

**BEHAVIOUR AND LOSS OF SOIL
NITROGEN
IN RELATION TO THE ENVIRONMENT**

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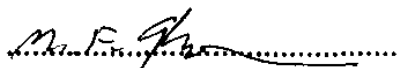


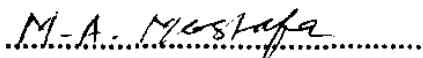
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ABSTRACT

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Bahaviour and loss of soil nitrogen in relation to the environment unpublished Master of Science,
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The behaviour and loss of nitrogen in an alluvial soil cultivated with wheat or corn in column under greenhouse or in the field were examined under different treatments including fertilization with urea or ammonium nitrate (46.5 KgN/feddan) added in two or three splitted portions and presence or absence of organic manure (12 m³/feddan) .

The results showed that under both greenhouse and field conditions, urea was superior to ammonium nitrate in increasing the available N in soil, N-content in the plant and grain yield of wheat and corn. It was also better in decreasing N loss from soil especially when accompanied with organic manure. In general, two splitted N doses gave higher vegetative growth and grain yield than three doses especially with wheat compared to corn.

The nitrogen contents and NO₃-N in the polluted soil, water and grasses along Bahr El-Bakar drain were examined. It was found that each of the drain's soil, water and grasses have tremendous amounts of nitrate-nitrogen in the toxic levels. The obtained values were much greater than premisable levels in water and plants which may be used by animals living around

the studied sites.

Key words:

Nitrogen in alluvial soil — Fertilizer nitrogen — Nitrogen distribution in soil column — Soil nitrogen — Nitrogen in soil lechate — Nitrate in Bahr EL- Bakar drain — Corn yield — Wheat yield — Urea — Ammonium nitrate .

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