

Vernonia—bursting with potential, the plant, that is

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Vernonia was discovered in a search for unusual seed oils for which new industrial markets might be created, or that might recapture markets lost by agricultural products to petrochemical products. Seed was screened for oil content and those with substantial amounts (20% or more) were evaluated to identify oils with unique fatty-acid composition, distinctly different from other domestic crops, such as peanuts and cotton seed.

Vernonia galamensis is a rich source of vernolic acid, a naturally epoxidized fatty acid. The seeds contain about 40 percent oil, with unique chemical (epoxy) and physical (low viscosity) properties.

Potential use, for example, could be a promising worldwide market in the manufac-

ture of oil based paints, producing "reactive diluents" to serve as solvents that become a part of the paint's surface as it dries and does not evaporate to pollute the atmosphere.

Volatile organic compounds from oil based paints and other sources, react with nitrogen to produce ozone, a deleterious component of photochemical smog. One pint of vernonia oil could be used in each of the 350 million gallons of oil based paint produced in the U.S., reducing emissions by at least 160 million pounds. It is estimated that 350,000 acres of vernonia plants would be required to achieve that level of production.

"Vernonia galamensis has numerous other industrial applications," says John Graham of the Coatings Research Institute at Eastern Michigan University, "It could eventually replace petroleum as a component in the manufacture of plastics."

Researchers in laboratories world-wide are experimenting with epoxies, resin, lubricants, additives, adhesives, insecticides and repellants; a growing list of new products as industry becomes aware of the properties, uses and availability of vernonia oil.

Research and development of agricultural methods and of new varieties continues to improve yields. Yields were doubled in two years



Botanist Robert E. Perdue Jr., left, and agronomist Chemist T. Nyati examine a field of Vernonia galamensis in Chiredzi, Zimbabwe.

when it was discovered that topping the plants when they were six inches tall, resulted in numerous new branches sprouting below the cut, doubling the number of blooms and, hence, seed.

Among the considerations in developing this plant as a new crop are the parameters of climate within which the plants will flourish. A subtropical climate within 20 degrees of the equator appears ideal, along with seasonal rainfall of about 8 inches.

The plant is exceptionally hardy and is resistant to disease, insects and drought. In addition, the "staying power" of the seeds is a remarkable 30 days; i.e. the seeds remain on the plant as long as

thirty days after they have matured, giving farmers time to postpone the harvest until all the blooms have matured.

U.S. agronomists are optimistically looking forward to the development of a plant that will be successful in some farming communities in the southwestern states.

It is a foregone conclusion that vernonia will not be growing in Vernonia. We can, however, subscribe to the title of the article provided by Dr. Richard Roseberg, assistant professor in crop science at Southern Oregon Experimental Station in Medford, from which this column was abstracted: **VERNONIA — BURSTING WITH POTENTIAL.**

Vernonia Police report

During the month of January 1995, the Vernonia Police Dept. investigated four assaults. Three of the assaults were domestic violence and arrests were made.

Three individuals were cited for possession of a controlled substance and given court dates to appear. One juvenile was charged with possession of tobacco and referred to the Columbia County Juvenile Department.

Two individuals were arrested on suspicion of in-

volvement in the December, 1994, theft of two scales from Vernonia High School. Information was received in January regarding this case. An investigation into this matter resulted in the arrest of two individuals. The investigation is still ongoing.

During the month of January, the Vernonia Police Dept. served seven nuisance abatement notices. One individual has been issued a citation for failure to comply. The others are still within the time period to comply with the cleanup.

The above are some, but not all cases handled by VPD in January.

VERNONIA POLICE DEPT JANUARY, 1995

Calls for service	69
Cases	45
Cases cleared	19
Traffic citations	28

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