

## The Growth of MEY in Spring Wheat Country

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Any ag orientated news source looked at in recent weeks in North Dakota or western Minnesota has had some kind of a MEY related story. The MEY usually has been identified as "maximum economic yield," but recently some use of "most efficient yield" has been seen. Yes, spring wheat country has a new buzz acronym - MEY.

How did such a buzz term for this amount of press/news coverage develop in the spring wheat region? The kickoff for MEY club development occurred on November 25, 1986. Before that was possible, major ground work had been done.

The Potash Institute coined the "MEY" term in the mid-sixties. Around the mid-seventies the Potash and Phosphorus Institute (PPI) and the Foundation for Agricultural Research (FAR) started funding maximum yield research (MYR). North Dakota received MYR funds for work on wheat in 1980. A MEY type software package was field tested in 1981-82 by extension and research staff. North Dakota Extension Services plan of work for 1984-87 included MEY under a heading of Profitable Crop Production. In November of 1985 North Dakota Extension Service was represented at a St. Louis PPI-FAR meeting on implementing MEY systems. Upon return two North Dakota Agricultural Association (NDAA) members were asked about holding MEY meetings under a "Manage for the Most" title. One of these was held on January 10, 1986 for managers of Grand Forks Seed and Fert-L-Flow. Some of these innovators accepted the concept and MEY was under way. They conducted MEY plots in several locations and had computer software developed to support portions of the MEY effort.

Final construction of the MEY payload started when NDAA, Grand Forks Seed Co., Fert-L-Flow, Union Carbide and others joined North Dakota Cooperative Extension Service as sponsors of a regional MEY workshop held in Bismarck, ND on July 8-10, 1986. During their annual shortcourse and trade show on November 25, 1986 the NDAA launched the MEY educational effort by holding a meeting on formation of MEY clubs. Over 175 people attended that event. The payload has landed in many locations. The first MEY clubs to complete the needed paperwork were the Hi-Tech Club of Fisher, MN and the Farming for Profit Club of Crookston, MN. Other clubs have been formed and those plus ones which have started the process brings the present total to 32 clubs. The profit payload carried by the MEY concept has spread far and wide. The interest is state wide plus along our borders.

It is evident that 4 major groups were involved in this MEY effort: North Dakota Extension Service, North Dakota Agricultural Association, agribusiness and producers. A brief summary of growth noted by each group is:

#### North Dakota Agricultural Association

1984 - Learned of the existence of Landmark High Yield Wheat Club in Canada.

1985 - High wheat yields produced in much of the spring wheat area. Fact they could obtain 100+ bushels now was known.

WHEATPAC software used at annual show.

Agribusiness interest was shown by a few companies.

1986 - Association helped sponsor MEY event for the spring wheat region. They also had booth space at that first MEY meeting. Conducted rap session to see if interest in forming MEY clubs was present. It was, and association started to lay plans for MEY effort.

Held kickoff meeting November 25. About 175 in attendance from throughout entire area. From these contacts, over 60 start-up MEY kits were sent to interested contacts in Minnesota, North Dakota, South Dakota, Montana and Canada.

1987 - Contacts for starting clubs started coming fast and furious. By March there were 23 clubs in place and more kits being sent out.

By April the count was 32 clubs and 350 producers. Seeding started and contacts let up.

May activity was up, often received 25 contacts per week. We are taking names, but no formal club formation will be conducted until fall.

News coverage way up. Farm Journal in May, AP-VP carried state-wide coverage.

Excellent crop is developing, this is leading to more contacts for MEY club activities.

The future looks so bright that the association invested funds in a computer to handle MEY records.

#### North Dakota Extension Service

- Outstanding media coverage of effort now (1987) and appears to be growing.

- Stimulation of new foliar N application research.

- Change of attitude by staff and clientele.
- MEY resource materials being developed elsewhere and shared with extension staff.
- 1988-91 Program Response Opportunities booklet for North Dakota Extension Service has major MEY program on wheat production and profitability, also total beef management program. Several program offerings have MEY concept as a part of the overall task.
- 1987-88 North Dakota Extension Service In-Service Education Plan has 9 MEY events scheduled, also 22 MEY related events in this booklet.
- Scheduled MEY events on calendar into January, 1988 at present; calls coming in daily.
- In-service type video and computer educational packets developed, more underway.
- Plans for future use of MEY producers and sponsors being discussed as schedules are developed. May use MEY people as resources to assist reduced extension staff in county and state offices. Have a MEY network of resource people to utilize in unlimited ways.
- Getting feedback from MEY sponsors and producers of good-bad experiences, foreseen needs for 1988 and on to use by advisory council to lay cooperative plans for MEY directions in the future.

#### Agribusiness

- Experience indicates MEY clubs should be formed in the fall.
- Number of members per club should be 8-15.
- Coordination of effort is a must for success.
- Positive things occur, the dealer and producer are talking about MEY, experiencing its importance, sharing it; thus creating better communication and business relationships.
- One firm carries MEY equipment (rain gauge, soil probes, etc.)
- One has developed soil sampler and entered into agreement with another to work with Vo-Ag people.
- A new nitrogen source has been introduced into spring wheat country.
- Interest in use of quality seed is high.

- Agribusiness contacts have noted producers doing exciting MEY things like:

1. Interfacing weather information to computer to track growth stage using MEY software.
2. Reference material from regional MEY workshop entered into computer. Software can be used by other producers.

#### Producers (MEY Club Members)

- They have commitment as shown by paying up to \$200 in dues.
- They are proud of their involvement, shown by doing MEY interviews for press and TV coverage.
- They are sharing and learning since they come to "last minute" meetings as well as to scheduled meetings. Has been said some meet at a "drop of rain."
- Asking about upcoming meetings on state and regional levels and are willing to be resource people.
- They are asking questions that challenge educators and researchers. Have shown several research need areas.
- They are attending early morning field clinics to examine wheat plants for leaf stage and yes, even for spikelet condition. See Figures 1 and 2.
- They have supported news coverage via a newspaper to the extent that one of its staff is going to Europe to see MEY firsthand.
- Several club members will be resource speakers at a regional spring wheat MEY workshop on January 6-8, 1988 in Fargo, ND.
- Innovations are being built by these clubs or members of them: High pressure 80 foot sprayer, soil sampling equipment, box style thresher unit, one pass seeding, fertilizing and spraying equipment.
- Doing some design of computer software for MEY.

All of this progress has been greatly assisted by availability of MYR and ICM data from North Dakota Experiment Station, Landmark High Yield Wheat Club experience, USDA-ARS wheat data collected at Mandan, ND and 350+ spring wheat producers willing to listen and try something new. The NAWG Test 20 program also assisted this MEY educational - cooperative event.

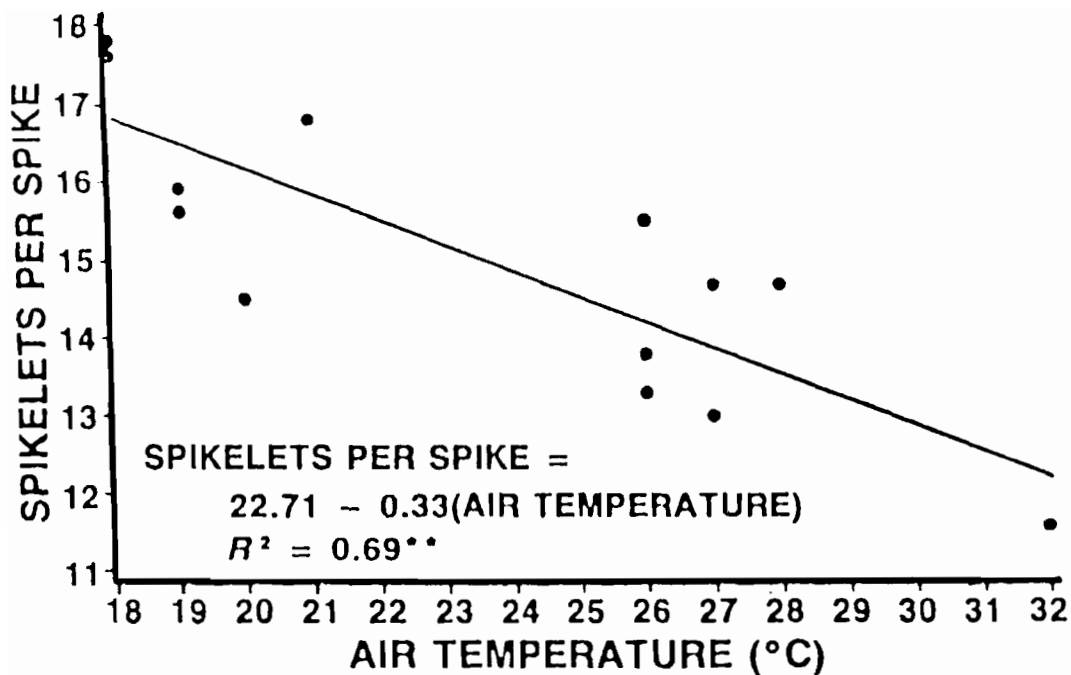


Fig. 1. Linear regression of total spikelets developed per spike of controlled environments and field grown spring wheat on maximum daily air temperature during the 4.0 to 5.5 Haun leaf growth stage.

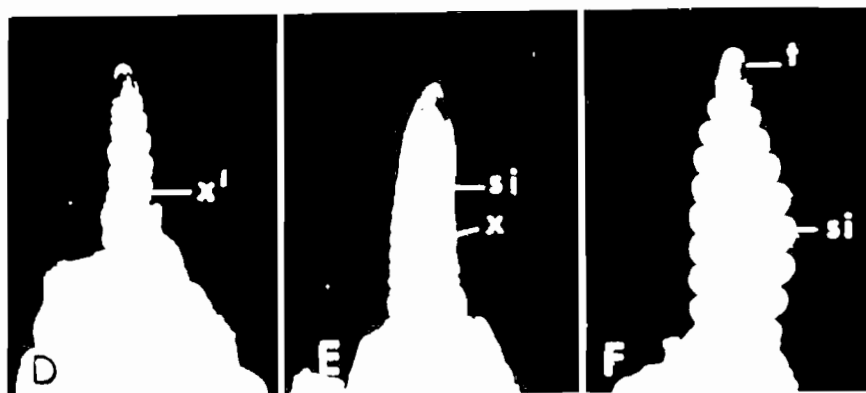


Fig. 2. Photos from Agricultural Experiment Station Bulletin 721, University of Illinois showing wheat spikelet formation at about the 5th leaf stage of development.



# PROCEEDINGS

## Of the Seventeenth North Central Extension-Industry Soil Fertility Workshop



St. Louis, Missouri  
Oct. 28-29, 1987



Published for  
The North Central Extension-Industry Soil Fertility Workshop  
by  
Potash & Phosphate Institute  
1220 Potter Drive, Suite 108B  
W. Lafayette, Indiana 47906-1334