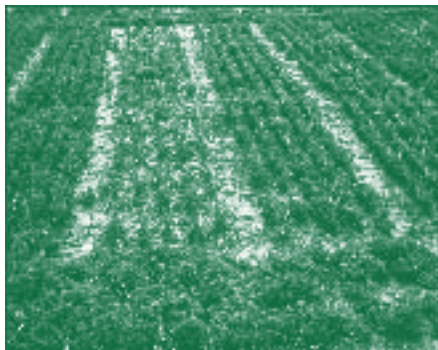


The PICKSEED Approach to Forage Variety Development

Jay Hackney, PICKSEED Vice President Research & Product Development

Alfalfa variety trials at the PICKSEED Research Station, Lindsay Ontario showing differences in persistence and regrowth (individual plots measure 18 x 3 feet; 1 foot between plots).



It All Begins With Research

PICKSEED operates the most extensive private forage variety testing program in Canada, giving us an unmatched ability to identify varieties with superior yield and persistence, faster regrowth, exceptional forage quality and superior disease resistance specifically for tough Canadian conditions – all the attributes you want in an alfalfa variety.

Each year 35-45 new alfalfa varieties enter our replicated variety trials. We test at three locations in Ontario, three locations in Québec and three or four locations in Western Canada, with each trial being harvested two to four times per year (depending on location and growing season). We also do forage quality sampling and analysis on our trials and we monitor the forage quality characteristics of our varieties.

These trials follow well-recognized government and university testing protocols, which require replicated testing (4 plots of each variety in each trial). This rigorous testing ensures that only the highest yielding and best adapted varieties are

advanced. PICKSEED selects and advances one or two elite varieties from this extensive testing program every few years.

The emphasis on development of new forage varieties at PICKSEED provides an unmatched level of genetic advancement. We have a constant and steady genetic improvement system to provide outstanding new varieties.

Why We Test Varieties In-House

When you buy varieties from PICKSEED, the promise of performance is backed by extensive regional testing, meaning your buying decision is secure. We only register an alfalfa variety for sale in Canada after we have grown it and tested it right across the country. We are not dependent on using varieties that were only tested in the USA or on a limited basis in Canada. You get proven yield, predictable performance and persistence that lets you plan with confidence and peace of mind.

When we compare varieties using trial data, we compare them head-to-head, where the varieties appear in the same trials. This is a key point. Government trials still operate under the assumption that they need to show a shorthand index that attempts to compare all varieties. The reality for government trials is that the varieties they list were usually not tested in the same trial, nor in the same locations, and not even in the same years. The yield index for one variety may come from predominantly Northern locations like New Liskeard. This is a problem because New Liskeard often has

ample snow cover which assures good winter survival of virtually all varieties. Unfortunately, because governments are strapped for budgets, they are limited in their choice of testing locations.

We also operate tough winter survival trials to screen our varieties for winter hardiness, making sure that only the most resistant make it out to the farmer.

That's why we can truly say "good things growing..."

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Managing forage grasses: New viewpoints on an old crop

Everett D. Thomas
Miner Institute/Oak Point Agronomics, Hammond, NY

Tall fescue replaces reed canarygrass on many farms

Twenty years ago the use of reed canarygrass in the Northern U.S. and Eastern Canada increased considerably. And for good reason, because it does well under variable drainage conditions, responds to high rates of manure, and tolerates intensive harvest management. However, canarygrass lags behind several other species in forage quality. Plant breeders have made tremendous progress in developing endophyte-free tall fescue varieties with improved palatability and animal performance. In a Cornell University trial at Miner Institute, almost every one of the 46 tall fescue varieties outyielded orchardgrass and reed canarygrass. Compared to canarygrass, tall fescue is lower in NDF both in the boot stage and at heading. Tall fescue also does well under a range of soil drainage conditions, from well-drained to moderately wet. If you haven't tried tall fescue recently maybe it's time you did. PICKSEED's "Carnival" tall fescue has done well in independent variety trials.

Growing grasses for dry cows takes patience

Prefresh dairy cows (2-3 weeks prepartum) need low potassium forages, but you can't simply put dry cows on a full feed of corn silage or they'll get "hog fat" and will have increased calving difficulties. What prefresh dry cows need is grasses with 2.0% or lower potassium, but this type of forage is hard to grow. That's because grasses are very efficient at finding potassium, even in soils with fairly low soil test K levels. Some dairy farmers have given up even trying to grow it themselves and buy low K grass hay, but often this hay is over-mature and not very palatable.

To grow low potassium grass, start with a field that has a low (best) or medium soil test K. A field a few miles from the cow barn is good since you won't be as tempted to spread manure there! If it's already in grass, go with what you've got; if not, seed brome-grass or maybe tall fescue. Apply fertilizer N in early spring and harvest in the boot stage. This forage will be good for a variety of livestock, but probably will be too high in K for prefresh dry cows—at least in the first and maybe second year. Right after first cut, apply more fertilizer N and harvest the

second cut as soon as there's enough there to mow—don't wait for heads to appear. Second cut grass is almost always lower in potassium than first cut. Don't apply any manure or potassium fertilizer! It might take two or three years to deplete soil K levels, but before long you should have some land that (as long as you continue to apply N fertilizer) will produce good yields of moderately low K grasses.

Be cautious about seeding alfalfa-grass on low fertility fields

As previously noted, forage grasses are very efficient in potassium utilization even under low soil test K levels. If soil K is low, grasses will "rob" this essential nutrient from alfalfa. While an alfalfa-grass seeding in a low fertility field may look good early, as the grass root system becomes well-established the alfalfa will soon start to disappear; often as early as the first year after seeding. You may be able to prevent this by applying high rates of potassium fertilizer, but at \$1000 per tonne of 0-0-60 can you afford to? Either increase soil fertility before seeding alfalfa-grass through the use of high rates of manure, or seed straight alfalfa if soil drainage is good.

PICKSEED History: Adolf Benes: 1921 – 2008

Martin Pick, Vice-Chairman, PICKSEED



Tom Pick, **Adolf Benes**, Swanson & Bill Denbeigh 1961

Adolf passed on October 8, 2008. Only a few current Pickseed folks will remember Adolf who retired in the 80's. However Tom & I, and those who had the wonder-

ful experience of working and socializing with him have only fond memories of this gracious and clever gentleman.

Adolf is survived by his wife Helen and two sons, Roger & Jack. Adolf was born and raised in the small Moravian hamlet of Lhenice, near Ceske Budejovice. He was a victim of WW-II being moved from one German work-camp

to another. somewhere along the way he met and married Helen. He arrived in Canada in the 50's and was introduced to

our father by a Czech friend and started working in the Richmond Hill, ON seed cleaning plant. The very next day he arrived, armed with a slide rule, which was eventually and reluctantly replaced by an electronic calculator. Adolf approached his work thoughtfully and always in a well planned fashion. He thought through the intricacies of cleaning small seeds, everything from Kentucky bluegrass, to chaffy brome-grass to alfalfa and red clover. Forage and grass seed production of the 60's and 70's was not yet blessed with the sophistication of modern weed control and some seed lots presented a weed/

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Keys to Corn Hybrid Selection

Matt Anderson, BSc., PICKSEED Research Associate

Hybrid selection for spring planting is one of the most important decisions a producer will make. Over the past few decades there has been significant improvement in hybrid genetics which has resulted in higher yield potential. To remain competitive within the industry both seed companies and producers must introduce and adopt new hybrids to their programs on a regular basis. They should choose hybrids with high yield potential and well suited physical traits, maturity, disease, insect resistance and herbicide tolerance for their operations.

Yield Potential

Hybrid line-ups available through seed companies change each and every year at what can seem like a rapid pace. This makes selection based on hybrid performance even more of a challenge. However, companies should have available provincial, private and proprietary data for each and every hybrid. The most reliable way to select top hybrids is to look at performance data from this season and last season over a wide range of locations and climatic conditions.

Physiological traits

Solid hybrids should stay green until they approach maturity. This indicates better stalk strength, root strength and overall plant health. Other traits influencing stand ability include resistance to stalk rot and leaf blights, genetic stalk strength (thick/thin stalk) as well as shorter plant height and ear placement. Good husk covering over the ear is also important as it reduces the potential for the introduction of disease into the kernels. High test weight is usually considered a desirable hybrid characteristic. However, it has been shown that there is very little relationship if any between grain test weight and kernel breakage or nutritional quality.

Maturity

Corn hybrids are characterized by their maturities (Relative Maturity, Growing Degree Days, or Crop Heat Units). Each of these ratings, in combination with performance trial data should be used to determine when a hybrid should reach their physiological maturity or black layer. Hybrids with good dry down ratings can be harvested quickly following black layer, whereas full-season hybrids take longer to dry down.

Disease Resistance

Diseases such as stalk rots, Grey Leaf Spot and rust affect numerous acres of corn each season. These can be managed by crop rotation and early planting, but also by selecting hybrids with identified levels of disease resistance. These ratings should especially be considered in a continuous corn system or in fields with a well known history of leaf and stalk diseases.

Insect & Herbicide Technologies

Genetically modified corn traits are becoming more prominent and valuable today than ever before when selecting a corn hybrid. Insect protection traits against corn borer, corn rootworm, fall armyworm, black cutworm and western bean cutworm have been shown to increase yields anywhere from 4 to 11 bushels per acre. Herbicide traits such as Roundup Ready and Liberty Link enable broad-spectrum weed control, safety and flexibility. Specific combinations of these traits are available through your seed company and add yield protection and increase yield potential to your hybrids.

Notes on Tall Fescue

Jay Hackney, PICKSEED Vice President Research & Product Development

PICKSEED offers the proprietary tall fescue varieties Carnival and Fuego, selling them either as straight seed, or more usually in a mixture with other forage grasses. Tall fescue is an excellent grass to use for dry hay or haylage or for pastures (continuous or rotational grazing) and it makes a great companion for alfalfa in a hay/haylage mix.

Tall fescue has a bunch type growth habit (non-spreading) and both Carnival and Fuego have very good persistence. Fuego is a soft-leaved type. Carnival and Fuego are long lived and can produce deep root growth in suitable soils. They are tolerant of alkalinity, salinity, acidity, flooding and are among the best for drought tolerance.

Table 1. Forage quality of Carnival and Fuego tall fescue (KY-31 is common seed of an old US landrace)

	ADF Avg	NDF Avg	RFV Avg
Carnival	29.4	56.3	109.3
Fuego	28.7	56.1	110.8
KY-31	30.2	58.1	105.1

ADF: Acid Detergent Fibre; NDF: Neutral Detergent Fibre; RFV: Relative Feed Value

PICKSEED History: Adolf Benes: 1921 – 2008

Martin Pick, Vice-Chairman, PICKSEED
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domestic seed mix of great challenges. Adolf was always up to the task, tuning his machines to get the job done, literally turning a sow's ear into a silk purse. His skills resulted in a long succession of class and world seed championships at Toronto's prestigious Royal Agricultural Winter Fair.

Also among these skills was a penchant for building; as Pickseed went through a period of rapid growth, Adolf designed the construction plans for warehouse additions, took them to the Richmond Hill Planning Department, had them stamped and the building work began. Adolf believed in sharing his knowledge too. Frequent tours of the Crop Science classes from the Ontario Agricultural College were rewarded with full explanations of how the Seed Act grades were accomplished. This too was another challenge;

now for the science students; they had to figure out "*bordel saracini*"; "*playing the mandolina*" and other colloquialisms the years of international exposure in the work camps had gifted to Adolf. We always joked that he spoke seven languages, but only his Czech mother tongue well.

Adolf was also up to the big tasks, starting up new plants and processes which included a seed corn grading line in Richmond Hill, and grass cleaning lines in Winnipeg and Edmonton.

Adolf Benes was a great Canadian but always too a loyal Czech. In his retirement years he read the Prague papers on his computer with his coffee and Black Cat (filterless) cigarettes always at hand. He was loyal, kind and always considerate of others. His contribution to family, friends and work will be remembered.

Join the PICKSEED Team

Have you considered a career in selling seed? Why not join the PICKSEED team. PICKSEED has some key areas where we are looking for sales agents in Eastern Canada.

Our current sales agents have a broad range of background and experience and their talent, knowledge and emphasis on customer service combined with the quality and performance of our forage, hybrid corn and turfgrass varieties together makes an excellent recipe for success.

If you are interested, call PICKSEED's provincial Sales Manager for more details. Paul Wight 519-717-2226 (Ontario & Atlantic provinces) or Victor Lefebvre 450-230-0815 (Québec).

About The Forage Informer

The Forage Informer is an information publication produced and distributed by PICKSEED. It is available in English and French versions. Call us and we will send you a copy of the Forage Informer in the language of your choice.

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