Oklahoma Agricultural

Experiment Station.

Bulletin Mo. 2, March 1892.

STILLWATER, OKLAHOMA.

Oklahoma Experiment Station,

STILLWATER,

PAYNE COUNTY, OKLAHOMA.

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EXPRESS AND FREIGHT STATION, WHARTON, INDIAN TERRITORY.

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STATION RECORD.

[J. C. NEAL.]

The work at the Oklahoma Experiment farm is necessarily in a barely formative stage, and the unusually inclement weather of the past winter has proved a serious hindrance to progress in out-door labor, or building.

On this account, the present bulletin will be merely a brief record of what has been accomplished, and some details of plans now being inaugurated.

THE STATION FARM.

The farm consists of 80 acres in section 14, tp. 19, range 2, and 120 acres in section 15, tp, 19, range 2.

Around these tracts, a road 66 feet wide has been projected, and a series of narrow roads laid out, which when completed, will enable visitors to easily reach the various plats, and observe the experiments in progress.

These roads will be, as far as possible, models in construction, as the soil of this section seems peculiar-

ly adapted to excellent road-way making, with little outlay in time, labor or money.

The soil of the tract in section 15 is a moderate grade of "second bottom" land.

Its color is generally a dark chocolate brown, except at the north and west sides where the land slopes to a series of gullies or "draws," and the red clay subsoil crops out. This sub-soil is quite tenacious, and bakes easily.

The surface soil is somewhat sandy and from 18 inches to 2 feet in depth. The sub-soil averages 8 feet in thickness, then red shale begins, intermingled with narrow strata of soft, red sandstone, reaching a hard rock at 120 feet.

This land was covered with a heavy growth of Bluestem grass, some scores of Buffalo "wallows," and several demolished prairie-dog towns.

In section 15, along the north line of the station land, is a rather large "alkali" draw, with out-crops of sand stone, and alkali spots occur with some frequency over 80 acres of this tract. These "alkali barrens" are a grayish or yellowish clay, apparently devoid of elements necessary to sustain plant growth, and after a rain, are covered with a salty efflorescence.

The south part of the land in section 15 is of better quality and about half is yet the original prairie.

CULTIVATION.

The experimental orchard was begun Dec. 2, 1891, by "breaking" the prairie in sec. 14.

Ten acres were plowed to a depth of 9 inches, ten acres 5 inches, two acres 4 inches, and twenty acres from $1\frac{1}{2}$ to 2 inches in depth.

The furrows averaged a foot in width, and as the sod was tough the 'breaking' was well done.

The weather hindered labor so that the land was not finished till Jan. 4, 1892.

December 25, 1891, the "disking" with the Acme Solid Disk Harrow, and the Cut-away began. The harrow followed the direction plowed at first, then at right angles, then diagonally, in all four directions. This speedily reduced the sod to small fragments, exposed the grass and weed roots to the destructive influence of the wind, cold and sun, and rudely tore thousands of dormant beetles and larvae from their hiding places to be devoured by the prairie birds that zeal-ously improved the opportunity.

February 2, 1892, the second plowing began, in which the soil was stirred to an average depth of 8 inches, then harrowed as before; finally a heavy 60-tooth steel harrow passed over it, which left it in very fair condition for planting.

The remainder of the land in this section was thoroughly "disked," sown in bluegrass and white clover, harrowed and rolled with a heavy Daines iron roller—in the hope that the experiment might indicate an easy method of converting prairie sod into tame grass pasture.

In section 15 some fifty-two acres had been plowed two seasons. This was in such bad order, weedy and rough that it required much labor in raking, plowing, disking and harrowing to made it available.

On this side, in a portion of the prairie, narrow strips have been disked and sown with various clovers and grasses to determine vitality in a struggle with the prairie grasses and weeds. Along the edge of the prairie small plats 4 feet wide, 8 feet long, extending into

the sod, have been sown with the following grasses to follow out the same line of improvement, as well as to test adaptability to the soil and climate of Oklahoma.

Agropyrum divergens, wire bunch grass.

Agropyrum Japonica, Japan rye grass.

Alopecurus pratensis, meadow fox-tail.

Andropogon annularis, ring grass.

" hallii, turkey grass.

Antisthiria avenacea, kangaroo grass.

Aristida depressa, spur grass.

Avena sterilis, animated oat.

Bouteloua prostrata, creeping grama.

Cenchrus montanus, mountain bur grass.

Chloris barbata, bearded star grass.

- " divaricata, spreading star grass.
- " schwartziana, Schwartz' star grass.
- '' virgata, branching

Diplachne imbricata, spike grass.

Eleusine coracana, crowfoot.

- " flagelliformis, whip grass.
- " scindica, Indian crowfoot.

Elymus virginica, wild rye.

Eragrostis Abyssinica, teff.

- " diandra, meadow grass.
 - " ciliaris, hair grass.
 - " conferta, slender meadow grass.
 - " oxylepis, sharp scaled grass.
 - " Pilosa,
 - " rachitricha, hair stemmed grass.

Eriochloa aristata, sand grass.

- " annulata, early spring grass.
 - " punctata, point grass.

Leptochloa mucronata, feather grass.

" subdigitata, Australian finger grass.

Muhlenbergia glomerata, clover-head grass.

Oryzopsis cuspidata, rice grass.

milacea, millet grass.

Panicum anceps, prairie grass.

- " cimicinum, Indian crab grass.
- " frumentaceum, Indian millet.
- "gibbum, moon grass.
- " lacnanthum, wooly prairie grass
- " palmeri, Palmer's panic.
- " teneriffe rosea, red panic.
- ' Texanum, Texas millet.

Pappophorus nigricans, black beard grass.

- Pennisetum lanuginosus, feather grass.
 '' longistylum, squirrel tail.
 - cenchroides, spur grass.

Polypogon monspeliensis, beard grass.

Schendonardus Texanus, Texas crab grass.

Sporobolus Indica, long smut grass.

Tetrapogon tetrastachys, four-stem grass.

Tragus racemosus, goat grass.

These grasses, natives of Australia, Africa and Asia mostly, were obtained through the courtesy of Prof. Tracy, of the Mississippi Ag. Exp. Station, and represent grasses that perhaps will be suited to our warm and dry climate.

A dozen Danish pasture grasses have been also planted, the seed obtained by Prof. Magruder when in Denmark.

Larger plats containin from 1-80 to 1-40 acre have been sown with these more common varieties.

Agrostis canina, Rhode Island bent grass.

- " stolonifera, creeping " "
- " vulgaris, red top.

Anthoxanthum odoratum, sweet vernal grass.

'Avena elatior, tall meadow grass.

" flavescens, yellow oat "

Bromus inermis, awnless brome grass.

Schraderi, Scrader's "

Cynodon dactylon, Bermuda or doob grass.

Dactylus glomerata, orchard grass.

Festuca duriuscula, hard fescue grass.

- " elatior, tall " '
- " ovina, sheep " "
- " ovina tenuifolia, narow-leaved sheep fescue.
- " pratensis, meadow fescue.
- " rubra, red

Lolium Italicum, Italian rye grass.

" perenne, English " "

Pennicilaria spicata, pearl millet.

Phleum pratense, timothy.

Poa arachnifera, Texas blue grass.

" pratense, Kentucky " "

Reana luxurians, teosinte.

These plats will be duplicated, in part, in the newly plowed ground, for comparison.

Plats each containing 1-40 acre are sown with the seeds of the following plants of the clover family:

Arachis hypogea, pinder, pea-nut.

Desmodium molle, Florida clover.

Dolichos catiang, cow pea, in varieties, viz: Black, black eye, blue Peet, clay, conch, crowder, kidney, lady, mongol, Oklahoma, robin, unknown, whippoorwill.

Dolichos soja, soy bean.

Ervum Abyssinica, African lentil.

- " ervilia,
- " lens, common lentil,
- " lens rubra, Jacob's lentil.
- " lens maxima, large lentil.
- " lens viride, green lentil.

Lathyrus sylvestris, wood pea.

Lespedeza cyrtobotrya, Japan tall clover. striata, creeping Japan clover.

Lupinus luteus, yellow lupine.

Medicago lupulina, trefoil clover.

'' sativa, alfalfa.

Melilotus leucantha, Bokhara çlover.

Trifolium hybridum, alsike clover.

- " filiforme, suckling clover.
- " incarnatum, crimson clover.
- " pratense, red clover.
- " perenne, cow grass clover.
- " repens, white clover.

Vicia lathyroides, spring etches.

Vouandsia subterranea, African earth nut.

Some of these deserve special mention.

As a weed exterminator, as dry or green forage, as a green crop for plowing under, the crimson clover is rapidly attracting attention.

Probably our best plant for new ground to "sweeten" and render it available is the cow pea. It needs only a trial to insure universal adoption.

One of the oldest known food plants is the lentil—Genesis xxv, 34; and as it is very productive in similar soils and climates, I propose to test it thoroughly.

I have received several varieties of Japan beans by the courtesy of Prof. Georgeson of the Kansas Ag. Exp. Station, that he thinks are decided acquisitions.

Florida Clover.—This remarkable plant has few equals in rejuvenating run-down stock, and no superior as a soiling crop.

Small trial plats have been planted with Oryza sativa, Georgia upland rice.

" Japan " "

Papaver somniferum, opium poppy. Sesamum orientals, benne.

Cyperus esculentus, chufa.

Stachys affinis, Japan mint potato.

Tracts containing 1-5 acre each will be planted with the following varieties of corn:

Angel of Midnight, Badger King, Blount's prolfic, Butler, Big Buckeye, Canada Early, Champaign prolific, Champion pearl, Chester Mammoth, Clarage yellow, Early Mastodon, Dakota Dent, Welborn's Conscience, Edmond's premium, Eclipse, Evans' red cob, Flour, Farmers' Favorite, Golden Beauty, Pride of the North, Giant of Normandy, Minnesota White Flint, White Dawn, Improved Leaming, Huron Dent, Mercer, Hickory King, California Golden, King Philip, Rustler, Queen of the field, Self Husking, Giant Fodder.

These are planted in rows 4 feet each way, in all 272 hills of each variety, alternating with the same areas of Archangel, Bonanza, Clydesdale, Golden Giant, Hopetoun, Welcome, Probsteier, Racehorse, Tartarian, and Russian oats. Saskatchewan, Velvet-chaff and Wellman spring wheats, Belgian and Russian flax, the following varieties of sorghum: Black African, Coleman Cane, Planters' Friend, Variety 91, Folger's Early Collier, Link's Hybrid, Colman's red, McLean, Red Kaffir Corn, Dourra and Jerusalem Corn, and the following varieties of cotton: Truitts, Southern Hope, Peerless, Jones' long Staple, Peterkin, T. J. King, Hawkin's, Improved, Jones' Improved, Okra, Stormproof, Wonderful, Barnett, Herlong, Peeler, Rameses, Jones No. 1, W. A. Cook, J. C. Cook, Allen long Staple, Cherry Cluster, Keith, Gold Dust, Welborn's pet, Hunnicutt, Zellner, Dixon, Petite Gulf, Bancroft's prolific.

These experiments with field crops will be duplicated in the newly plowed ground for comparison in connection with chemical analyses of the old and new lands.

Several varieties of sweet potatoes have been received from Prof. Morgan, of the Louisiana Ag. Exp. Station, and from Florida, for use in future.

The grasses, clovers and field crops will have a preliminary trial this year, simply as a basis for future experiments.

The orchard has been staked out for trees in squares 30 feet each way, the holes dug $2\frac{1}{2}$ feet wide and 2 feet deep, and the work of setting out the trees is in progress.

Six plats of 342 trees each will be formed by evergreens, and a belt of cedars and pines will surround the orchard.

Three trees of each variety will be set, the earlier ripening sorts being on the east and south.

They will be planted leaning to the southwest, against the usually strongest winds, thoroughly watered, mulched, and a wire netting cylinder placed around each tree. This guard will be 4 inches in diameter, 18 inches long, and stuffed with fine hay, thus protecting the trunk against the attacks of rabbits, insects and sun-scald.

ORCHARD.

The following varieties have been selected:

APPLES—Early Colton, Red Astrachan, Early Harvest, Early Ripe, May Pippin, Red Margaret, Red June, Sweet Bough, Sweet June, Charlotten Thaler, Yellow Transparent, Carolina Watson, Simmon's Red, Saps of Wine, Cooper's Early Summer Queen, Gravenstein.

Jeffries, Kansas Queen, American June, Pearmain, Rhodes Orange, Nantahelee, Spencer, Oldenburg, Jewett's Best, Early Strawberry, Keswick Codlin, Fanny, Primate, Wine, Tetofsky, Red Bietighimer, Golden Sweet, Bailey, Benoni.

Lowell, Disharoon, Horse, Haas, Duchess of Oldenburg, Duchess, Beldsoe, Yopp's Favorite, Jonathan, Carter's Blue. Carolina Greening, Maiden Blush, Elgin Pippin, Red Winter Pearmain, Buckingham, Bostick Queen, Mrs. Ryan, Green's Golden.

Flory Belleflower, Hoover, Ortley, Lauren's Greening, Wealthy, Lanier, Bradford's Best, Moon, Autumn Strawberry, Taunton, Colvert, Shannon, Chenango Strawberry, Fall Pippin, Celestia.

Rawle's Janet, Walker, Porter, Rambo, 20 ounce, St. Lawrence, Rutledge, Rome Beauty, Winesap, Hockett's Sweet, Mangum, Maverack, Moultrie, Shockley, Black Warrior, Stevenson, Kittageskee, Yates.

York Imperial, Alexander, American Golden pippin, Arkansas Beauty, Arkansas Black, Autumn Bough, Babbitt, Baldwin, Belleflower, Ben Davis, Bethel, Black Annette, Broadwell Sweet, Cannon Pearmain, Chattahoochee, Clayton, Chester, Coffelt.

Cole's Quince, Cornells, Crawford, Cullasaga, Cullen's Keeper, Dickinson, Donine, Early Pennock, Early Trenton, Elkhorn, Enormous, Etowah, Eureka, Fallawater, Jersey Sweet, Fameuse, Farmers, Forest.

Gano, Gideon, Horn, Vandevere, Huntsman's Favorite, Indian, Ingram Sweet, Jones' Seedling, King, Lawver, Little Romanite, Longfield, Loy, Mammoth Black, Mammoth Black Twig, Mammoth pippin.

Sweet Dixon, Marshall red, McIntosh, McMahon, Masons, May of Myers, Winkler, Missouri pippin, Mother, Nansemond, Hero, Nickajack, Northern Spy, Northwest Greening, Orchard Red, Osceola, Pewaukee.

Pickard's Rescrve, Plumb Cider, Poorhouse, Pryor's Red, Pyle's Red, Red Riches, Red Limbertwig, Rhode Island Greening, Royal Limbertwig, Gilpin Romanite, Roman Stem, Roxbury Russet, Scarlet Cranberry, Seek-no-further, Shackleford, Shirley, Smith's Cider, Sonoma.

Steward, Stewart's Golden, Talman Sweet, Wagner, Water, White Pippin, White Winter Pearmain, Willowtwig, Wolf River, Rebel, Kentucky Red Streak, Stump, Utter's Red, Isham Sweet, McAlfee, Ramsdell, Talbert pippin.

APRICOTS—Golden Russian, Gibbs, Alexander, Nicholas, Alexis, J. S. Budd, Roman Peach, Early Golden, Shensi, Newcastle, Luizet, Jackson, Oldberg.

CHERRIES—Black Tartarian, Gov. Wood, Rockport, Downer's Late Red, Yellow Spanish, Luelling, Purple Guigne, Sappington, Napoleon, Black Mastodon, California Advance, Centennial, La Marie, Purity, Thompson's Tartarian.

Prince Englebert, English Morello, Belle d'Choisy, Dyehouse, Lieb, Large Montmorenci, Mayduke, Olivet, Ortheim, Magog, Late Duke, Louis Philippe, Belle d'Montrieul, Everbearing, North-West, Suda, Royal Duke.

CRABS—Sylvan Sweet, Whitney, Red Siberian, VanWyck, Yellow Siberian, Hughes' Virginia, Gibbs,

Myslop, General Grant, Martha, Quaker Beauty, Yates, Soulard, North Star, Richland Sweet, Florence, Looker's Winter, Sweet Minnesota.

Sweet Russett, Telfair, Sweet Winter, Golden Montreal.

NECTARINES—Early Violet, Boston.

PEACHES—Alexander, Alpha, Gov. Garland, Warterloo, Wilder, E. Louise, E. Beatrice, E. Tillottson, Tuskena, Bishop, Barnard's, Hale's, Troth, Albert Sydney, Great Eastern, Berenice, Pallas, Spottswood.

Oriole, Elberta, Duff's, Juno, Newington, Robert, E. York, Bonanza, Steadly, Lord Palmerston, Globe, Crawford E., Lady Ingold, Osceola, Cora, Darby, Wonderful.

Croft's Golden, Stonewall, Chinese Cling, Sallie Worrall, Susquehanna, Wheatland, Stump, Reeves Fav., Chaires' Choice, Ward's late, Smock, Heath red, Crawford's late, Goode's October, Tinsley's October, Wagner.

Austin Cling, Beer's late Melocoton, Blood-leaf, Brandywine, Red Rare Ripe, Champion, Chinese Blood, Christiana, Conkling, Downing, Dwarf Japan Blood, Gearey's, Gen. Grant, George's late, Great Western, Heath Cling, Hyslop's Favorite.

Indian Blood, Ireland's Choice, Jones' Seedling, Keyport, Late Mixon Free, Levi's Late, Lovell's white Madison, Magnum Bonum, McAllister, McKevill, Moors, Muir, Newhall, N. Am. Apricot, Pennington, Powell's.

Prize, Red Cheek, Reed's, Richardson's, Seedling No. I, Sheester's, Shipley's late red, Silver Medal, Summer Snow, Smock, Temple's White, Thurber, Tongpa, Tuscan Cling,, Ulatis, Ward's late, Washington, Hughes.

PEARS—Andre Desportes, Cornet, Brandywine, Yopp's, Howell, Bartlett, Le Conte, Sickel, Buffum, Superfine, Duchess, Anjou, Kieffer, Mt. Vernon, Flemish Beauty, Onondaga, Angouleme.

Doyenne, Idaho, Boussock, Manning, Ogereau, Bar-Seck, Bessemianka, Jones' Seedling, Longworth, Nixy, Santa Anna, Sapieganka, Sutton's G. Britain, Swiss, Victor, Reliance, Lucrative, Tyson.

PERSIMMONS—Hachijo, Hyakume, Masugata, Tanenashi, Yedoshi, Yemon, Zinzimaru.

PLUMS—Caddo Chief, Yosobe, Hattankio, Pissardii, Wild Goose, Botan, Simoni, Golden Beauty, Kelsey, Ogon, Wooten, Forest Garden, Weaver, Shirosmomo, Burbank, Wayland, Silver Prune.

World Beater, Bradshaw, Green Gage, Imperial Gage, Jefferson, Lombard, Washington, Wolf, Yellow Egg, Damson, Gen. Hand, German Prince, Monroe, Miner, Pond's, Red Egg, Reine Claude, Coe's.

Urabeni, Masu, Shropshire, Smith's, Shipper's Pride, Purple Egg, Banford, Clyman, Bungoume, Damson Free, French Damson, Richland, DeSoto, Red Russian, Forest Rose, Peter's Gage, Glaister, Grand Duke.

Hawkeye, Hilltop, Illinois Iron Clad, Japan Free, Long Fruit, Missouri Apricot, Missouri Green Gage, Moreman, Newman, Pool's Pride, Prairie Flower, Prune d'Agen, Diamond Prune, Golden Prune, Hungarian Prune, Tragedy Prune, Stark Green Gage, Uncle Ben.

MISCELLANEOUS-Meech's Quince, American Sweet Almond, Hardshell Almond. American Chestnut, Spanish Chestnut, Japan Chestnut, Hick's Mulberry, Spaulding Mulberry, Victoria Mulberry, Pearl Pecan, American Walnut, English Walnut, Japan Walnut, Celestial Fig, Adriatic Fig, Magnolia Fig, Black California Fig, Blue Ischia Fig, Brown Turkey Fig.

Two dozen plants of the following named vines and bushes have been set out.

BLACKBERRIES—Ancient Briton, Branton, Crystal White, Dallas, Early Harvest, Early King, Erie, Freed, Kittattiny, Stowe's Hardy, Snyder, Taylor, Wachusett, Wilson.

CURRANTS—Jelly, White Grape, Versailles.

GOOSEBERRIES—Downing, Houghton.

RASPBERRIES—Brandywine, Cuthbert, Earhart, Gladstone, Hopkins, Kansas, Mammoth Cluster, Ohio, Palmer, Shaffer's Colossal, Souhegan, Newark, Turner,

STRAWBERRIES—Bubach, Capt. Jack, Crescent, Jersey Queen, Jessie, Michael, Miner's Prolific, Mrs. Cleveland, Parker Earle, Parry, Sharpless, Windsor Chief.

VINEYARD.

Three vines each of the following grapes have been set out. Rows 15 feet apart, vines 10 feet.

EARLY WHITE GRAPES—Antoinette, Campbell, Centennial, Challenge, Duchess, Empire State, Faith, F. B. Hayes, Golden Gem, Green Mountain, Jessica, Lady, Martha, Masons, Pearl, Rommel.

EARLY RED GRAPES—Brilliant, Delaware, Dracut Amber, Lutie, Massassoit, Norfolk, Northern Muscadine, Perkins, Ulster Prolific, Vergennes, Woodruff, Wyoming.

EARLY BLACK GRAPES—Alvey, Aminia, August Giant, Barry, Black Eagle, Champion, Cottage, Creveling, Early Victor, Eaton, Eumelan, Hartford, Israella, Janesville, Mary Ann, Mills, Moore's Early, New Haven, North Carolina, Telegraph, Whitehall, Worden's.

MEDIUM RIPENING WHITE GRAPES—Eldorado, Etta, Gazelle, Grein's Golden, Humboldt, Lady Washington, Missouri Riesling, Moore's Diamond, Naomi, Noah, Polkington, Prentiss, Transparent, Wilding.

MEDIUM RIPENING RED GRAPES—Amber, Amber Queen, Beauty, Beckman's, Brighton, Jefferson, Lindley, Peter Wylie, Poughkeepsie, Requa, Rochester, Salem, Venango, Walter.

MEDIUM RIPENING BLACK GRAPES—Bacchus, Black Pearl, Cambridge, Concord, Herbert, Highland, Iron Clad, Ives, Marion, Montefiore, Peabody, Rentz, Secretary, Wilder, York Maderia, H. Jaeger, Conqueror, Dr. Warder.

LATE RIPENING WHITE GRAPES—Elvira, Goethe, Irving, Taylor's Bullit, Triumph, Uhland.

JATE RED—Catawba, Diana, Iona.

LATE BLACK—Amanda, Black Defiance, Clinton, Cunningham, Cynthiana, Devereux, Herbemont, Hermann, Isabella, Jacques, Lenoir, Merrimac, Neosho, Norton's Virginia, Othello, Rogers No. 2.

Autochon, Brant, Cornucopia, Scuppernong, Thomas.

These are arranged, as far as known, with the earlier varieties on the east side of the vineyard, in the order of the colors, white, red and black.

Other varieties will be added next year.

STATION NOTES.

Some difficulty has occurred in finding a sufficient supply of water, resulting in the necessity of a reservoir well ten feet in diameter, a Shipman Automatic kerosine 4 H. P. engine, a 300 barrel tank elevated 40 feet above the surface, and piping the water to places needing it.

Four buildings are in process of erection: The barn, centrally located, is 50 feet long, 30 feet wide, and

contains 4 stalls, harness room; tool room; two bins, mow and wagon room.

The laboratory, 32 feet long by 24 feet wide, includes work room 12 feet by 24 feet, weighing room 8 feet by 12 feet, two offices each 12 feet square, hall and dark room.

A neat cottage has been built for the Farm Superintendent, and the office and residence of the Director, conveniently arranged and located, is well under way.

During the coming year an outfit of chemicals and chemical apparatus will be obtained, and it is hoped that analyses of our soils and waters will add much to the knowledge of the value of this new land, and its special requirements and adaptation to crops.

Farm tools, machinery, stock, meteorological instruments, and a library embracing the latest works of reference, will be obtained, with every aid practicable to a thorough investigation of every subject relating to agriculture.

A large amount of preliminary work is necessary and we shall require more knowledge of the climate, soil, and especial needs of the people. All interested are respectfully urged to correspond with the station.

As the station will test and report on any fruits, vegetables, trees or plants, and guarantee the rights of the introducer, we solicit contributions from nurserymen and seedsmen, Address

OKLAHOMA EXP. STATION,
Stillwater, Okla.
Send express and freight via Wharton, Ind. Ter.

Special thanks for favors are due Messrs.

T. V. Munson, nurseryman, Denison, Texas.

P. J. Berckmans, "Augusta, Ga.

Worden & Co. "Wellington, Kansas.

Blair & Co., "Kansas City, Mo.

Stark Bros., "Louisiana, Mo.

Bush, Son & Meissner "Bushberg, Mo.

W. O. Beach, "Parsons. Kansas.

L. T. Sanders, "Plaindealing, La.

also to

Prof. G. G. Georgeson, Kansas Exp. Station.

- " H. A. Morgan, Louisiana "
- " J. C. Clayton, Alabama " "
- " W. F. Massey, North Carolina " "
- " S. M. Tracy, Mississippi "
- " H. T. Van Deman, U, S. Dept of Agriculture.

Judge J. F. McDonell, Archer, Fla.

A. W. Smith, Esq., Americus, Ga.

It is the intention during the year to issue a bulletin on insects destructive to vegetation, and it is greatly desired that where they occur, that specimens be sent the station, in small tin or wood boxes, with as complete description of the ravages as possible.

In order that the results of the experiments may benefit our agriculturists it is desired that secretaries of Alliance, Farmer Clubs, County Fairs, etc., send their names and addresses to the Director for the mailing list.



