

Commercialising Vegetative Propagation Systems for Perennial Grasses for Paludiculture Production Using CEEDS™ Technology

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1. Crop Expansion Encapsulation & Drilling System (CEEDS™) technology

CEEDS™ contain primed plant tissue, encapsulated in growing media, then coated. Growth promoters and crop protection products can also be incorporated into CEEDS™ so their application is targeted and efficient. CEEDS™ can then be drilled in the field like a conventional seed using automatic planters. CEEDS™ are produced horticulturally, dramatically reducing the production area required for large scale multiplication.

This project will assess the potential for an innovative vegetative propagation technology, CEEDS™, to facilitate the commercial establishment of two potential paludiculture crops

- *Phragmites australis* (Common Reed) currently established from vegetative plantlets or rhizome pieces
- *Molinia caerulea* subsp. *arundinacea* (Purple Moor grass) established from seed or crown division but, as seedling vigour is very low, it is difficult to establish due to competition from weeds.

Current propagation method from both seed or conventional vegetative reproduction methods are time consuming and expensive which are a bottleneck to commercial, field-scale establishment.



Plant propagules are encapsulated to facilitate mechanical field drilling.

2. Methods

Vegetative material from both *Phragmites* and *Molinia* will be subjected to a range of treatments known to stimulate specific physiological responses in other vegetatively propagated grasses. These preliminary responses will indicate the precise development routes to be explored in detail as New Energy Farm's experience indicates there are general specific responses which must be identified and understood.

Controlled experiments will progress to larger scale pot trials and field plantings. If these species demonstrate the optimal response to the technology, further steps will be taken to investigate the commercialisation of CEEDS™ technology in paludiculture systems.

3. Applications

CEEDS™ technology has already been commercialised for similarly difficult to propagate grasses such as *Miscanthus* and Sugar Cane.



4. Licensing Model

- Patented NEF CEEDS™ technology is available under License Agreements to interested parties.
- Licensing can be for internal production or for supply to third parties.

5. Results

Both *Phragmites* and *Molinia* responded positively to the treatment, demonstrating their potential for the use of CEEDS™ technology.

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