### INTRODUCTION

The plant growth regulator chlormequat promotes flowering and fruit set and prevents premature fruit drop in certain top fruits. In Germany chlormequat is registered for use in cereal production to increase resistance to lodging which results in better yields. In other countries chlormequat is also used on cotton, vegetables, sugar cane and other crops. Mepiquat suppresses vertical and horizontal growth, promotes reproductive growth resulting in increased yields of crops such as cotton, potato, oilseeds, legumes, vegetables. It is not approved for use in Germany at all.

### Method and Validation

We have applied the rapid methanol extraction method which involves the use of isotopically labelled internal standards, which was validated in summer 2001 in an international ring test organized by Alder, BGVV, Berlin. Determination was performed using LC/MS and LC/MS/MS with an cation exchange column (Partisil SCX 10 μm, 150 x 2 mm) as described by Hill et al. [EPRW 1996]. The following tables show the ring test results from CVUA Stuttgart compared to the mean of all participants for chlormequat (CCC) and mepiquat.

### ANALYSIS OF SAMPLES FROM THE GERMAN MARKET

#### Pears:

In 2001 the German authorities got knowledge of the illegal use of chlormequat on pears in Southern Germany. With this in view, a number of samples have been analysed to monitor the situation. Besides chlormequat another growth regulator mepiquat was found to some account in German pears. Mepiquat is not approved for use, therefore German MRL is set 0.01 mg/kg.

### Sweet pepper:

A total of 53 samples were analysed in 2002. 14 samples, 13 from Spain and one from Italy had residues of chlormequat all below the MRL of 0.5 mg/kg and none had residues of mepiquat.

### Tomatoes:

A total of 32 samples were analysed in 2002. 4 samples from Italy had residues of chlormequat, two of them above MRL (EC MRL 0.05 mg/kg).

### Conclusion

The numerous findings and the high percentage of violative samples suggest that chlormequat is intensively used by farmers in various crops and that good agricultural praxis is probably not always followed. Mepiquat was only found in German pears. Surveillance is continued.