

New ATV's For Fieldmen?



Fighting Alternation

The Most Important Thing You Can Do

GET AGGRESSIVE



Planning For Chemical Thinning

- ❖ **Winter Strategy Meeting**

- ❖ **Owner, Manager & Crop Advisor with:**

*spray records, production & hand
thinning costs per block for previous*

3 years

Main Factors Which Affect Alternation:

- ❖ Leaf N
- ❖ Rootstock
- ❖ Spur Density
- ❖ Strength of Pollenization
- ❖ Chemical Thinning Program
- ❖ Variety

Leaf N

Spur Red Leaf Sample Analysis 1992-1997

1992-97 with crop
in alternating cycle
leaf sample averages

15 different orchards samples used:

(N)	2.26
(FE)	260.2
(MN)	42.6

1992-97 always-crop
never alternate leaf
sample averages
16 different orchards
samples used

(N)	2.52
(FE)	290.6
(MN)	58.5

Ideal Leaf N

- ❖ Fujis & Goldens 2.1-2.3%
- ❖ Galas 2.3-2.5%

**Strength Of Pollenization
Too Much Or Too Little Can
Be Bad!**

Study Spur Density Is There Too Much Blank Wood?

- ❖ Scion rooting
- ❖ Too much N
- ❖ Too wet in Spring
- ❖ Incorrect pruning
- ❖ Intense Apogee program to increase fruiting darts

Categorize blocks into:

- ❖ Low risk of alternation
- ❖ High risk of alternation
- ❖ Easy to over-thin
- ❖ Hard to over-thin

**Consider past programs,
modify them and put on a
spread sheet.**

Hardest category 1st time blocks NO history

Split into 2-3 programs

Find other similar programs from Growers or
Consultants

**You will have a chemical
thinning spread sheet with
hours of thought**

- ❖ **Bloom sprays are most effective.**
- ❖ **Petal fall sprays are pretty effective**
- ❖ **12-15 MM sometimes effective**
- ❖ **Ethrels post-bloom really help**

CHEMICAL THINNERS

**How do I decide which
materials to use in which
blocks?**

**Apple chemical bloom
thinning trials
WTFRC 1999-2010**

Bloom Thinner	Harvested fruit diam¹	Return bloom^{1,2}
Ammonium thiosulfate	9/35 (17%)	2/28 (8%)
Lime sulfur	8/26 (25%)	8/25 (19%)
Crocker's Fish Oil + lime sulfur	16/35 (27%)	10/29 (23%)
JMS Stylet Oil + lime sulfur	7/20 (35%)	4/19 (18%)
Supreme Oil + lime sulfur	2/8 (11%)	3/9 (15%)

- ❖ **Small varieties limit Ethrels**
- ❖ **1-2 ATS's & 1 LS**
- ❖ **Early PF Sevin/NAA or**
- ❖ **Sevin/Maxcell 5-15 MM if we have weather**
- ❖ **Sevin /NAA at 12-15 MM**
- ❖ **Maxcell (6BA)+ NAA at PF or MM**

Big varieties at bloom 2 LS's
or LS + oil

Petal fall triple combo and
more Ethrels later

At 12-15 MM use Sevin/NAA

50 day Ethrel

How do I choose products & timings at bloom & post bloom.

What has worked.

Pollenization strength for blossom sprays

Weather at all timings.

How often do Growers
over-thin -VS- under-thin

Tactics To Use On The “On Year”

- Flag trees in “on and off” orchards
- Scoring trees
- Reduce bees
- Increase N in “on year”
- Spread risk and split programs
- Use more Lime Sulfur
- Use more Ethrels post bloom
- Reduce pollinators
- Have a 3 year thinning history on paper
- Take good notes

ALTERNATIVE PROGRAMS

- Mechanized thinning Karen Lewis
- Hand blossom thinning works
- Early hand pruning before 10MM
- Pruning to the bud

The Future

1. What are the key tools or information we need to be more effective at CLM (Crop Load Management)

1- past program history

2- past hand thinning cost

3- past production/acre

4- pollenization

5- leaf samples

6- use other growers/consultants
successful programs

7- mechanized thinning

2. Where do you need to focus your resources to improve CLM. Winter time strategic meetings!