



# Grower Summary

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## **FV 428**

Vining peas – The effect of soil phosphate levels on Rhizobia population

Annual 2015

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The results and conclusions in this report may be based on an investigation conducted over one year. Therefore, care must be taken with the interpretation of the results.

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Only officially approved pesticides may be used in the UK. Approvals are normally granted only in relation to individual products and for specified uses. It is an offence to use non-approved products or to use approved products in a manner that does not comply with the statutory conditions of use, except where the crop or situation is the subject of an off-label extension of use.

Before using all pesticides check the approval status and conditions of use.

Read the label before use: use pesticides safely.

## **Further information**

If you would like a copy of this report, please email the AHDB Horticulture office ([hort.info.@ahdb.org.uk](mailto:hort.info.@ahdb.org.uk)), quoting your AHDB Horticulture number, alternatively contact AHDB Horticulture at the address below.

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AHDB Horticulture is a Division of the Agriculture and Horticulture Development Board.

**Project Number:** FV 428

**Project Title:** Vining peas – the effect of soil phosphate levels on Rhizobia population

**Project Leader:** Dr Kerry Maguire, PGRO

**Contractor:** PGRO

**Industry Representative:** Stephen Francis, Fen Peas Ltd

**Report:** Annual report 2015

**Publication Date:** 15 June 2015

**Previous report/(s):** None

**Start Date:** 3 February 2014

**End Date:** 30 January 2016

**Project Cost:** £28,088

# ***GROWER SUMMARY***

## **Headline**

The application of fertilisers at drilling has the potential to increase yields of vining peas in some scenarios.

## **Background**

There has been increasing interest in the application of fertilisers to peas at drilling. Drilling applications allow nutrients to become available to the seedling when it is actively growing and before the plant roots have exploited soil reserves. Some 'starter' nutrient products contain low amounts of nitrogen. There are no recommendations for nitrogen for peas in RB209 and it is detrimental to the formation of root nodules. This study used field scale plots (approximately two hectares per plot) to study the impact of two fertilisers on vining peas drilled at three different times.

## **Summary**

Primary Phosphate (P) (containing nitrogen) and straight P were applied with the seed at drilling, at three sites. Three rates of each fertiliser were used. Each plot was approximately two hectares and, aside from the starter fertiliser, the plots were treated as in the same way as the commercial crop. Each site was drilled at a different time. Drilling began 28<sup>th</sup> March 2014 and concluded on 7<sup>th</sup> May 2014. The sites and the drilling times were chosen to fit into the commercial vining pea drilling programme. During the growing season soil samples were taken for soil nutrient analysis and rhizobial counts. The plants were sampled and the above and below ground plant biomass measured and yield taken. Results were mixed. This was partially due to the detrimental effects of root rot on the early drilling. However, the application of fertiliser increased yield at the mid and late drilled sites. These sites also had increased plant mass as a result of the applications. These trials will be repeated in 2015 to confirm the results obtained in 2014.

## **Financial Benefits**

Results from the first year of trials are inconclusive of financial benefits.

## **Action Points**

Action points have yet to be identified.