

## **MAIZE**

The nutrient requirement kg/ha (units/acre) for 15t/ha (6t/acre) dry matter maize crop are:

### **Soil Fertility (P & K Index)**

	<b>N</b>	<b>P</b>	<b>K</b>
High (4)	75 (60)	Nil	Nil
Moderate (3)	110 (88)	40 (32)	190 (152)
Deficient (2)	140 (112)	50 (40)	225 (180)
Poor (1)	180 (144)	70 (56)	250 (200)

### **Weed Control**

#### **Crops sown under plastic**

The main choice in this situation will be pre-emergence pendimethalin (Prop 330/Stomp) at 4.5 l/ha. Pendimethalin on its own may be challenged in continuous maize ground with a high weed challenge. Alternatives include a mixture of Prop/Stomp 330 at 4.5 l/ha and Cadou Star at 0.75 kg/ha or PDM 330 at 2.5 l/ha and Calaris at 1.5 l/ha, both pre-emergence. Excellent sprayer hygiene is necessary to ensure maximum herbicide efficiency of these mixes. In all cases a follow-up overspray of an appropriate post-emergence product (see table) may be necessary if weeds come through. PDM 330 is a new formulation of pendimethalin (Stomp) from BASF with a maximum dose of 4.5l/ha. Some old formulation Stomp will be still available, note its maximum application rate is 3.75l/ha on maize. Prop 330 is a generic formulation of pendimethalin from DHM with a maximum dose of 4.5 l/ha.

#### **Crops grown without plastic**

A grower may choose to go the pre-emergence route as outlined under 'plastic crops' or use a post emergence product. The main choice for use post-emergence will be Calaris at 1.0 – 1.5 l/ha depending on the weed challenge. For difficult sites 2.5 l/ha PDM 330 + 1.25 l/ha Calaris offers improved residual activity. Difficult weeds such as thistle, scutch and volunteer potatoes will need specialist herbicides such as Titus or Fluroxypyr for effective control.

### Herbicides Pre-emergence of Weeds and Crop

Product	Rate/ha	Comments
PDM 330	4.5 L	Apply within 5 days of sowing. Good on Orache
Prop 330	4.5 L	Black nightshade, Knotgrass and nettles.
Calaris	1.0-1.5L	Wide weed spectrum from emergence to 6 leaf stage of weeds. 6 weeks residual at 1.5 L against black nightshade and orache
Cadou Star	0.85 kg/ha	The Cadou Star label recommends a tank mix with pendimethalin if used under plastic.

### Post-emergence Herbicides for Maize

Product	Rate/ha	Comments
Calaris	1.0-1.5L	Best applied at the 4 leaf stage but can be applied up to the 8 leaf stage. Wide weed spectrum from emergence to 6 leaf stage of weeds. 6 weeks residual at 1.5 L against black nightshade and orache.
Calisto	0.75 – 1.5	Can be applied up to 8 leaf stage of the crop. Mainly contact activity and will be mixed to PDM for knotgrass control
Bromoxynil	1.5-2.5 L	Timing - maize 2-9 leaves, optimum 3-4 leaves. Weeds emergence to 4 leaves, optimum 2 leaf stage. Split application often associated with higher rates.
PDM 330 Prop 330	4.5 L 4.5 L	Needs to be applied very early post-emergence (before 4 leaf stage) Good on Orache, Black nightshade, Knotgrass and nettles.
Fluroxypyr	0.5-1.0 L	Follow-up treatment. Good on docks and vol potatoes.

<b>Product</b>	<b>Rate/ha</b>	<b>Comments</b>
* Titus +	50 g+0.1%	Use for grasses and BLW up to 4 collar stage of Agral maize (6 leaves unfolded).
* Titus +	40-50 g	Apply up to 4 collar stage (6 leaves unfolded on maize for control of BLW).
Bromoxynil	0.5-1.0 L	Do not add adjuvant.

\*Titus is cleared for use on Andante, Aurelia, Benecia, Justina, Loft, Schumi & Tassilo from the DAF 2009 Rec. List

**Note**

Atrazine cannot be legally used as from 31st December 2007 and Dow Shield cannot be used from May '09

**Recommended List (2009) of Forage Maize varieties suitable for growing without plastic cover.**

Actual yield data is shown for the mean of the control varieties, and the relative yield data (as % of controls) is shown for all varieties. The data is based on results of 14 trials (4 to 5 trials x 3 years) carried out in the period 2006 to 2008.

	<b>Uncovered (Without Plastic Cover)</b>					
	<b>Yield of Dry Matter</b>	<b>Dry Matter content</b>	<b>Starch content</b>	<b>Lodging Resistance score (1 - 9) (9 = best, 1 = worst).</b>	<b>Plant Height (metres)</b>	<b>Year first Rec.</b>
<b>Controls* (actual)</b>	<b>14.6t/ha</b>	<b>31.9%</b>	<b>25.9%</b>	<b>7.5</b>	<b>1.96</b>	<b>---</b>
<b>Algans (R)</b>	<b>103</b>	<b>93</b>	<b>95</b>	<b>7.4</b>	<b>2.02</b>	<b>2005</b>
<b>Andante (R)</b>	<b>99</b>	<b>100</b>	<b>101</b>	<b>7.3</b>	<b>2.09</b>	<b>2003</b>
<b>Avenir (R)</b>	<b>102</b>	<b>105</b>	<b>100</b>	<b>7.6</b>	<b>1.89</b>	<b>2000</b>
<b>Fergus (R)</b>	<b>105</b>	<b>97</b>	<b>100</b>	<b>6.7</b>	<b>2.07</b>	<b>2008</b>
<b>Loft (R)</b>	<b>99</b>	<b>95</b>	<b>99</b>	<b>7.7</b>	<b>1.90</b>	<b>1999</b>
<b>Nescio (PR-3)</b>	<b>103</b>	<b>85</b>	<b>100</b>	<b>7.5</b>	<b>1.93</b>	<b>2007</b>
<b>Nimrod (R)</b>	<b>103</b>	<b>98</b>	<b>97</b>	<b>6.8</b>	<b>2.12</b>	<b>2008</b>
<b>Tassilo (R)</b>	<b>100</b>	<b>99</b>	<b>102</b>	<b>7.2</b>	<b>1.91</b>	<b>2003</b>

**Recommended List (2009) of Forage Maize varieties suitable for growing with plastic cover.**

Actual yield data is shown for the mean of the control varieties, and the relative yield data (as % of controls) is shown for all varieties. The data is based on results of a total of 10 trials carried out in the period 2006 to 2008.

<b>With Plastic Cover</b>						
	<b>Yield of Dry Matter</b>	<b>Dry Matter content</b>	<b>Starch content</b>	<b>Earliness of emergence through plastic Score (1 – 9). (9 = earliest, 1 = latest).</b>	<b>Plant Height M</b>	<b>Year first Recommended</b>
<b>Controls* (actual)</b>	<b>16.9t/h<sub>a</sub></b>	<b>36.2%</b>	<b>29.8%</b>	<b>5.9</b>	<b>1.99</b>	<b>---</b>
<b>Algans (R)</b>	<b>(93)</b>	<b>(103)</b>	<b>(98)</b>	<b>(5.1)</b>	<b>(1.85)</b>	<b>2005</b>
<b>Aurelia (PR-1)</b>	<b>101</b>	<b>103</b>	<b>104</b>	<b>5.4</b>	<b>1.98</b>	<b>2009</b>
<b>Benicia (R)</b>	<b>(98)</b>	<b>(79)</b>	<b>(96)</b>	<b>(5.0)</b>	<b>(2.16)</b>	<b>2006</b>
<b>Justina (R)</b>	<b>106</b>	<b>90</b>	<b>100</b>	<b>6.1</b>	<b>2.06</b>	<b>2005</b>
<b>Schumi (R)</b>	<b>101</b>	<b>108</b>	<b>101</b>	<b>6.5</b>	<b>2.02</b>	<b>2006</b>
<b>Surprise (PR-1)</b>	<b>103</b>	<b>112</b>	<b>106</b>	<b>6.7</b>	<b>1.91</b>	<b>2009</b>