



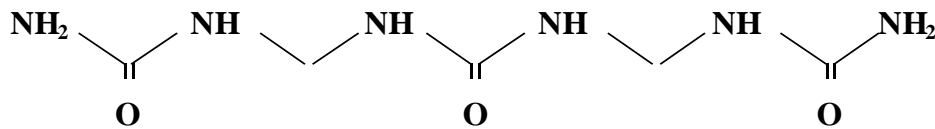
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CR NITROGEN - Technical Bulletin

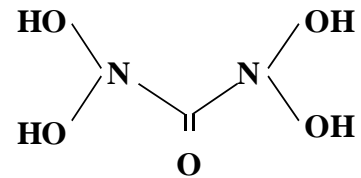
WHAT IS CR NITROGEN?

Control Release Nitrogen is a unique tri-polymer formulation containing nitrogen in the amide form (NH/NH₂). CR NITROGEN contains short, medium and long chain polymers that release nitrogen during the growing period. The short chain polymers that make up about 10% of CR NITROGEN are water soluble and supply an immediately available source of N for the roots. The medium chain polymers that make up the majority of CR NITROGEN release their N over a 2-3 week period, while the longer chain polymers extend nitrogen release up to 4-6 weeks. Below are diagrams of medium and long chain polymers.

dimethylene-tri-carbonyldiamide
(medium chain)



dimethylol carbonyldiamide
(long chain)



HOW DOES CR NITROGEN WORK?

As stated above, a small percentage of nitrogen is immediately available for the crop and is absorbed directly by the roots. The remainder of the nitrogen is absorbed as a food source by soil microbes and later released via microbial decomposition. CR NITROGEN increases microbe proliferation, which in turn leads to greater decomposition of organic matter and release of organic nitrogen. Over time, the microbes themselves die and release microbial protein that can be converted to plant available ammonium and nitrate. CR NITROGEN that is not immediately used by microbes binds to soil colloids and remains in the soil until it can be utilized by soil microorganisms. Phosphorous and potassium can also be cleaved into the nitrogen polymers and released via microbial decomposition. Chelated trace elements can also be added to the nitrogen polymers.

