

HIGH PERFORMANCE SEEDS Inc.



*Improving the Health of
Agricultural Soils*



ISCI 99*

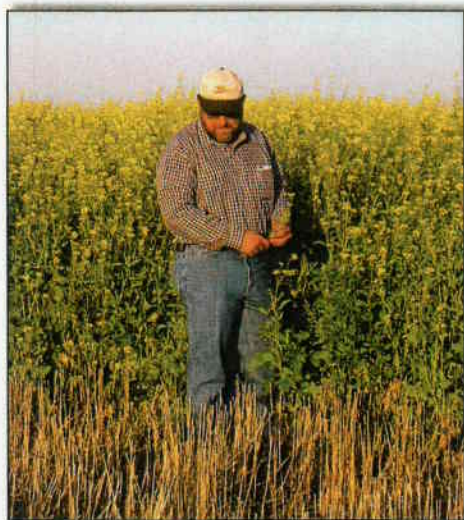
NEMAT*

Choose Your Cover Crops Carefully!

– CALIENTE BRAND BLENDS –

Choose Your Green Manure Cover Crops Carefully!

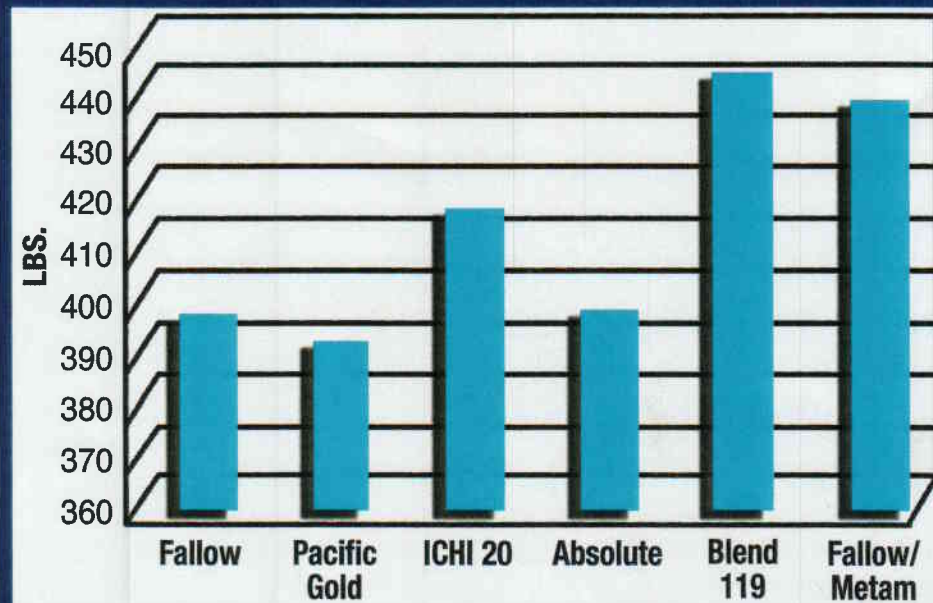
High Performance Seeds (HPS) has been working with US and European researchers to supply growers with the most widely tested and effective green manure cover crops available. HPS varieties from the Industrial Crop Research Institute (ISCI) in Bologna, Italy produce high levels of biomass with the highest level of effective glucosinolates commercially available. ISCI is the recognized world leader in biofumigant research and their patented varieties are the only mustards available developed for their biofumigant properties. The ISCI varieties used in our Caliente Brand Blends consistently produce positive results in replicated trials on potatoes in Washington, Idaho, and California. ISCI 20 used in our Caliente 119 Blend has shown excellent results in yield and quality compared to fallow, fumigants, and edible mustards.



Caliente 119 planted no-till into irrigated wheat stubble.

ISCI 20 and 99 consistently produce the highest levels of biomass and effective glucosinolates per acre in replicated trials in Washington.

U.C. DAVIS TRIAL Marketable Yield for 1/100 of Harvested Acre



1. Joe Nunez

W.S.U. TRIAL Mustard Green Manure Variety Trials

Glucosinolate (ITC producing) Production
Estimates for Mustard Crops - 2003

Variety	Dry Biomass lb / ac	Total gsl, uMol/g	GSL production , mMol/m2
B. juncea			
ICSI99	6570	28	21
ISCI 20	9487	18	19
PI 458934	5276	30	18
2003-84	6139	21	14
ISCI 61	5208	21	12
2003-615	6608	16	12
Pacific Gold	6781	14	10

2. Andy McGuire



Variety trials at Moses Lake, WA in cooperation with WSU and ISCI.

Not all cover crops are equal in their ability to increase total beneficial microbes without also increasing pathogenic ones. Worldwide, researchers have found that some mustards and other green manure crops can elevate levels of destructive *Pythium* species. ISCI 20 and 99 were developed to eliminate this problem common with other green manure crops.



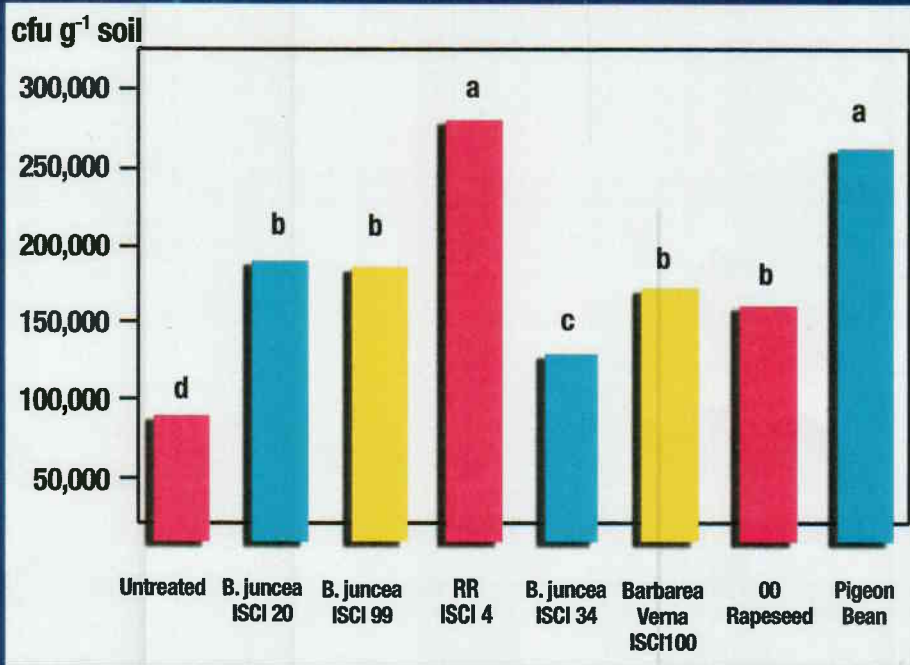
Purified glucosinolates from the ISCI collection used in their variety development program.

Research Trials performed by:

1. Nunez, Joe; U.C. Davis, Bakersfield, CA
2. McGuire, Andy; WSU Extension, Ephrata, WA
3. Lazzeri, Luca; ISCI, Bologna, Italy
4. Lazzeri, Luca; ISCI, Bologna, Italy
5. Riga, Ekaterina; WSU, Prosser, WA
6. Nunez, Joe; U.C. Davis, Bakersfield, CA

ISCI RESEARCH INSTITUTE

Total Fungi 1 Month After Green Manure Simulation



Pythium spp. 1 Month After Green Manure Simulation

