21 (Tulare x Sinensis #5) (selected 1998): This protandrous, upright, vigorous tree leafs out and harvests close to 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 7.0 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 and branchy with a dense canopy and is 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 7.7 g and nuts average 52% 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 leafs and harvests about 10 days before Chandler and nuts have smooth solid shells with a good seal, adequate strength, and 58% kernel. Kernels average 8.4 g and yield easy halves. Color is good most years but has been poor at Chico. Very precocious and strongly lateral bearing with good yield and only moderate blight, this harvests earlier than Sexton and has a similar growth habit but has thinner shells and less consistent color. (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 and in some cases nuts have shown open stem-ends or seals but it may be suitable for a cracking selection. Kernels average 7.5 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 huge on this precocious selection. The large 8.9 g kernels have shown consistently excellent color with easy removal of halves. The large, round, smooth-shelled nuts average 56% kernel but shell strength and seal may prove insufficient and it continues to show problems with incomplete shells as it ages. Not for in-shell use, but could be an early cracking selection if shell strength is adequate. Outstanding 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 continues to show a pattern of excellence at Davis but not at other locations. 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 five years.

91-088-7 (Cascade x 56-224) (selected 2000): This mid to late-season selection is

protogynous, yields 49% kernel, and has 8.9 g kernels. The light-colored oval shells have an attractive appearance with excellent strength, thickness, and seal for in-shell use but this tree was not precocious as a seedling and laterals break slowly. Yield has not been consistently strong, it harvests too close to Chandler, and color has not held up over time. Probable discard 2005. (Trials: Deseret)

***91-090-41** (87-009 x Chandler) (selected 1999): This early harvesting 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 have consistently been very strong, and color of the 8.1 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 but shells and seals were weak again this year and remain a concern. (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 6.9 g and tend to be variable in size. Looks great at Kearney (Mr. Green Tree) and had a huge yield again this year at most locations. Possible discard 2003. (Trials: Deseret, Stuke, Conant, Deardorff, Crane)

91-096-3 (Cisco x Chandler) (selected 1998): This early harvesting, short season selection is most interesting for its absence of blight. Very little blight has been observed, even in bad blight years. 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 excellent and harvest date is close to Payne. Nuts average 52% kernel but nut size is a concern. Kernels average only 6.5 g but 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 56% kernel. The 8.2 g blocky kernels are not plump and have a wide gap between the lobes. Color on grafted trees has never been as good as on the seedling. 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, 7.4 g kernels, and 55% 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. Great nut appearance and very high value scores from Diamond crackout in multiple years and locations. Nut size is larger and more consistent than Chandler with 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 9.2 g kernels have

mostly light 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 but it could be an early cracking selection. 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 8.8 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. Probable discard 2006. (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 50 % kernel. The 8.6 g kernels have had mostly light to extra light color. Stem end holes should be watched but were acceptable again this year. Although Hartley-shaped, the shells can be irregular and may not be consistent enough in appearance 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 with large, oval, very attractive nuts. This selection leafs like Chandler but harvests about two weeks earlier and has had very little blight. The smooth, attractive, solid shells have good seals and 54% kernel. The very plump, Sunland-shaped kernels average 8.6 g and color is excellent. Yield was very good this year but needs to be watched further and it has had shrivel problems two year at Kearney. (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 excellent. 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 8.0 g kernels. Leafing date is similar to Chandler but it mid-season 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): This selection could serve as an early Hartley with a harvest date similar to Payne, a Hartley-shaped nut, and good kernel color. The shell remains thin and a bit rough but has relatively good strength, resembling Serr in this regard. Yield has been good, nuts contain 60% kernel with easy halves, and kernels average 8.4 g. Consider for release as an early variety. Watch the yield consistency. Also the leaves don't abscise normally in some years. Continue to watch. (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 7.8 g kernels and has great shell strength. It harvests within a week of Payne and averages 50% kernel. The tree is large and vigorous. Watch for spreading or sweepy growth habit, consistency of yield, and stem end opening. (Trials: Stolp, Conant, Sierra Gold)

94-020-19 (Vina x PI159568) (selected 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 8.1 g kernel size, and 49% kernel. Yields have been good but not outstanding. Laterals have been slow to leaf and color has not been consistently good, particularly at Kearney. Probable discard 2006. (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 8.3 g with mostly good color but has also had some bad years. A potential early in-shell. Trees in selection blocks are still young. Watch for blanks and degree of lateral bearing

***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 mostly good color and average 8.0 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 8.2 g kernels, and very solid, well filled shells with 50% kernel but color has not been adequate for several years. Harvest date is mid-season. Nuts yield halves easily and shells are suitable for inshell but harvest is not early enough. Probable discard 2006.

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, and 53% kernel. The large kernels average 8.7g. Kernel color continues to be marginal, veins detract from kernel appearance, and the interior shell configuration is not conducive to halves. 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. Its large nuts with very plump 7.8 g kernels and 50% kernel yield are well suited to in-shell use but excessive fill makes removal of halves too difficult and color has not held up in selection blocks. Blight susceptibility is also 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 good yield, and can have excellent kernel color but the color has been inconsistent. Nuts have shells that are solid and attractive with a very good seal but only 48% kernel. Kernels average only 6.8 g and are losing size

in the selection blocks. Blight, nut size, and color are a concern. Probable discard 2006.

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 and again this year but was poor last year at several locations. The amount of shrivel and strength of seals need to be watched further. 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. 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, or before, Payne and is characterized by great yield, excellent shell color and appearance, and mostly Chandler-like extra light kernels averaging 7.6 g. It may have sufficient shell strength for in-shell use but strength and seals should be watched and nut size is not large. Nuts yield 57% kernel with very easy removal of halves. Kernel quality and harvest date are excellent. This selection has shown some summer heat damage to the foliage and some summer nut drop. Watch for susceptibility to blight and summer heat stressed black nuts. (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. It can have a thick leathery packing tissue and sometimes poor fill. (Trial: Sierra Gold)

95-011-16 (67-013 x Chico) (selected 2003): This protandrous early in-shell selection harvests about a week after Payne and has large, light colored kernels that average 7.9 g. Nuts have very solid, attractive, oval shells that give 54% kernel. Watch for variable nut size and it may have a tendency towards dark keels and tip shrivel.

95-011-22 (67-013 x Chico) (selected 2001): A high yielding selection with mostly light to extra light kernels and a mid-season harvest date. Nuts have 54% kernel with shell and seal strength suitable for in-shell use. Nut size is a concern. Kernels average 7.1 g but have declined noticeably as trees have aged. (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 very 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 on the seedling tree in a declining area of the block have been under 7 g the last five years and nuts average only 49% kernel. Trees in the selection blocks are still young. Hulls are thick so the nuts look bigger on the tree than they really are. 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 close to Payne harvest time. The large, attractive nuts have a rounded Vina or Hartley shape, very solid shell, and average

48% 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 but those averaged only 46% kernel this year on young trees.

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 51% kernel and easy halves but fill is poor and kernels average only 6.9 g. Watch in selection blocks but young trees tere averaged only 7.1 g this year. (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 where nuts on young, less crowded trees averaged 8.2g this year.

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 7.2 g and nut size is a concern. Watch in the selection blocks where nuts averaged 7.9g this year.

95-026-21 (Lara x Chico) (selected 2001): A protogynous selection with excellent yield and little blight that harvests within a week of Payne. Nuts average 53% kernel but kernel weights have declined to only 6.6 g. Kernel color has been very good and kernels come out in halves easily. Seal and strength are good and shells have light color. Watch in selection blocks. This year grafted trees showed high yield but small nuts. (Trials: Conant)

95-026-22 (Lara x Chico) (selected 2001): This protandrous tree harvests mid-season with a very strong shell and seal and good nut size. Kernels average 8.8 g and nuts yield 48% 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 even on a crowded seedling tree. (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 generally light to extra light Chandler-like kernels but color was not good in the selection blocks this year. Shell strength is better than Chandler and harvest is earlier. Kernel size averages 7.5 g and 51% kernel. Continue to watch in selection blocks. (Trial: Scheuring)

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 has had better yield than Tulare trees around it the last four years, an equivalent harvest date, and better color. The light

colored, smooth, attractive shells have been solid and adequate for in-shell use but were too thin this year. Nuts produce 53% kernel but kernels average only 6.6 g and size has declined to less than 6 g the last two years. 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 or 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 8.2 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 7.3 g but harvest date now appears to 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)