Planting a New Alfalfa Crop

Mike Ottman
Extension Agronomist
University of Arizona
Cost of Establishment (Maricopa Co, AZ)

- Establishment ~ $900/A
- Growing costs ~ $1100/A/yr
Land Preparation

Deep ripping

Laser leveling
Fertilizer

• Phosphorus
  • Soil test for phosphorus
  • 100 lbs P₂O₅/acre maximum rate per year

• Nitrogen
  • N stimulates weed growth
  • N reduces nodulation
  • Some starter fertilizer (~25 lb N/acre) may be beneficial
Planting Date

• October optimum
• Late planting effects measured for life of stand
Variety Selection

- Fall dormancy
- Pest resistance
- Traits
  - Roundup ready
  - Low lignin
- Yield
- Stand
- Use certified seed
  - VNS
  - Saved seed
Seed inoculation

• Not needed in areas where alfalfa grown
• Inoculum dispersed by dust
• May be needed on new ground in isolated areas
• Live inoculum must be kept cool
• Inoculated seed must not be past expiration date (~1 yr)
Seed coatings

- Rhizobium bacteria
- Fungicide
- Insecticide
- Nutrients
- Growth promoters
- Lime coating
Seeding machinery

• Grain drill
• Brillion seeder
• Broadcast followed by cultipacker
Seeding Rate

• Uniformity of stand establishment more important than seeding rate
• Optimum rate with uniform emergence could be 10-15 lbs/acre
• Recommended rate 20 lbs/acre
  • 100 seeds/sq ft seeded
  • 50 seeds/sq ft established
  • Lose roughly half of stand per year
Seedbed

- Firm (1/2 inch footprint)
- Not overworked
Seeding depth

• Optimum depth is $\frac{1}{4}$ to $\frac{1}{2}$ inch
• Alfalfa emergence drops significantly if seeded below 1 inch
• Seeding too deep can delay or inhibit emergence
• Planting too shallow can result in desiccation of the seed

Source: Legacy Seeds
Seeding method

- Flat
- Corrugations
- Beds
Weed control

• Preplant
  • Eptam and Balan
  • Injury a concern

• Post emergence
  • Broadleaves
    • Pursuit and Raptor
  • Grasses
    • Clethodim or Sethoxydim
Insect control

- Preplant
  - None

- Post emergence
  - Whiteflies
    - Chemical treatment?
  - Spotted alfalfa aphid
    - Dimethoate
  - Pale striped flea beetles
    - Pyrethroid or diamide class insecticide

(Source: M. D. Rethwisch)
Irrigation

- Initial
- 1-2 weeks later
- Once per 1-2 months
First post plant cut

Regrowth buds 1 inch

Taproot > 14 inches
Conclusions

- Plant in October