

# **COTTON - AL, AR, AZ, CA, FL, GA, LA, MO, MS, NC, NM, OK, SC, TN, TX, VA - FIELDS WITH HIGH VEGETATIVE VIGOR - LATE SEASON**

## General Information

### USE INFORMATION

MEP 42 is a foliar applied plant regulator that modifies the cotton plant in several beneficial ways. It allows the grower to manage the cotton plant for short-season production leading to reduced risk of yield and quality loss due to delayed and prolonged harvest. Additional benefits derived from the use of this product include:

- height reduction and more canopy
- better early boll retention and/or larger bolls
- less boll rot
- improved defoliation
- reduced trash and lower ginning costs
- better harvest efficiency
- darker green leaf color

These benefits can provide for earlier maturity and often result in improved yields.

### Spray Coverage

Under most circumstances, water is the recommended diluent, however, oil is permitted in the following states for ultra low volume (ULV) aerial applications:

Alabama, Arkansas, Florida, Georgia, Louisiana, Missouri, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, and Texas.

Refer to Air and Ground Application sections for spray volumes.

Regardless of method or gallonage of application, thorough coverage of the cotton foliage is required.

### Cleaning Application Equipment

Clean application equipment thoroughly using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions before and after applying this product, particularly if a product with the potential to injure crops was used.

## APPLICATION INSTRUCTIONS

### Early Application

On both short-staple and Pima cotton, the grower has the option of lowrate multiple

applications (see Table 1) or higher, less frequent dosages (see Table 2) which greatly facilitates his management flexibility. The multiple application option gives the producer the ability to discontinue usage of MEP 42 if any significant stresses occur after an earlier application.

In such a case, the total quantity of MEP 42 used over a season may be reduced. If stress is relieved, the grower has the option of continuing treatments with MEP 42. In addition, the rate and timing ranges indicated in the "Application Rates and Timings Tables" allow the grower to tailor his usage of MEP 42 to the degree of vegetative vigor in a given field. In areas where insecticides, miticides or foliar fertilizers are frequently applied, the timings are such that tank mixing is often possible. (See section "VII. General Restrictions and Limitations").

Fields should be carefully scouted and MEP 42 should not be applied if plants are under severe stress from weather factors, mite, insect or nematode damage, disease stress, herbicide injury, or fertility stress.

In the absence of these stresses, up to 5 low-rate multiple applications can be made each season. After the first application (at matchhead square in the absence of stress), the rate and timing of subsequent applications will depend on vegetative vigor. Under good growing conditions, additional treatments should be made at 7-14 day intervals.

However, if new growth at any time is excessive, higher rates of MEP 42 can be used. If significant loss of squares or young bolls has occurred earlier due to insect pressure or other stresses, but now these stresses have all been alleviated, the need for MEP 42 is increased — excess vegetative growth is likely because of poor fruit load.

## AIR APPLICATION

### Spray Volume

- Water as Diluent: Use a minimum of 2 gallons of water per acre in all states except California. In California, use a minimum of 5 gallons of water per acre.
- Oil as Diluent: Use a minimum of 1 quart of oil per acre. When using oil as a diluent, the oil concentrate must contain either a petroleum or vegetable oil base and must meet all of the following criteria:
  - be nonphytotoxic
  - contain only EPA-exempt ingredients
  - provide good mixing quality in the jar test
  - be successful in local experience

The exact composition of suitable products will vary; however, vegetable and

petroleum oil concentrates should contain emulsifiers to provide good mixing quality. If the oil does not contain an emulsifier, one must be added during mixing at a volume equal to 3% of the final volume of the mixing tank. Do not apply MEP 42 ULV without using emulsifiers. Highly refined vegetable oils have proven more satisfactory than unrefined vegetable oils. For additional information, see "Compatibility Test for Mix Components".

## GROUND APPLICATION

### Spray Volume

- Water as Diluent: Use 2 gallons of spray solution per acre in all states except California. In California, use a minimum of 5 gallons of spray solution per acre.

## RESTRICTIONS AND LIMITATIONS

- Maximum seasonal use rate: Do not apply more than a total of 48 fluid ounces (3 pints) of MEP 42 plant regulator (0.132 pounds a.i.) per acre, per season.
- The sum of all products and formulations containing mepiquat chloride must not exceed 0.132 pounds of mepiquat chloride per acre per season.
- Do not plant another crop within 75 days of last treatment.
- Stress: Do not apply to cotton plants under severe stress due to adverse weather conditions, mite, insect, or nematode damage, disease, herbicide injury, or fertility stress. If using the low-rate multiple option, discontinue use until the stress is alleviated. Do not apply a single application of 8–16 fluid ounces of MEP 42 to cotton that is stressed due to lack of soil moisture.
- Do not graze or feed cotton forage to livestock.
- Do not apply through any type of irrigation equipment.

## Limitations, Restrictions, and Exceptions

### Low Rate Multiple Applications

The times and rates of application have been carefully researched and the Directions for Use should be observed as specified below. See section "VI. General Restrictions and Limitations".

- Use higher rates if previous application was not made or if growing conditions are conducive to vigorous growth.

### Late Season Application

Late application of MEP 42 (approximately during the fourth to sixth week of

blooming) can provide certain benefits to cotton. However, it should not and does not substitute for early season use – the time of the greatest benefit from the use of MEP 42. Late season application can lead to one or more of the following:

- reduction in late season vegetative growth or regrowth after cutout or defoliation
- more complete and manageable cutout
- better defoliation
- earlier maturity
- reduction in trash
- lower ginning costs

Some of these effects may favorably influence the yield potential and fiber quality. A late season application of MEP 42 should be applied only if fields are not drought or nutrient stressed; that is, those fields likely to experience additional vegetative growth or regrowth. However, fields that are very rank and extremely vigorous due to a combination of poor boll load and excellent growing conditions may not respond as much as desired to late season applications at the suggested rates.

#### Timing for Late Season Applications

- On fields where cotton cuts out and then starts regrowth: Apply when regrowth begins, as evidenced by new leaves in the terminal and stem elongation. This application time is often, but not always, 5 to 6 weeks after the first bloom.
- On fields where cotton never completely cuts out: Apply MEP 42 when there are 4 to 6 nodes above the white flower (NAWF).

Measure NAWF by counting the number of mainstem nodes from the first position white bloom (the one closest to the mainstem) to the terminal. Count the node with the first position white bloom as zero and the last node in the terminal, which is counted, should have a leaf at least the size of a quarter. Generally, the NAWF first reaches 4 to 6 nodes during the fourth to sixth week of bloom.

During this time, the NAWF should be decreasing about one node every 5 to 6 days — if its rate of decrease is less, the plant is not cutting out soon enough (the crop is too vigorous). If the fifth week of bloom arrives and NAWF is still above 5 to 6, apply MEP 42.

#### Use Rate for Late Season Application

Apply 8 to 24 fluid ounces of MEP 42 per acre. Use the lower rate on cotton with only moderate additional growth potential, and the higher rate on fields likely to continue vigorous growth.

#### Method

[Broadcast/Foliar Air](#)

[Broadcast/Foliar Ground](#)

Pre-Harvest Interval

30 days

Rates

[field rates 0](#)

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Restricted Entry Interval

12 hours

Timings

[During the fourth to sixth week of blooming.](#)