

THE POTENTIAL FOR WINTER TURNIP RAPESEED IN THE U.K.

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ABSTRACT

Winter turnip rapeseed (*Brassica rapa p*) has been extensively grown in the United Kingdom, (particularly in Scotland), as a spring sown crop. With the advent on new cultivars suited for over winter production it was decided to instigate a series of trials to assess the crops performance and evaluate its place within the climatic, agronomic and economic constraints of British agriculture.

This poster provides a review of those trials, considers the benefits of this new oilseed crop option and finally provides a commentary on the potential of winter turnip rapeseed.

EXPERIMENT

Two lines of winter turnip rapeseed WW 1 (now named **Debut**) and WW 2 were chosen for the trials. A northern and southern site were selected and it was decided that in the initial year a comparison would be made with conventionally sown swede types (*Brassica napus*).

It was known at the on-set that the winter turnip rapeseed types were considerably lower yielding (up to 25%) when compared to the swede types, but winter turnip rape offers a number of distinct and unique benefits which could compensate growers for the anticipated lower yields. The trials were established to evaluate the performance; to substantiate some of the claims for the crop and to provide a better understanding of the nature of the material so that future trials could be better designed to match the exacting needs of winter turnip rapeseed.

RESULTS

Comparative Yield 1994

	Hampshire	Aberdeen
SWEDE	100	100
TURNIP	60	78
MEAN YIELD AT 100%	3.69 t/ha	5.18 t/ha

At both sites the swede types performed well giving yields in excess of the National average (3.1 t/ha). The winter turnip rape gave a better relative yield at the northern site, which was at Aberdeen, than at the southern site in Hampshire. The relative performance of both trials was within the range expected, but the actual yield achieved in Aberdeen, which was in excess of 4t/ha, was higher than anticipated.

One of the key benefits of turnip rape is its earliness to mature and at both sites this factor was well proven with the Scottish crop maturing 22 days earlier than swede types, and in Hampshire winter turnip rape was 17 days earlier. The Hampshire turnip rapes were harvested 300 days from planting whilst the Scottish site at Aberdeen was harvested 320 days from sowing. The winter hardiness of winter turnip rape was judged to be better than the swede rapes. It was noted that damage by pigeons was less on winter turnip rape and also that the resistance to shedding and shattering was better than the swede types.

DISCUSSIONS

The reported trial results have provided sufficient confidence for the crop testing to be extensified and in autumn 1994, a more comprehensive network of replicated trials were established covering four sites. In addition, 25 field blocks were established to provide an on-farm appraisal and to develop an economic base on which the crop can be assessed for its commercial viability.

The claimed benefits of winter turnip rapeseed are:

1. Extreme earliness.
2. Winter hardy.
3. Resistant to damage from slugs and pigeons.
4. Low Nitrogen demand.
5. High disease resistance, particularly to Light Leaf Spot.
6. High shedding resistance.

The initial trials have confirmed that many of these benefits hold true, and more evidence will be sought from the 1995 harvest.

The advent of an Area Payment Scheme has reduced the dependence on yield alone, as the main selection criteria and it is against that background that some of the benefits of winter turnip rapeseed will become paramount. For instance, the earliness of this material will result in a much earlier harvest and that in-turn could result in the material achieving "old crop prices" which are invariably higher than new crop prices. This factor alone could compensate for the reduced yield as the price difference is commonly within the range of 20-30%.

Resistance to slugs and pigeons can provide growers with yield security, whilst reducing their costs of production and avoiding the difficulties of adequately and effectively controlling pigeons.

Low Nitrogen demand may mean that the crop will fit better into regimes, where Nitrogen application is a sensitive issue. Resistance to disease and shedding can further reduce input costs and field operations. This can add to the Growing Cost Efficiency of the crop.

Winter turnip rape offers an interesting and perhaps genuine opportunity for a new authentic oilseed and one which could be of considerable benefit, particularly to those in the north of England and Scotland, as well as growers who farm within Nitrogen restricted areas (Nitrogen Vulnerable Zones)