Sesame for Texas—
High Plains & Rolling Plains

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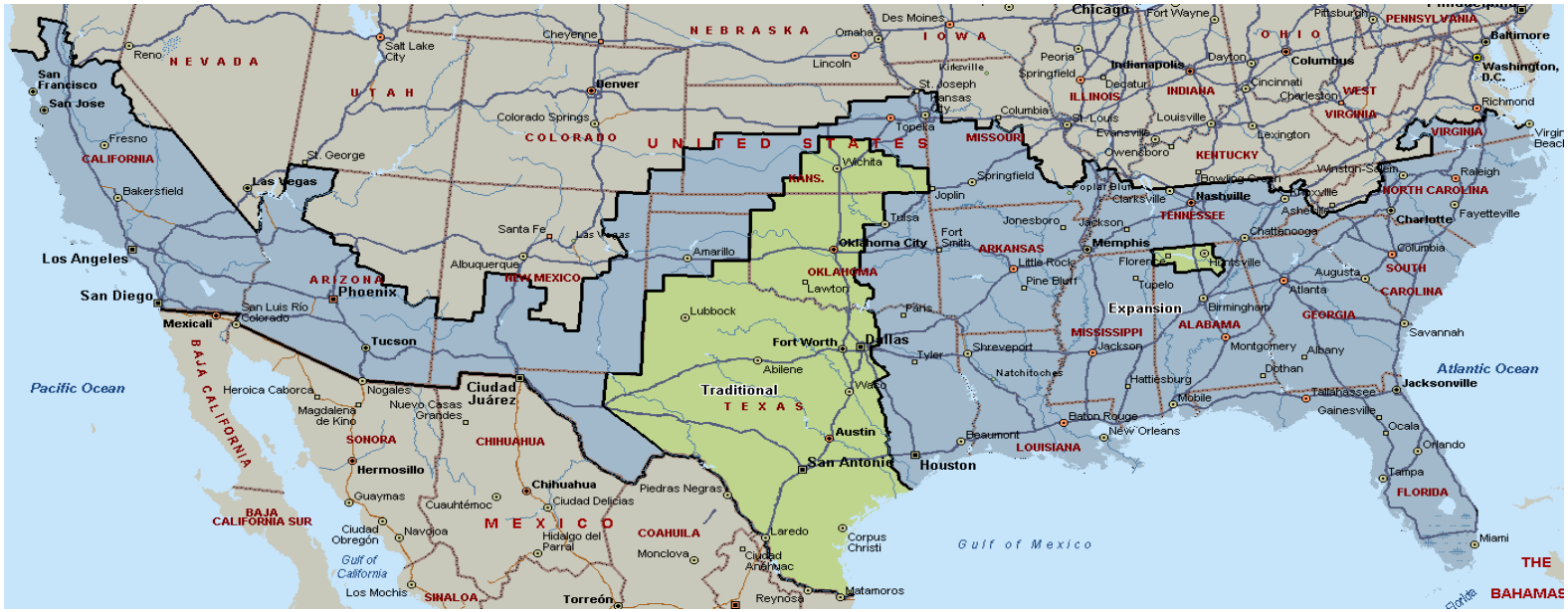
TEXAS A&M AGRILIFE EXTENSION

Where is Sesame Grown?

Counties for Crop Insurance…



Sesame Contracts

- Sesaco Corporation, www.sesaco.com, (66% owned by Mitsubishi of Japan)
- For May 2016, Texas High Plains & Rolling Plains sesame terminated by freeze or harvest—this regional crop is used for the export market, i.e. Japan, must not sprayed with glyphosate as a harvest aid
  - Dryland, May 2016: $0.32/lb.
  - Irrigated, May 2016: $0.35/lb.
  - Sesame from further south in Texas can use harvest aids (not exported)
- Several premiums available—and achievable—for good quality ($0.01-0.02/lb. is common)
- Discounts occasionally if quality targets not met

Sesame for West Texas

- Sesaco interest is in full-season crop
  - Seeking full yield potential with longer season crop (in contrast to late-planted crop or planted after cotton failure)
- Rotation benefits, no cotton root rot effects, little to no hog damage; deer pass through?
- Input costs will remain minimal compared to other crops
- Sesame is not for your weedy ground!

Sesame & Wild Hogs

- Based on several observations across Texas:
- Charles Stichler, former Extension agronomist, now Sesaco consultant, Uvalde: "The only damage comes from hogs rooting up plants. Hogs do not eat sesame plants. Now—having said that—deer will munch on a few plants if they are very hungry but will eat the dry capsules just before harvest. Hogs will walk through sesame fields, but not eat it. Here in the brush country sesame is about their only choice unless they high fence."
- Jerry Riney, Sesaco: "Yes, most growers in the Rolling/South Plains area grow sesame as a revenue source that has low risk to hog damage. Incidents of hog damage to sesame mainly come from growers not harvesting in a reasonable amount of time from when the crop is ready."
- Dr. David Drake, extension agronomist, San Angelo: "Hogs have walked through my trials almost all season long, but never damage it, and they never fed on it."

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Sesame & Crop Insurance

Verify the Counties…

- Program crop insurance is available for counties below, but you may need to apply before the cropping season.

- Oklahoma: Alfalfa, Blaine, Caddo, Custer, Dewey, Garfield, Kingfisher, Kiowa, Major, Tillman, Washita, Jackson

- Texas:
  - High Plains: Gaines, Dawson, Terry, Hockley, Lubbock, Crosby, Lamb, Hale, Floyd, Castro, Swisher
  - Rolling Plains: Childress(?), Hardeman, Haskell, Jones, Wilbarger, Wichita
  - Concho Valley: Tom Green, Runnels

Sesame Contacts

- Area Sesaco representatives
  - Texas Northern Rolling Plains, Oklahoma: Jared Johnson, jjohnson@sesaco.com, 405.531.7840
  - Texas High Plains, central TX Rolling Plains (Seymour to Abilene): Joe Guzman, jguzman@sesaco.com, 806.781.5908
  - Sesaco weed control assistance: Jack Rose, jrose@sesaco.com, 512.568.4265
  - (For Central/South Texas & Concho Valley, Brannon Lyssy, blyssy@sesaco.com, 210.557.5321)

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Sesame in General

- Not for your weedy ground—four labeled herbicide active ingredients (apart from burndown chemicals)
- Shatter-resistant varieties developed by Sesaco for combine harvest
  - “Non-dehiscent” (only in the U.S.)
- Very drought tolerant and insect resistant

Sesame, the Plant

- Physiological maturity, 95-110 days after planting, dries down in 120-150 days to harvest; increased heat units accelerate maturity
- Drought tolerant, heat tolerant, may respond less to rain & irrigation compared to other crops (but this is a credit to sesame itself)
  - High Plains test show that with an extra 6” irrigation or rain, yield response is moderate (increase ~20-33%), but overall water use efficiency (WUE) is good

Sesame, the Plant

- Broadleaf summer crop, self-defoliating at maturity
- Can reach 6’ tall with some irrigation
- Flowers about 35-45 days—slow growing and not competitive with weeds at this point—after planting
- Flowering ceases about 75-85 days after planting
  - Some indeterminacy remains in the crop
- Average daily soil planting temperature, **70° F**
  - Warmer than just about any other crop
  - Sesaco staff recommends that night time soil temperatures not drop below 68° F

Sesame

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High/Rolling Plains

- Planted mostly in mid-May to July 1, including after failed cotton (check your herbicide rotations)
  - Rolling Plains, end of planting July 1 vs. mid-July (latter is less optimal)
  - High Plains, recommend planting by ~June 20 north of Lubbock to June 25 south of Lubbock (maturation slows considerably in cool weather)
  - Experience suggests earlier does better
- Minimal input crop (but don't neglect N fertility needs)
- All kinds of planting conditions for stubble, seeding equipment
- "The hardest thing about growing sesame is getting it planted right."

HP/RP Production Tips

- Plowing too deep dries out the field and can result in mediocre stands
- Need firm seed bed for this small seed
- Slow growth in first 6 weeks or so, grass problems treated with clethodim (Select products) or especially sethoxydim (Poast products)
- Thin fields often look like candidates for plowing, but stands when left in place especially if uniform, often surprise
- Sesame at any time is susceptible to glyphosate drift, also Ignite, etc.
- Any combine works well—pickup reels often used, but bat reels might be better; all-crop headers can work, too

Planting I

- Early planted sesame normally gives the best yields
- Early planting: Late May in the South Plains, mid-May in the Rolling Plains
- Terminates on its own
- Must make physiological maturity prior to harvest frost for optimum yield

Planting II

- Slow down!!! to achieve better stands, more uniform seed depth.
- Seed is very small, has less push than cotton, hence problems with crust
  - That is why seeding rates are higher than is actually needed to grow the crop
- Consult Sesaco for variety recommendations

Seeding

Seeding

Seeding Rates

- 2.5 to 4.5 lbs./A, target 3 lbs./A
  - Over 30 seeds per foot
- Seeding rates will drop by 1/4 to 1/3 when drilling or planting into good soil conditions
- Sesame adjusts to the population if initially too thin or too thick
- Little difference in yield across 3-8 plants per foot

The Vulnerable Stage

What Sesame Must Do at Nearing and at Maturity

- The plant stops flowering
- Mature without capsule opening
- Shed leaves
- Dry down as quickly as possible
- Hold seed even in adverse weather
- Release seed in combine easily

Sesame Crop Description

Similar growth habit to cotton & soybean

- 3-5 feet tall
- Varieties can be single stemmed or branched
- Flowering starts about day 35-45
- The fruiting form is called a capsule
- Physiological maturity (PM) normally occurs at day 95-110
- Dries down at 120-150 days
- A killing freeze will terminate the crop and typically dry down the plants in 7 to 10 days.

Consult Sesaco for N Recommendations

- Dryland growers may forego N
  - Be careful about this: if you have residual N, good; if not, ensure you are not taking an overall “cheap” management approach
- Typical fertility program would target 30-60 lbs. of N per acre (adjusted for soil moisture and related yield potential)

Irrigation

- Very drought tolerant
  - Among most drought tolerant crops in West Texas (others would be hybrid pearl millet, guar, safflower)
  - Rule of thumb: uses 1/2 the water of cotton, 1/3 of sorghum

- Limited irrigation is good; 4-6 inches offers good return on water use efficiency (WUE)

Economics I

- Because input costs can be minimal, net return is often favorable compared to other crops
- Dryland, budget for ~500 lbs./A (an appropriately conservative yield goal)
- Irrigated, ~3” then ~100 lbs. per inch of irrigation, or typically ~1,000 lbs./A for most irrigators

Economics II

- AgriLife Crop Budgets for Sesame, 2016 (*plug in current prices, your projected yield, field operations, etc.*)
  - High Plains (District 2), download the Excel spread sheet at http://southplainsprofit.tamu.edu (read along the bottom for 'Tabs' for irrigated and dryland; contact Jackie Smith, jackie.smith@agnet.tamu.edu, 806.746.6101)
  - Lower Rolling Plains (District 7)

    http://agecoext.tamu.edu/resources/crop-livestock-budgets/budgets-by-extension-district

    Contact Extension ag. econ's Bill Thompson, wjthompson@ag.tamu.edu, 325.653.4576)
  - Northern Rolling Plains (District 3), no current budgets available at above URL; contact Extension ag. econ's Stan Bevers, sbevers@ag.tamu.edu, 940.552.9941)

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Sesame & Weed Control I

Pre-plant/Pre-emerge

- Several pre-plant contact/burndown options like Roundup, even ET (pyraflufen-ethyl)
- Dual Magnum (*s*-metolachlor), 83.7% a.i.—changes weed control perspective for sesame (TX, OK, KS, AL; others?)
  - 0.67 to 1.33 pints/A based on soil type—Sesaco staff caution about possible Dual injury at higher rates; perhaps limit Dual to 1 pint per acre at most)
  - 1) Broadcast pre-emerge after planting but before emergence, 2) Irrigate lightly (0.5") if needed to activate (7-10 days if no rain), but preferably not before sesame emergence, 3) No incorporation
  - Access this 24(c) label through Syngenta's 'Farm Assist' website, www.farmassist.com by registering. You must agree to a statement saying Syngenta does not recommend this practice, and that you bear the risk in order to access the label.

Sesame & Weed Control II

Pre-plant/Pre-emerge

- A "Yellow" herbicide: Sonalan HFP (a.i. ethalfluralin, 35.4%): Sesame is listed in the Oilseeds section (not by name) of the label which provides a soil texture-based rate (1.5, coarse, to 2.5 pints/A, fine), timing not mentioned (Sesaco recommends at least 45 days before planting).
- Likewise Treflan (a.i. trifluralin) is listed in a footnote on the Treflan HFP label, but no details are given. We need to contact DowAgro for clarification (Sesaco also notes that it would need application at least 45 days before planting.)
- Forthcoming potential label: several chemicals are being examined for possible labeling, and registration information for at least one has been submitted in early 2016 to EPA

Sesame & Weed Control III

Over-the-top Grass Control

- Select Max (a.i. clethodim, 12.6%). First 30 days or after flowering. Sesaco notes that some injury with clethodim may occur. In 2009-2011 timing studies, Select Max® prevented capsule formation when sprayed during flowering as shown in Photo 13. Some varieties are more susceptible than others. Clethodim has shown to be effective against Texas Panicum. See more at:

  http://www.sesaco.com/weeds-herbicides#sthash.RPnh8vN1.dpuf

  - Annual grasses, 9-16 oz./A; perennial grasses, 12-16 oz./A; use 0.25% NIS

- Poast (a.i. sethoxydim, 18.0%): up to 2.5 pints/A (max 5.0 pints/year), 60 day PHI; UAN or AMS for certain grasses; no statement on timing of application relative to bloom (e.g., do not apply during bloom?). Sethoxydim does not appear to injure sesame (safer than clethodim). Sesame is listed under "Rapeseed subgroup" on the label.

Sesame & Herbicide Rotation

- If planting after wheat, watch out for wheat herbicide residual (Amber, Glean, Ally, Finesse, Assert)

- For rotation, if cotton is not on the label for rotation in 9-12 months, then don't try sesame

Sources of Label Information
& AgriLife Extension Weed Scientists

- Labels for herbicides, insecticides, fungicides, seed treatments, growth regulators, etc.—access through **http://www.cdms.net**, click 'Label Database' then 'Search' then conduct either of two searches:
  - **A)** Enter product name then choose the specific product then its label or supplemental label (most common use)
  - **B)** Click "Other Search Options" (register for a free password) to search by active ingredient (looking for a generic?), find a class of chemicals (herbicides, fungicides, insecticides) labeled for a particular crop, etc.
- Texas High Plains—Dr. Pete Dotray, Lubbock, (806) 746-6101, pdotray@ag.tamu.edu
- Central & South Texas—Dr. Paul Baumann, College Station, (979) 845-3041, pbaumann@ag.tamu.edu
- South Texas—Dr. Josh McGinty, Corpus Christi, (361) 265-9203, joshua.mcginty@ag.tamu.edu

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SESACO
SESAME COORDINATORS

SESAME PRODUCER GUIDE

2012

Direct Cut

SESACO
SESAME COORDINATORS

View, print, download from
http://www.sesaco.com

SESAME HARVEST GUIDE

D. Ray Langham, Jerry Riney, Glenn Smith, and Terry Wiemers

September 2008

Sesame Production Summary

- No new equipment
- Low input
- Low risk
- Low management required
- Acre agreement price protection
- A hedge against the weather