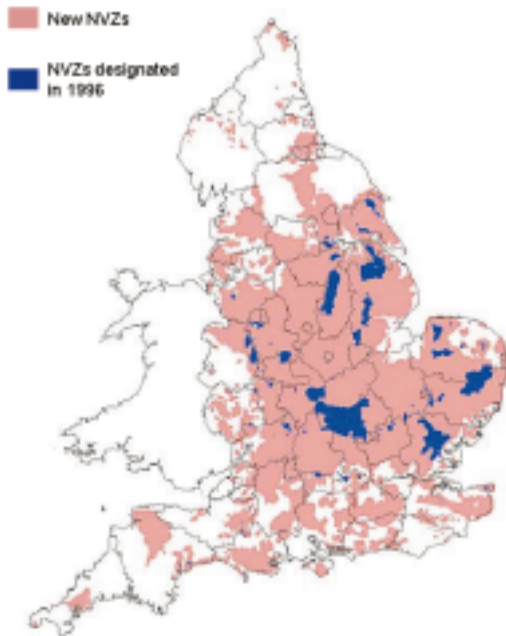


Managing arable crops in NVZs in England



Action:

- Check if you have land in an NVZ.
www.defra.gov.uk/environment/water/quality/nitrate
Tel. 08459 335577.
- To request a review of NVZ boundaries, write to ADAS Woodthorne, Wergs Road, Wolverhampton WV6 8TQ by 31 December 2002 giving full details to support any request.
- Comply with NVZ rules. Tel. 08456 023864 for free copy of 'Your farm and NVZs – do you comply?' CD-Rom.
- For free advice, tel. ADAS Technical Advice Helpline (08456 023864). Enquire about a free farm visit.
- For information on Farm Waste Storage Grants. Tel. 01159 291191.
- If using biosolids and manures, follow the action points in Topic Sheet No. 64.

Background

The EC Nitrates Directive (1991) aims to reduce nitrate pollution of water. In England about 70% of nitrates in water come from farming. When introduced in 1998, Action Programme rules applied to 8% of the land area of England. From December 2002 they will apply to 55% of the land area and most arable land.

The boundaries of NVZs in England have been based on the results of regular analysis of surface or groundwater samples at over 7000 sites. Sites with nitrate (NO₃) concentrations exceeding 50mg/litre, or which could exceed this level, have been identified by the Environment Agency.

All land draining into the upstream catchment or groundwater aquifer has been included in an NVZ but the final boundaries only include whole fields. A few catchments have been designated where coastal or marine waters are eutrophic resulting in algal blooms,

fish death or loss of species diversity.

Most arable farmers will not be significantly affected by being in an NVZ. The rules will have greatest effect on intensive livestock farmers, especially those with limited land for spreading organic manures. Arable farmers applying organic manure (including sewage sludge) to land must take account of its nitrogen value. This can result in large fertiliser savings.

Summary of NVZ Action Programme rules

(see **Guidelines for farmers in NVZs – England**, Defra PB5505, for full details)

Organic manures

- Do not apply more than the following amounts of manure total N across the whole farmed area; the limits include N deposited during grazing:
 - maximum 170 kg/ha N for land not in grass, eg arable cropping, that has been in an NVZ from 1998;

Table 1. Typical maximum application rates of organic manures
Rate to supply 250 kg/ha of manure total N

Manure type	Metric	Imperial
Dairy slurry (6% DM)	83 m ³ /ha	7,400 gallons/acre
Pig slurry (4% DM)	63 m ³ /ha	5,600 gallons/acre
Liquid digested sewage sludge	125 m ³ /ha	11,200 gallons/acre
Cattle FYM	42 tonnes/ha	17 tons/acre
Broiler litter	8 tonnes/ha	3.2 tons/acre

If you are unsure about any of the suggested actions, or want them interpreted for your local conditions, consult a professional agronomist.

Managing arable crops in NVZs in England



- maximum 210 kg/ha N for land not in grass that is in an NVZ from 2002 (reduces to 170 kg/ha N after December 2006);
- maximum 250 kg/ha N for grassland.
- Apply no more than 250 kg/ha of manure N to any field in any rolling 12-month period (Table 1).
- Do not apply slurries, poultry manures or liquid digested sludges on sandy or shallow soils in September or October (autumn-sown crop); or August, September and October (spring-sown crop). There are no closed periods for these manures on other soil types.
- Solid FYM can be applied on any soil type at any time of year.
- Ensure sufficient slurry storage capacity for any autumn closed spreading period.
- Do not apply organic manures on waterlogged, frozen, flooded, snow-covered or steeply sloping ground or within 10 metres of a watercourse.

Nitrogen fertilisers

- **Fertiliser recommendations for agricultural and horticultural crops**, Defra RB209 (2000) is one, but not the only, source of advice on the use of fertiliser nitrogen.
- Do not apply more fertiliser nitrogen than is needed by the crop. Take account of soil nitrogen supply and crop available N from manures and justify what is applied. The rules do not set any fixed limits to the amount of fertiliser nitrogen.
- Do not apply nitrogen fertiliser to arable land between 1 September and 1 February unless there is a crop requirement. You can apply seedbed N to winter oilseed rape, but not to autumn-sown cereals.
- Do not apply N fertilisers on waterlogged, frozen, flooded, snow covered or steeply sloping ground.

Records

- Record all cropping and nitrogen fertiliser and organic manure applications to each field. Also keep details of organic manures exported off the farm.
- Keep all records for at least five years for Environment Agency inspection.

Summary

From 19 December 2002, NVZ Action Programme rules will apply to 55% of the land area of England.

They aim to reduce or control nitrate concentrations in surface and groundwaters by limiting organic manures applied to land and ensuring that nitrogen fertiliser use does not exceed crop requirement. Soil nitrogen supply and crop-available N from manure applications must be taken into account.

This Topic Sheet summarises relevant rules as they apply to arable farmers. Topic Sheet No. 64 indicates where recent research results can help farmers maximise the value from manures and slurries, whilst adhering to NVZ rules.

Further information:

Guidelines for farmers in NVZs – England (2002), Defra PB5505 (free)
Tel: 08459 556000

Manure planning in NVZs - England (2002), Defra PB5504 (free)
Tel: 08459 556000

Fertiliser recommendations for agricultural and horticultural crops (2000), Defra RB209
Tel: 08706 005522



**Topic sheets
are free**

To join our
mailing list
contact HGCA

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